ELECTRONIC BANKING AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NORTH RIFT REGION, KENYA

Caroline Jeruto Chesir, Dr. Julius Miroga, PhD & Dr. (CPA) Hesbon Otinga, PhD

The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com
Vol. 11, Iss.2, pp 782 – 802, May 16, 2024. www.strategicjournals.com, © Strategic Journals

ELECTRONIC BANKING AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NORTH RIFT REGION, KENYA

[1] Caroline Jeruto Chesir, [2] Dr. Julius Miroga, PhD & [3] Dr. (CPA) Hesbon Otinga, PhD

[1] Master Candidate, Jomo Kenyatta University of Agriculture and Technology, Kenya
[2,3] Lecturers, Jomo Kenyatta University of Agriculture and Technology, Kenya

Accepted: April 28, 2024

DOI: http://dx.doi.org/10.61426/sjbcm.v11i2.2949

ABSTRACT

To maintain profitability, deposit taking financial institutions have come up with various electronic banking aimed at avoiding the negative consequences of liberalization. However, commercial banks have had imperceptible growth over the past ten years, both in terms of their operational performance and financial performance. In order to determine the impact of technical breakthroughs on financial performance, the current study is conducted due to the contextual, methodological, and conceptual gaps arising from previous investigations with a focus on the commercial banks in Nairobi. The specific objectives of the study were to explore the effect of Mobile Banking, ATM Banking, Internet Banking and payment card banking on financial performance of Commercial banks in North Rift Region, Kenya. Descriptive research design was adopted in this study. The population of study in this research was the 84 respondents comprising finance and ICT manager of 42 commercial banks in North Rift region of Kenya. In this case, the census of all the 84 respondents was studies. Pilot study was conducted among 8 respondents from 4 commercial banks in Bungoma to ascertain reliability and validity of the research instruments. Data collected was purely quantitative and it was analyzed by descriptive and inferential statistics using SPSS version 26. The results were presented using tables, charts and figures. The results revealed that there is significant influence of mobile banking, online internet Banking, automated teller machine, payment card banking on financial performance of commercial banks in North Rift Region, Kenya at 5% significance level. Overall, electronic banking significantly accounted for 64.3% of variation in financial performance of commercial banks in North Rift Region, Kenya. The study therefore concluded that electronic banking herein mobile banking, online internet Banking, automated teller machine, payment card banking is significant predicator of financial performance. Commercial banks should prioritize investment in robust Internet banking platforms to meet the growing demand for digital banking services. Commercial banks should continue to invest in and promote payment card banking services to meet the evolving needs and preferences of customers.

Key Words: *Mobile Banking, ATM, Internet Banking, Payment Card, Electronic Banking*

CITATION: Chesir, C. J., Miroga, J., Otinga, H. (2024). Electronic banking and financial performance of commercial banks in north rift region, Kenya. *The Strategic Journal of Business & Change Management*, 11 (2), 775 – 802. http://dx.doi.org/10.61426/sjbcm.v11i2.2949

INTRODUCTION

In the vibrant global environment that organizations operate in today, organizations are faced with a huge responsibility of understanding and implementing electronic banking in order to keep up with the ever-changing technological advancements. According to Ahmed, Khuwaja, Brohi and Othman (2018) the financial performance of financial institutions is very essential in the economy since they act as economic growth engines in every country. Financial institutions serve as financial intermediaries as they form a crucial link which facilitates transactions and other financial services for their customers. Githui (2019) alludes that the changing operating environment, social trends, rivalry and globalization have caused the financial sector to undergo persistent changes which affect their financial performance.

Rantyanti and Halim (2020) averred that global financial crisis over the past showed that there is need for adoption of effective electronic banking for sustainable financial performance. Financial performance is a numerical indicator of the spread to which financial goals are met (Ghosh & Ansari, 2018). Profitability, liquidity, leverage, and efficiency are all ways to gauge financial success. Financial performance also involves the ability to efficiently and effectively use resources to achieve the objectives and goal of a firm (Ghosh & Ansari, 2018). As per Ahmed, Khuwaja *et al.,* (2018) profitability is widely viewed as the best measure of firm performance, especially in transition context. This indicator is usually calculated using the financial information of companies which is publicly available. Among the financial ratios, the most commonly used performance measures are return on assets (ROA) and return on equity (ROE).

Globally, close to one-third of companies invest up to $50 million in automation, including AI, machine learning, cognitive computing, and robotic process automation (Boot & Thakor, 2019). USA and China are the world leaders in electronic banking. Daulatkar and Sangle (2019) indicated that industry technological innovators such as Netflix, Uber, AirBnb, and Alibaba embraced IT into their business strategies resulting in significant competitive advantages within their respective markets. KPMG (2018) reported the US remains the most advanced in disruptive technology breakthroughs that will have a global impact, at 34%, 26% and 29% over the year 2018, 2017 and 2016 respectively.

China, which has continued to see investment funneled into R&D, took the second spot as reported by 25% of the responses collected which was an increment from 25% and 23% in the years 2017 and 2016 respectively. KPMG (2018) added that India, Japan and the UK took third, fourth and fifth spots. India's preference for growing in disruptive technologies rose to 13% in 2018 from 11% in 2017. The United Kingdom Country deteriorated from 10% in 2017 to stand at 6% in 2018. According to Bergo (2019), the structure of the telecommunications market in Brazil is formed by government policies combined with the need for constant technological innovation in the sector. In Nepal, Dongol (2021) reported that banking sectors have improved their services through adopting different financial innovations. In recent years, financial innovations such as automated teller machines (ATM), internet banking, mobile banking, electronic fund transfer, the use of credit cards increasing day by day.

The last two decades witnessed the emergence of private African banking groups and the entry of emerging market banks in the African market, which have invigorated competition, and thus helped to foster innovation within the African banking sector, enabling improved access to financial services by consumers (Kobena, 2019). According to McKinley, 2018), most African countries today have deeper and more stable financial systems, although challenges of concentration and limited competition, high costs, short maturities and limited inclusion persist. According to OECD (2018), Africa has emerged as the second financial market in respect of growth and profitability. However, low penetration of banking services and levels of income, and high credit risk have for a long time been considered as drawing major obstacles to the development of the continents financial sector.

NBC Africa (2018) evaluated the financial performance of 35 financial institutions in sub-Saharan Africa and revealed that the number of banked Africans increased from 550million to nearly 800 million between 2016 and 2018. McKinley (2018) also noted that Africa was facing disappointing returns and sluggish growth, a factor attributed to huge staff costs and labor intensive paper dominated processes with potential of stifling performance. In Nigeria, electronic banking enhanced performance of banks due to improved customer satisfaction. This is because, innovations ensure that less time taken to perform banking transactions and this saves money for both accounts' holders and the financial institutions. Godswill, Ailemen and Osabohien (2018) reported higher levels of electronic banking positively affected the monetary execution of the business banks in Nigeria.

Kenya's financial system has evolved rapidly over the years. Wanalo, Mande and Ng'ong'a (2021) reported that Kenyan commercial banks have kept making significant expenditures in technological advancements and training employees to exploit new technologies. CBK Report (2021) indicated that there are various development and financial electronic banking that have taken place in Kenya including use of agency banking, Kenya Electronic Payment and Settlement System (KEPSS), Automated Clearing House operations (ACH), automated teller machines (ATMs) and plastic card usage, and mobile phone usage for funds transfer. According to Financial Services Department (2018) the number of agency banking has increased from 8,809 agents in 2009 to 35,789 agents in 2014.

Commercial banks in Kenya have been early adopters of fintech solutions. They introduced the M-Pesa account, which allows consumers to use their mobile phones to access banking services. Commercial Bank's cooperation with Safaricom's M-Pesa has broadened its reach and made banking more accessible to the unbanked people. Commercial banks in Kenya have also invested in a strong digital banking platform, such as KCB Loop, which provides a variety of financial services such as savings, loans, and investments. Customers who are youthful and tech-savvy have taken to the platform. In terms of customer experience, Commercial Banks in Kenya have also implemented 24/7 customer support and regularly conduct financial literacy campaigns to empower their customers according to Festo Akonde Imbo, MPRSK, Business Strategy Consultant.

Statement of the Problem

Firms operating in a highly competitive global industries have over time shown that profitability is not guaranteed due to stiff competition and the oligopoly nature of such industries (Godswill, Ailemen & Osabohien, 2018). Between years 2015 and 2021, the commercial banks sector contribution to Kenya's GDP has fluctuated between 9.2% and 18.3%. The financial performance of commercial banks has fluctuated due to several factors and the risk of this fluctuating performance would increase as competitors in the financial industry react similarly to the challenges. According to Sheik and Wang (2018), the liberalized financial market in Kenya has led to electronic banking in the Kenyan financial industry. To maintain profitability, deposit taking financial institutions have come up with various electronic banking modes aimed at avoiding the negative consequences of liberalization. However, commercial banks have had imperceptible growth over the past ten years, both in terms of their operational performance and financial performance. In 2021, commercial banks customer deposits made up to 47.9 percent of the total assets financed by commercial banks; borrowed funds accounted for 54.2 percent of the total assets, followed by required deposits (22.5 percent) and voluntary savings (6.32 percent) (CBK, 2022). According to CBK (2022), the debt-to-equity ratio of commercial banks was 5%, indicating minimal equity leverage in the industry. The sector's overall liabilities as of December 2021 were KShs. 64.7Bns. While profitability levels significantly declined with reported declines in return on equity and return on asset, the number of non-performing loans (NPL) rose (Isabwa & Mabonga, 2021). The effect of electronic banking on the financial performance of Kenya's commercial banks was examined by Onchong'a (2018) who established that there is a favorable correlation between the performance of Kenyan commercial banks. Okumu and Jagongo (2020) looked into how debit/credit cards affected the profitability of commercial banks that accepted deposits. The study found that fees/commission from debit/credit cards had significant effect on profitability of commercial banks. Due to the contextual, methodological, and conceptual deficiencies that these studies had, the current investigation was necessary.

Objectives of the Study

The general objective was to examine the effect of electronic banking systems on financial performance of commercial banks in North Rift Region, Kenya. The specific objectives were;

- To examine the effect of mobile banking on financial performance of commercial Banks in North Rift Region, Kenya
- To determine effect of online internet Banking on financial performance of commercial banks in North Rift Region, Kenya
- To assess the effect of automated teller machine (ATM) banking on financial performance of commercial banks in North Rift Region, Kenya
- To evaluate the effect of payment card banking on financial performance of commercial banks in North Rift Region, Kenya

The researcher sought to answer;

- How does mobile banking affect financial performance of Commercial banks in North Rift Region, Kenya?
- How does Internet banking affect the financial performance of Commercial banks in North Rift Region, Kenya?
- How does an automated teller machine (ATM) banking influence the financial performance of Commercial banks in North Rift Region, Kenya?
- What is the effect of payment card banking on financial performance of Commercial banks in North Rift Region, Kenya?

LITERATURE REVIEW

Theoretical Review

Agency Theory

Jensen and Meckling (1976) defined agency relationship as "a contract under which one or more persons [the principal(s)] engage another person (the agent) to perform some service on their behalf. This principal–agent relationship also involves delegating some decision-making authority to the agent." According to Lan and Heracleous (2010), under law, an agent is a person who acts on behalf of another (known as a "principal"). This theory, therefore, focuses on the relationship between the principal and the agent, which in this study refers to the bank and their agents, respectively. The principal-agent model framework occurs in any social, political, or legal situation where two parties align themselves to fit a situation where the principal with which authority to act originally "hires" or delegates some of this authority onto the agent (Ross, 2018).

Agency theory is used to understand the second objective of this study. While intrinsic factors (such as profit-making) can be suggested as reason for taking up agency baking (Venkatesan, 2017), many "agent"-related factors, for example bank expansion, desire to reach the unbanked, regulations that allow the bank to engage the agent, among others, are key in the engagement of individuals for agency banking (CBK, 2010; Ndungu & Njeru, 2014). Agency theory is thus instrumental in examining the influence of agency banking on the financial performance of commercial banks in Kenya.

Innovation Diffusion Theory

The notion of Innovation Diffusion Theory can be connected with the acceptance and acceptability of AMT services among users and the general public. Compatibility, complexity (the aspect of it being friendly), relative advantage (the range in which technology gives an improvement to the existing instruments), trialability, and observability (the range in which the output of technology and its benefits can easily be seen) are some of the factors that affect how quickly an innovation spreads (Rogers, 2003), Given that they are not mutually exclusive, these factors are unable to forecast either the amount or the rate of innovation dissemination. Brancheau and Wetherbe (1990) provided support for the claims made by Benbasat (1991), who expanded the number of innovation traits to seven.

Banks throughout the world have implemented AMT systems and are still doing so. Systems like ATMs, M-Pesa, and M-Kesho, among others, provide significant advantages to financial institutions as well as their clients. They give consumers the ability to do transactions at times and places that are more convenient than during branch banking hours. Banking fees are increasingly decreased by automation of previously laborious processes, generating income. When banks collaborate, integrate, and use the internet to connect their systems, clients of other banks may access their accounts through a bank's system, multiplying these advantages (McAndrews, 2003). Automated money transfer system deployment in Kenya follows the diffusion of innovations theory curve, with user adaptability variable. Compared to competing services, the M-pesa money transfer service had a fairly quick uptake.

Bank-Led Theory

The Bank-Led hypothesis was proposed by Lyman, Ivatury and Staschen (2006) and is made out of a grouping of three principle substances; the bank, the retail operator, and the client. depends on the contention that, an authorized monetary organization conveys money related administrations through a retail specialist. The hypothesis bolsters office banking model by expressing that crafted by a bank is creating money related items and administrations, however conveys them through retail specialists who handle all or most client connection (Lyman et al, 2006). Retail operators have up close and personal collaboration with clients and perform money/in real money out capacities, much as a branch-based teller would take stores and procedure withdrawals (Owens, 2006). Under this hypothesis, the bank creates budgetary items and administrations yet disperses them through retail specialists who handle all or most client collaborations (Lyman, Ivatury and Staschen, 2006). The bank is the supplier of money related administrations and is the organization where clients look after records.

To Roberts and Amit (2013) banking guideline regularly perceives numerous classifications of hazard that bank controllers and administrators try to moderate. Five of these hazard classifications credit chance, operational hazard, lawful hazard, liquidity hazard, and notoriety chance interpretation of exceptional significance when clients use retail specialists as opposed to bank offices to get to banking administrations. The bank lead hypothesis centers around how monetary foundation like banks convey their money related administrations through a retail operator, where the bank creates budgetary items and administrations, however disseminates them through retail specialists who handle all or most client communication. Monetary organizations in Kenya disperse their money related items through their portable banking and web banking. For this situation the specialists have up close and personal communication with the clients and perform money/in real money out capacities, much as a branch-based teller would take stores and procedure withdrawals. This theory therefore will be relevant in investigating the effects of internet banking on financial performance of commercial banks.

Financial Intermediation Theory

Due of the difficulties with asymmetrical information seen in the 1970s, Akerlof (1970) created the hypothesis. The theory is based on informational asymmetry theory, transactional cost theory, and agency theory (Bert & Dick, 2003). According to this idea, the lack of accurate information, high transaction costs, and regulatory mechanisms lead to the creation of financial intermediaries. According to the idea of financial intermediation, by pooling client resources, intermediaries can reduce informational asymmetries and transaction costs, leading to scale economies (Alexandra et al., 2009). The continuous flow of money from units with surpluses to those with deficits is the intermediaries' most significant contribution. Financial intermediaries reduce transaction costs brought on by incomplete information between lenders and borrowers, which increases the efficiency of resource allocation.

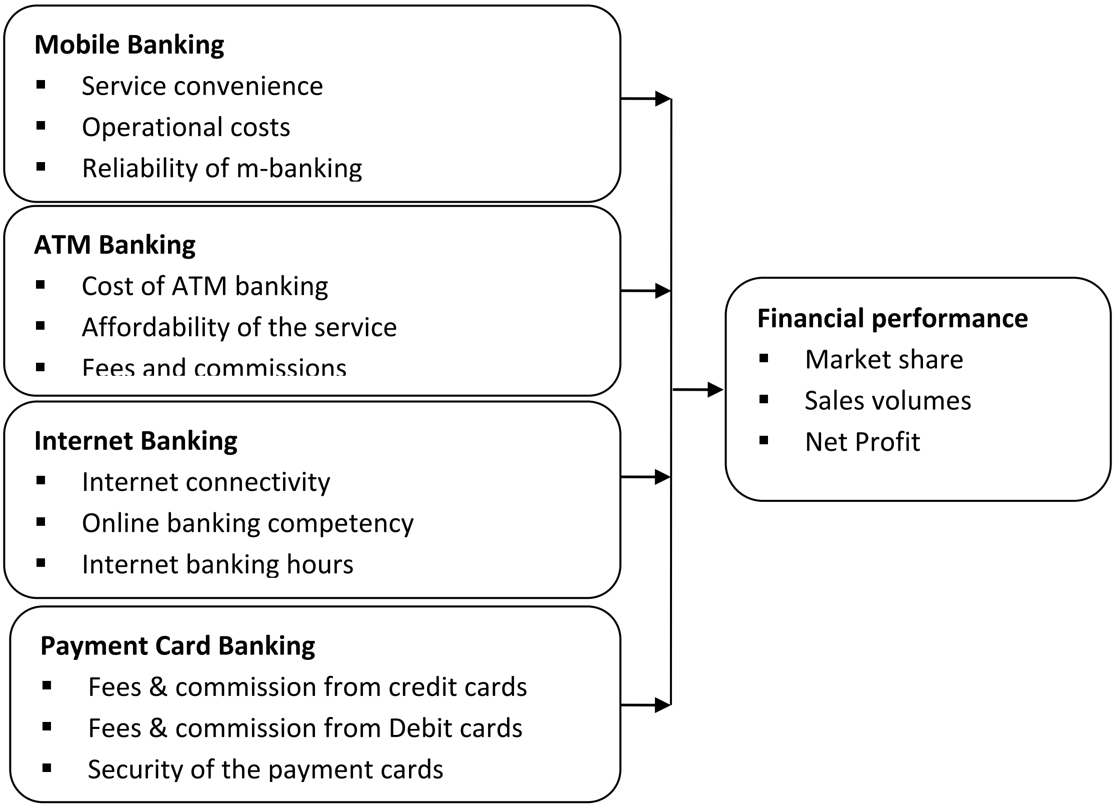
Due to flaws in the market, financial intermediaries are necessary. As a result, financial intermediaries would not be necessary in a perfect market environment with no transaction or information costs. Generally, digital technologies play a supplementary role in financial intermediation. However, some researchers and economists hold the notion that the reduction of transaction costs due to internet banking makes the financial markets accessible and eliminates the information assymetries for financial intermediation thereby creating opportunities for financial intermediaries and business models to emerge as a n alternative for some of the activities and functions of the conventional banking models (Molnar, 2018). This theory is relevant in establishing the influence of payment card banking on financial performance of Commercial banks in North Rift Region, Kenya

Balanced Score Card Theory

The proponents of the Balanced Score Card (BSC) theory are Kaplan and Norton (1992). The theory proposes that an organization's performance measured through financial evaluation should also factor-in the intangible assets of the organization to give a wholistic picture of the organization performance. According to Kaplan & Norton (2003), this theory merges all the organization's strategic objectives into one balanced framework. This theory advanced the General Electric's analysis of corporate strategy whose proponent was Lewis in the 1955. Lewis (1955) proposed that performance was measured using both financial and non-financial measures.

The BSC is used by management in the formulation and communication of strategy, business unit's alignment as well as setting strategy priorities for guiding strategy implementation. The BSC starts at the top level and cascades to the lower levels. At the lower levels, the strategic goals are customized to precise situations. There is alignment of the different units together as well as to the strategy of the organization (Kaplan, 2006). Close incorporation of systems structure and strategy leads to increased chances of successful implementation of strategy. The BSC is an efficient and convenient tool to monitor and control organization processes and variables for premium performance. The BSC theory is pertinent to the study since it offers essential tools for keeping track of commercial banks' financial performance.

Conceptual framework



Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework

Empirical Review

Adhitya and Sembel (2020) investigated the impacts of mobile banking technology adoption on the financial performance and stock performance of big banks in Indonesia. The financial performance is measured by CAMEL ratio of banks and the value added of this research is the stock performance that included in the research. The stock performance is measured in stock return and stock risk (standard deviation) of the banks. The research will use class IV banks as samples, because Class IV Banks is already considered as Big Banks with a capital of more than 30 Trillion IDR, and a successful Mobile banking tech adoption that has reached many users in Indonesia. The data of financial performance and stock performance from the seven banks in Indonesia that are collected will be tested using the F-test, T-Test and Regression method to measure on financial performance and stock performance. This research also measures the macroeconomic factor during the mobile banking technology implementation such as GDP (Gross Domestic Product), interest rate, currency rate and exchange rate. This result shows that the technology adoption on mobile banking have lower performance for ROE and NPL of the banks. On the macroeconomic side, the result shows positive impact and negative impact towards GDP performance to the financial performance of the banks. However, the result shows the technology adoption will strengthen banks financial performance on bank’s CAR and LDR. This finding becomes important for banks to accelerate technology adoption to increase their competitiveness against competitors and adapt in a changing market.

Bolat (2018) explored mobile technology capabilities and their role in service innovation practices in creative SMEs. The findings suggested that the interaction between mobile technology resources and mobile technology capabilities stimulated and facilitated process and product service innovation practices. The findings further showed that mobile technology deployment was grounded in establishing an interactive system of mobile technology resources, where infrastructure, skills, relationships and culture interacted to enable operational efficiencies and/or create new solutions.According to the study, mobile technology capabilities were found to form a set of the following capabilities that enabled firms to creatively and distinctively combine and deploy mobile technology resources through: leveraging mobile technology resources capability; transforming business operationally and strategically capability; learning capability; solving problems capability and leading capability.

Abdi, Hussein and Kadir (2022) investigated the effect of automated teller machines and mobile banking on financial performance among commercial banks in Somalia. A descriptive survey design was adopted targeting 6 commercial banks in Somalia that had successfully rolled out electronic banking while the respondents covered the Banks staff, like managers and officers from each institution respectively and census was used. Primary data was collected on automated teller machines, mobile banking and customer deposits with the aid of the questionnaire. The study found out that automated teller machines banking and mobile banking are significant predictors of financial performance among commercial banks in Somalia. Thus, electronic banking is a significant enabler of financial performance of commercial banks.

In their research, Bek et al. (2017) all measured financial performance by analyzing demographic branch and ATM penetration rates. In addition, demographic branch and ATM penetration rates are often utilized as proxies in the research that has been done on the topic of measuring financial performance. When we discuss the level of demographic branch penetration, we are referring to the number of bank branches that are present for every 100,000 people. On the other hand, when we discuss the level of demographic ATM branch penetration, we are referring to the number of ATM branches that are present for every 100,000 people. The penetration of demographic bank branches and automated teller machines is a statistic that is used to evaluate the availability of banking branches and ATMS to a population in terms of how easy they are to reach. Greater branch and ATM penetrations within a given population suggest simpler access since there are fewer prospective customers served by each location, and vice versa. The previous research had a lack of contextual information, which is something that the present study aims to address.

Rahaman, Luna, Kejing, Ping and Taru (2021) investigated the determinants of accepting internet banking system in Bangladesh. Internet banking is one of the innovative services that have reshaped the traditional banking activities, particularly in Bangladesh. The research was designed to examine the Internet banking adoption based on five variables: perceived usefulness, perceived ease-of-use, trust, social influence, and perceived enjoyment, and the study also explores differences among respondents on these study variables based on gender and academic disciplines. The study selected university students as study samples as they are the prospective customers to use Internet banking. Sample size in the research is 300, and a well-designed questionnaire was distributed to collect data. SPSS is used for statistical analysis. The research used ANOVA test to capture any difference on variables based on gender and academic disciplines. The findings indicate that male students in business have more intention to adopt Internet banking and preference for ease-of-use than female students, and business students will be more favorably inclined to adopt Internet banking service than students in other academic disciplines.

Oniore and Okoli (2022) examined the impact of electronic banking on the performance of money deposit banks in Nigeria from 2006 to 2017 using time series quarterly data. The study adopted Ordinary Least Squares as main tool of analysis. The estimated regression equation showed that in the long-run, all the variables are correctly signed, except inter-bank transfer that is negatively signed. There have been increased investments in computer hardware, software and telecommunication equipment; resulting in the introduction of Electronic Bank (E-Banking) in the Nigeria Banking Industry. There has been an increase in the services rendered to customers by the deposit money banks through the utilization of electronic banking. The policy implication of the findings is that e-banking has gradual positive impacts on performance of banks in Nigeria and hence could contribute to the process of economic growth.

Nwobu (2022) determined the effect of electronic payment systems on financial performance in Nigeria from 2008 to 2021. An ex-post facto research design was adopted for this study to achieve the objectives of the study using disaggregated data on internet access, financial literacy and changes in technology as well as data on access to financial services in each of the states in Nigeria. data was gathered from Central Bank of Nigeria e-payment insights as well as from yearly report of Central Bank of Nigeria monetary consideration procedure execution from 2008 to 2021 and it was investigated utilizing Ordinary Least Square (OLS) relapse model with the guide of SPSS form 23.0. Electronic card banking was found to have a statistically significant impact on access to financial services in Nigeria.

An investigation of the influence of electronic card banking on financial performance in Nigeria was undertaken by Ene, Abba, and Fatokun (2019). The study examined the total number of Nigerian automated teller machines and point of sale devices as a proxy for electronic banking. According to these findings, a proxy for Nigeria's degree of financial performance was calculated by comparing people with bank accounts to the total number of adults who are bankable in the country. This study was carried out using the correlational and ex post facto research design methodologies, in addition to the multiple regression analysis that was carried out on a computer. It was shown that point-of-sale devices had a significant effect on the level of financial performance in Nigeria; on the other hand, automated teller machines did not have a significant bearing on the level of accessibility to financial services in the nation.

The objective of the research carried out by Midika (2016) was to assess the effect that electronic card banking has had on the level of financial performance in Kenya's banking industry. This study's research design was based on a methodological framework that was provided by descriptive statistics. The research looked at 13 different Kenyan financial institutions as its sample. The sample was chosen with the intention of being representative of Kenya's thirteen financial institutions, each of which provides one, two, or all three of the aforementioned digital financial services. The research found a marginally significant adverse relationship between financial performance in Kenya's banking system and agency banking, mobile banking, and internet banking. Internet banking, mobile banking, and mobile banking all have a strong association in terms of the number of transactions that are made. There was no significant correlation found between utilizing the internet to bank and having more access to financial services. It seems that there is no relationship between the banking industry in Kenya and financial performance via the use of digital finance. Based on the study's results, this conclusion was drawn. For this reason, financial institutions employ digital financial services to reduce the costs of maintaining and developing new branches, which in turn helps them to become more profitable.

METHODOLOGY

Descriptive research design in form of mean, median, standard deviation, minimum and maximum was adopted in this study. The population of study in this research were 42 commercial banks in North Rift Region, Kenya as unit of analysis. The unit of observation was 84 respondents comprising of finance managers and ICT managers of the 42 commercial banks. In this case, since the targeted respondents are less than 100 as per Mugenda and Mugenda (2008), a census of the 84 respondents was studied. Data collection methods are tools for use in the field to collect data. According to Saunders, Lewis and Thornhill (2017), a researcher needs to develop instruments with which to collect data. A structured questionnaire was used as the tool for collecting data. Likert type scale was employed as the rating scale in the matrix questionnaires. This study used questionnaires and anonymity was maintained by coding the questionnaires such that only the researcher recognized them and ensuring that the respondents did not indicate their names or any other form of identification. The Cronbach alpha was used to ascertain the reliability of the research instrument. The raw primary data collected was coded prior to being input into SPSS statistical analysis software.

FINDINGS AND DISCUSSIONS

Analysis of Descriptive Data

These are descriptive statistics based on summarized responses on the structured questions about the influence of electronic banking on financial performance of commercial banks in North Rift Region, Kenya. The responses are based on Likert scale with values ranging from 5 to 1; that is; where 5 = strongly agree, 4 Agree, 3, Uncertain, 2, Disagree and 2 Strongly disagree. The results are presented in the table form showing frequencies of responses as per each statement and its corresponding percentage score in brackets, means and standard deviations.

Mobile Banking and Financial Performance

These are descriptive statistics to determine whether mobile banking affect the financial performance of commercial banks in North Rift Region, Kenya as summarized in table 1:

Table 1: Descriptive statistics: Mobile banking

Statement	5	4	3	2	1
Mobile banking affects the level of sales, access to new markets and marketing effectiveness within this commercial bank	28.4%	46.3%	11.9%	10.4%	3.0%
Mobile banking reduces the operational costs within this commercial bank	22.4%	56.7%	13.4%	4.5%	3.0%
Mobile banking enhances the competitive advantage of this commercial bank	31.3%	31.3%	20.9%	10.4%	6.0%
Mobile banking improves remote transmission of transactions processes in this commercial bank	14.9%	56.7%	20.9%	3.0%	4.5%
Mobile banking has positive influence on the speed of response to customer needs and internal efficiency	13.4%	38.8%	28.4%	16.4%	3.0%

The survey results reveal insights into the perceptions regarding the impact of mobile banking on a commercial bank's operations. Regarding its effect on sales, access to new markets, and marketing effectiveness, a substantial proportion of respondents, comprising 28.4% who strongly agree and 46.3% who agree, view mobile banking as positively influencing these aspects. Similarly, a significant majority, with 22.4% strongly agreeing and 56.7% agreeing, believe that mobile banking contributes to reducing operational costs within the bank.

Furthermore, opinions regarding the enhancement of the commercial bank's competitive advantage through mobile banking are divided, with 31.3% strongly agreeing and another 31.3% agreeing, while 10.4% disagree and 6.0% strongly disagree. However, a notable portion, consisting of 14.9% who strongly agree and 56.7% who agree, perceive mobile banking as improving the remote transmission of transaction processes, indicating its efficiency in this regard.

Interestingly, respondents' perspectives on the positive influence of mobile banking on the speed of response to customer needs and internal efficiency vary. While 13.4% strongly agree and 38.8% agree with this statement, a considerable 28.4% remain neutral, and 16.4% disagree, suggesting a more nuanced understanding of its impacts on these particular aspects.

Online internet Banking and financial performance

These are descriptive statistics to determine whether online internet Banking affect the financial performance of commercial banks in North Rift Region, Kenya as summarized in table 2:

Table 2: Descriptive statistics: Online internet Banking

Statement	5	4	3	2	1
Commercial bank customers have more intention to adopt Internet banking and preference for ease-of-use	22.4%	46.3%	9.0%	17.9%	4.5%
Adoption of online banking has helped to improve customer service levels	17.9%	46.3%	20.9%	10.4%	4.5%
There has been an increase in the financial services rendered to customers through the utilization of internet banking	6.0%	40.3%	40.3%	10.4%	3.0%
Internet banking has enabled this commercial bank to speed up its banking services	23.9%	41.8%	17.9%	7.5%	9.0%
There is a positive relationship between internet banking and financial performance of this commercial bank	7.5%	55.2%	28.4%	7.5%	1.5%

Firstly, a significant proportion of respondents, accounting for 22.4% who strongly agree and 46.3% who agree, believe that commercial bank customers exhibit a growing intention to adopt Internet banking, largely due to its perceived ease of use. This indicates a shifting trend towards digital banking solutions among consumers. Furthermore, respondents widely recognize the positive impact of Internet banking on customer service levels within the commercial bank. With 17.9% strongly agreeing and 46.3% agreeing, a total of 64.2% acknowledge that the adoption of online banking has led to tangible improvements in customer service. This suggests that Internet banking is instrumental in enhancing the overall customer experience and satisfaction.

In addition, opinions vary regarding the increase in financial services rendered to customers through the utilization of Internet banking. While 40.3% of respondents agree, a significant portion (40.3%) remain neutral on this statement, indicating the need for further exploration into the concrete benefits experienced by customers. Moreover, the majority of respondents, totaling 65.7% who strongly agree or agree, believe that Internet banking has enabled the commercial bank to expedite its banking services. This underscores its role in improving operational efficiency and streamlining processes to better serve customers.

Finally, respondents overwhelmingly perceive a positive relationship between Internet banking and the financial performance of the commercial bank. With 7.5% strongly agreeing and 55.2% agreeing, a substantial majority of 62.7% express confidence in the ability of Internet banking to contribute to the bank's overall success and profitability.

Automated Teller Machine on Financial performance

These are descriptive statistics on the extent to which automated teller machine determines the financial performance of commercial banks in North Rift Region, Kenya as summarized in table 3:

Table 3: Descriptive statistics: Automated teller machine

Statement	5	4	3	2	1
ATM banking makes it cost effective to use banking services	19.4%	50.7%	11.9%	13.4%	4.5%
ATM banking services are fair in facilitating financial transactions	29.9%	17.9%	34.3%	16.4%	1.5%
ATM banking has a positive impact on transfers, payments, deposits and withdrawals in financial transactions	19.4%	26.9%	28.4%	20.9%	4.5%
ATM banking is a cost effective, reliable and simple way of conducting business	17.9%	25.4%	31.3%	19.4%	6.0%
ATM banking provides increased value for customers' banking transactions	10.4%	35.8%	28.4%	20.9%	4.5%

A significant majority of respondents, totaling 70.1% who either strongly agree or agree, perceive ATM banking as a cost-effective option for accessing banking services. This indicates that customers view ATMs as providing economic benefits, likely due to the convenience of conducting various transactions without the need for human intervention, which can reduce operational costs for the bank.

Opinions are more divided regarding the fairness of ATM banking services. While 47.8% of respondent’s express agreement (strongly agree + agree) that ATM services are fair in facilitating financial transactions, a notable portion (51.9%) either remain neutral or disagree with this statement. This suggests that there may be concerns or discrepancies in customers' experiences with ATM transactions, possibly related to fees, transaction processing times, or dispute resolution processes.

There is a mixed perception regarding the positive impact of ATM banking on different types of financial transactions. While 46.3% of respondents express some level of agreement (strongly agree +

agree), an almost equal percentage (45.3%) either remain neutral or disagree with this statement. This suggests that while some customers perceive ATM banking as effective for certain transactions, others may have reservations or experiences that differ.

While a significant proportion of respondents (43.3%) either strongly agree or agree that ATM banking is a cost-effective, reliable, and simple way of conducting business, there is also a notable percentage (25.4%) who disagree. This indicates a divergence in perceptions regarding the overall utility and ease of use of ATM banking services. It suggests that while some customers find ATM banking to be convenient and straightforward, others may have encountered challenges or issues that impact their perception of its reliability and simplicity.

Opinions are again varied regarding the value provided by ATM banking for customers' transactions. While 46.2% perceive ATM banking as offering increased value, a considerable percentage (25.4%) disagree. This suggests differing perspectives on the extent to which ATM banking enhances the overall banking experience for customers. Some customers may value the convenience and accessibility of ATM banking, while others may prioritize other factors such as personalized service or advanced digital banking features.

Payment card banking on Financial performance of commercial banks

These are descriptive statistics to find out the extent to which payment card banking determines the financial performance of commercial banks in North Rift Region, Kenya as summarized in table 4

Table 4: Descriptive statistics: Payment card banking

Statement	5	4	3	2	1
This commercial bank has recorded an increase in trend of utilization of payment card banking	14.9%	35.8%	34.3%	6.0%	9.0%
There has been a positive and significant impact of payment card banking on profitability of this commercial bank	13.4%	55.2%	26.9%	3.0%	1.5%
Payment card banking has a significant effect on service delivery	13.4%	58.2%	9.0%	14.9%	4.5%
Well defined payment card banking processes enhance efficiency thereby improving financial performance of this Microfinance Institution.	22.4%	37.3%	25.4%	9.0%	6.0%
Payment card banking enhances the ability of this commercial bank to track and analyse their cash flow in monitoring their profitability	16.4%	50.7%	19.4%	9.0%	4.5%

Among respondents, 14.9% strongly agree and 35.8% agree that there has been an increase in the trend of utilization of payment card banking within the commercial bank. This suggests that a combined 50.7% of respondents perceive a growing adoption of payment card banking services. However, it's notable that 34.3% neither agree nor disagree, indicating some uncertainty or lack of awareness about the trend among some respondents. A strong consensus is observed among respondents, with 13.4% strongly agreeing and 55.2% agreeing that payment card banking has had a positive and significant impact on the profitability of the commercial bank. This highlights the widespread belief, with a combined 68.6% of respondents, in the beneficial effect of payment card banking on the bank's financial performance.

Overwhelmingly, 13.4% strongly agree and 58.2% agree that payment card banking has a significant effect on service delivery within the commercial bank. This strong consensus, with a combined 71.6% of respondents, indicates the perceived role of payment card banking in enhancing service delivery standards. A substantial portion of respondents, comprising 22.4% strongly agree and 37.3% agree, believe that well-defined payment card banking processes enhance efficiency and subsequently improve the financial performance of the microfinance institution. This emphasizes the perceived importance of streamlined processes in maximizing the benefits of payment card banking.

Among respondents, 16.4% strongly agree and 50.7% agree that payment card banking enhances the commercial bank's ability to track and analyze cash flow for monitoring profitability. This indicates a combined 67.1% of respondents perceiving the utility of payment card banking as a tool for financial management and performance monitoring.

Financial performance

These are descriptive statistics to determine whether mobile banking affect the financial performance of commercial banks in North Rift Region, Kenya as summarized in table 5:

Table 5: Descriptive statistics: Financial Performance

Statement	5	4	3	2	1
The sales volume of financial services of this commercial bank has increased significantly for over the past 5 years	20.9%	31.3%	29.9%	9.0%	9.0%
The profitability of this commercial bank has increased significantly over the past 5 years	6.0%	17.9%	31.3%	34.3%	10.4%
The market share of this commercial bank has increased significantly over the past 5 years	10.4%	44.8%	20.9%	17.9%	6.0%
The cost of providing services has decreased significantly over the past 5 years	17.9%	49.3%	16.4%	14.9%	1.5%
The revenue generated from electronic banking has increased significantly over the last 5years	0.0%	26.9%	41.8%	26.9%	4.5%

The survey data indicates a diverse range of opinions regarding the increase in the sales volume of financial services. While 20.9% strongly agree and 31.3% agree with this statement, a considerable proportion (29.9%) neither agree nor disagree. Additionally, 9.0% disagree, and another 9.0% strongly disagree, expressing skepticism or opposing views regarding the significant increase in sales volume over the specified period.

Responses regarding the profitability of the commercial bank over the past 5 years are varied. Only 6.0% strongly agree and 17.9% agree that profitability has significantly increased. However, a notable percentage (31.3%) neither agree nor disagree, suggesting uncertainty or lack of clarity among respondents. Moreover, 34.3% disagree, and 10.4% strongly disagree with the statement, indicating skepticism or contrary opinions regarding the reported increase in profitability.

Regarding the increase in market share, opinions are more favorable. While 10.4% strongly agree and 44.8% agree that the market share has significantly increased, 20.9% neither agree nor disagree, reflecting some uncertainty. Furthermore, 17.9% disagree and 6.0% strongly disagree, suggesting some dissenting views regarding the reported increase in market share.

Responses regarding the decrease in the cost of providing services are generally positive. A significant proportion (17.9%) strongly agree, and 49.3% agree that costs have decreased significantly. However, 16.4% neither agree nor disagree, indicating some uncertainty or lack of awareness. Additionally, 14.9% disagree and 1.5% strongly disagree, suggesting dissenting opinions regarding the reported decrease in costs.

Opinions regarding the increase in revenue from electronic banking are mixed. Interestingly, no respondents strongly agree with this statement. However, 26.9% agree, and 41.8% neither agree nor disagree, suggesting uncertainty or lack of awareness. Furthermore, 26.9% disagree, and 4.5% strongly disagree, indicating skepticism or contrary opinions regarding the reported increase in revenue from electronic banking.

Pearson Correlation Results

The correlation coefficient (r) results are presented as shown in Table 6: using Pearson correlation analysis, which computes the direction (Positive/negative) and the strength (Ranges from -1 to +1) of the relationship between two continues or ratio/scale variables.

Table 6: Multiple Correlation Matrix

		MB	IB	ATM	PCB
Mobile banking	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	67			
Online internet Banking	Pearson Correlation	.369**	1		
	Sig. (2-tailed)	.002			
	N	67	67		
Automated teller machine	Pearson Correlation	.544**	.476**	1	
	Sig. (2-tailed)	.000	.000		
	N	67	67	67	
Payment card banking	Pearson Correlation	.348**	.336**	.613**	1
	Sig. (2-tailed)	.004	.005	.000	
	N	67	67	67	67
Financial Performance	Pearson Correlation	.565**	.539**	.752**	.630**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	67	67	67	67

****. Correlation is significant at the 0.01 level (2-tailed).**

From the correlation Table 6: mobile banking is positively correlated to financial performance of commercial banks in North Rift Region, Kenya, the coefficient is 0.565 (p value < 0.01) this is significant at 99% confidence level. Thus increase in mobile banking would make financial performance of commercial banks in North Rift Region, Kenya to increase in same direction. Mahdi & Mehrdad (2010) found that mobile banking adoption improves bank efficiency and profitability.

Online internet Banking is positively correlated to financial performance of commercial banks in North Rift Region, Kenya, the coefficient is 0.539 (p value < 0.01) this is significant at 99% confidence level. Thus increase in online internet Banking would make financial performance of commercial banks in North Rift Region, Kenya to increase in same direction. De Young et al. (2007) found internet banks to be more profitable than traditional banks. Furst et al. (2002) observed that banks offering e-banking tend to be more profitable.

Similarly, the correlation coefficient for payment card banking was 0.630, P=0.000, suggesting that there is significant positive relationship between payment card banking and financial performance of commercial banks in North Rift Region, Kenya.

Increase in payment card banking would results to increase in financial performance of commercial banks in North Rift Region, Kenya. Several studies highlight the benefits of payment card transactions for banks.

Lastly, there is significant positive relationship between automated teller machine and financial performance of commercial banks in North Rift Region, Kenya as indicated by .752**, p=0.000. This implies that increase in automated teller machine would results to increase in financial performance of commercial banks in North Rift Region, Kenya. Research by Beck et al. (2003) indicates that ATMs can reduce operational costs for banks, potentially leading to higher profits.

Multiple regression analysis

Multiple regression analysis was computed to assess the multivariate influence of the study's independent variables (online internet Banking, payment card banking and automated teller machine) on the dependent variable financial performance of commercial banks in North Rift Region, Kenya). This was after the compulsory assumptions of multiple regression analyses were checked and met. The multiple regression results are shown in table 7:

Table 7: Model Summary for Electronic banking

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.790	4	8.198	33.168	.000[b]
	Residual	15.999	62	.258		
	Total	48.789	66			

a. Predictors: (Constant), Automated teller machine, Online internet Banking, Payment card banking, Mobile banking

b. Dependent Variable: Financial performance of commercial banks in North Rift Region, Kenya

Multiple regression analysis in table 7: shows the multiple regression results of the combined influence of the study's independent variables (online internet Banking, payment card banking and automated teller machine). The model's R squared (R2) is 0.643 which shows that the study explains 64.3% of variation in financial performance of commercial banks in North Rift Region, Kenya, while other factors not in the conceptualized study model accounts for 35.7%, hence, it is a good study model.

Table 8: ANOVA Table for Electronic banking

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.790	**4**	**8.198**	**33.168**	**.000[b]**
	Residual	15.999	**62**	**.258**		
	Total	48.789	**66**			

a. Predictors: (Constant), Automated teller machine, Online internet Banking, Payment card banking, Mobile banking

b. Dependent Variable: Financial performance of commercial banks in North Rift Region, Kenya

Furthermore, Analysis of Variance (ANOVA) (Table 8:) shows the mean squares and F statistics significant (F (4,66) = 33.168; significant at p<.001), thus confirming the fitness of the model and also implies that the study's independent variables (mobile banking, online internet Banking, payment card banking, automated teller machine) have significant variations in their contributions to financial performance of commercial banks in North Rift Region, Kenya.

Finally, the values of unstandardized regression coefficients with test statistics in parenthesis in table 9: indicate that all the study's independent variables (Mobile banking β = 0.427, t=2.497 at p<0.05; online internet Banking; β = 0.372, t=2.862 at p<0.05, payment card banking; β = 0.399, t=2.494 at p<0.05; automated teller machine; β = 0.218, t=4.200 at p<0.05 significantly influenced financial performance of commercial banks in North Rift Region, Kenya (dependent variable).

In this regard, the study's final multiple regression equation is;

y =-0.762 +0.427X1+0.372X2+0.399X3+ 0.218X4

Where;

y= financial performance of commercial banks in North Rift Region, Kenya.

X1= Mobile banking

X2= online internet Banking

X3= automated teller machine

X4= payment card banking

Table 9: Regression Coefficients for Electronic banking

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.267	0.414		-0.645	.088
	Mobile banking	0.427	0.171	0.386	2.497	.000
	Online internet Banking	0.372	0.130	0.293	2.862	.000
	Automated teller machine	0.399	0.160	0.255	2.494	.000
	Payment card banking	0.218	0.0519	0.201	4.200	.000

a. Dependent Variable: financial performance of commercial banks in North Rift Region, Kenya

From the findings presented in Table 9: we look at the model results and scan down through the unstandardized coefficients B column. All electronic banking variables had significant influence on the financial performance of commercial banks in North Rift Region, Kenya. If electronic banking is held at zero or it is absent, the financial performance of commercial banks in North Rift Region, Kenya would be -0.762, p=0.088.

Multiple regression coefficients results indicate that mobile banking significantly determined financial performance of commercial banks in North Rift Region, Kenya (β = 0.427 at p<0.05). The results indicate that a unit increase in mobile banking will lead to 0.427-unit improvement in financial performance of commercial banks in North Rift Region, Kenya when other factors in the model are controlled. This aligns with research by Mahdi & Mehrdad (2010) who found that mobile banking adoption improves bank efficiency and profitability

Multiple regression coefficients result also indicated that online internet Banking significantly determined financial performance of commercial banks in North Rift Region, Kenya (β = 0.372 at p<0.05). The results indicate that a unit improvement in online internet Banking will lead to 0.372-unit improvement in financial performance of commercial banks in North Rift Region, Kenya when other factors in the model are controlled, supporting findings from De Young et al. (2007) who suggest internet banks tend to be more profitable.

Multiple regression coefficient results further indicated that automated teller machine

The Strategic Journal of Business & Change Management. ISSN 2312-9492 (Online) 2414-8970 (Print). ww.strategicjournals.com

significantly determined financial performance of commercial banks in North Rift Region, Kenya (β = 0.399 at p<0.05). The results indicate that a unit improvement in automated teller machine will lead to 0.399 unit's improvement in financial performance of commercial banks in North Rift Region, Kenya when other factors in the model are controlled. This aligns with research by Beck et al. (2003) who reported that ATMs can reduce operational costs for banks, potentially leading to higher profits.

Lastly, multiple regression coefficients results indicate that payment card banking has significantly determined financial performance of commercial banks in North Rift Region, Kenya (β = 0.218 at p<0.01). The results indicate that a unit improvement in payment card banking will lead to 0.218-unit improvement in financial performance of commercial banks in North Rift Region, Kenya when other factors in the model are controlled. This supports findings by Demir & Mithra (2010) and Claessens et al. (2003) who suggest increased card usage can improve bank profitability

SUMMARY

The main objective of this study was to examine influence of electronic banking on financial performance of commercial banks in North Rift Region, Kenya. The study sought to answer the following questions how does mobile banking influence financial performance of commercial banks in North Rift Region, Kenya? How does online internet Banking influence financial performance of commercial banks in North Rift Region, Kenya? How does automated teller machine influence financial performance of commercial banks in North Rift Region, Kenya? How does payment card bank influence financial performance of commercial banks in North Rift Region, Kenya?

The first objective was to examine the influence of mobile banking on financial performance of commercial banks in North Rift Region, Kenya. The survey reveals that a significant proportion of respondents perceive mobile banking as positively impacting sales, access to new markets, marketing effectiveness, and reducing operational costs in commercial banks. However, opinions on its contribution to competitive advantage, remote transaction processes, speed of response to customer needs, and internal efficiency vary among respondents. Pearson correlation analysis revealed mobile banking has significant positive relationship with financial performance of commercial banks in North Rift Region, Kenya in Kenya.

The second objective was to evaluate the influence of online internet Banking on financial performance of commercial banks in North Rift Region, Kenya. A notable percentage of respondents believe in the increasing adoption of Internet banking by commercial bank customers due to its ease of use, leading to improved customer service levels. While opinions vary on the increase in financial services rendered, there is consensus on the positive impact of Internet banking on operational efficiency and financial performance. Pearson correlation analysis revealed online internet Banking has significant positive relationship with financial performance of commercial banks in North Rift Region, Kenya in Kenya.

The third objective of the study was to assess the influence of automated teller machine on financial performance of commercial banks in North Rift Region, Kenya. The survey reveals that a significant majority of respondents perceive ATM banking as a cost-effective option for accessing banking services, attributing economic benefits to its convenience. However, opinions are divided on the fairness of ATM services and their positive impact on different financial transactions, indicating varying customer experiences and concerns. Pearson correlation analysis revealed automated teller machine has significant positive relationship with financial performance of commercial banks in North Rift Region, Kenya in Kenya.

The fourth objective of the study was to determine the influence of payment card banking on financial performance of commercial banks in North Rift Region, Kenya. A notable proportion of respondents perceive an increasing trend in the utilization of payment card banking within the commercial bank, with a combined 50.7% agreeing on this trend. Additionally, there is strong consensus among respondents regarding the positive impact of payment card banking on the bank's profitability, service delivery standards, efficiency, and ability to track cash flow for profitability monitoring. Pearson correlation analysis revealed payment card banking has significant positive relationship with financial performance of commercial banks in North Rift Region, Kenya in Kenya.

CONCLUSION

The study sought to answer the study research questions.

The first research question was how does mobile banking influence financial performance of commercial banks in North Rift Region, Kenya? The study concluded that mobile banking positively and significantly influenced financial performance of commercial banks in North Rift Region, Kenya. Increase in mobile banking would results to increase in financial performance of commercial banks in North Rift Region, Kenya. The study underscored the varied perceptions regarding the impact of mobile banking on commercial bank operations. While there is consensus on certain benefits such as cost reduction and improved access to markets, opinions diverge on aspects like competitive advantage and speed of response to customer needs.

The second research question was how does online internet Banking influence financial performance of commercial banks in North Rift Region, Kenya. In regard to online internet Banking, the study concluded that online internet Banking has a direct and significant impact on financial performance of the commercial banks in Kenya. The study highlighted the perceived benefits of Internet banking, including enhanced customer service levels, operational efficiency, and financial performance within commercial banks. These findings underscore the importance of digital banking solutions in meeting evolving customer needs and driving organizational success.

The third research question was how does automated teller machine influence financial performance of commercial banks in North Rift Region, Kenya? Automated teller machine has a significant relationship with financial performance therefore; the study concluded that automated teller machine is significant determinant of financial performance of commercial banks in North Rift Region, Kenya. The findings highlight mixed perceptions regarding ATM banking, with customers acknowledging its cost-effectiveness but expressing reservations about fairness, transaction effectiveness, reliability, and overall value. These insights underscore the importance of addressing customer concerns and enhancing the ATM banking experience to meet diverse customer needs and expectations.

The last research question was how does payment card banking influence financial performance of commercial banks in North Rift Region, Kenya? Payment card banking has a statistically significant relationship with financial performance of commercial banks whereby they have a positive relationship. Therefore, the study concluded that payment card banking significantly determines the financial performance of commercial banks in North Rift Region. The survey findings indicated widespread belief among respondents in the beneficial effects of payment card banking on various aspects of the commercial bank's operations, including profitability, service delivery, efficiency, and financial management. These results underscore the perceived importance of payment card banking as a strategic tool for enhancing overall performance and competitiveness in the banking sector.

RECOMMENDATIONS

Based on the findings of this study the following recommendations were proposed in relation to each study objective.

Commercial banks should leverage the perceived benefits of mobile banking by investing in robust mobile banking platforms and enhancing customer education and awareness. Additionally, banks should conduct regular assessments to understand evolving customer needs and preferences regarding mobile banking services, ensuring continuous improvement and innovation in service delivery.

Commercial banks should prioritize investment in robust Internet banking platforms to meet the growing demand for digital banking services. Additionally, banks should conduct thorough assessments to identify areas for improvement in service delivery and customer engagement through Internet banking channels, ensuring sustained customer satisfaction and organizational growth.

Banks should prioritize improving transparency and fairness in ATM services, addressing concerns related to fees, transaction processing times, and dispute resolution. Additionally, enhancing ATM functionality and reliability, along with providing clear communication about transaction benefits, can help align customer perceptions with the value proposition of ATM banking, thereby improving overall customer satisfaction and loyalty.

Commercial banks should continue to invest in and promote payment card banking services to meet the evolving needs and preferences of customers. Additionally, banks should focus on enhancing payment card banking processes, ensuring efficiency, transparency, and reliability to maximize the benefits for both the bank and its customers. Moreover, efforts should be made to address any uncertainty or lack of awareness among respondents regarding payment card banking trends, highlighting its significance and potential impact on the bank's operations and customer experience.

Areas for further research

The influence of electronic banking on the financial performance of commercial banks was investigated in this research. The online internet Banking, automated teller machine, mobile banking, and payment card banking were the primary subjects of the research. In addition to the factors identified in this study, the researchers recommend that additional research be conducted on factors that were not considered in this study, such as firm size, which may have a direct or indirect impact on the relationship between electronic banking and financial performance of commercial banks in North Rift Region, Kenya. Interest rates and inflation, as well as other macroeconomic repercussions, may be considered.

The study focused on commercial banks in North Rift; therefore, further studies should be expanded to cover other commercial banks in Kenya.

REFERENCES

Ahmed, A., Khuwaja, F. M., Brohi, N. A., & Othman, I. L. (2018). Organizational Factors and Organizational Performance: A Resource-Based view and Social Exchange Theory Viewpoint. *International Journal of Academic Research in Business and Social Sciences*, 8(3), 579–599.

Isabwa, H. K., & Mabonga, M. W. (2021). Effect of Non-Performing Loans on Profitability of the Banking Industry in Kenya. *International Journal of Finance and Banking Research*, 6(2), 28.

Kobena, H. (2019) Disruptive Technologies, Innovation & Development in Africa: Implications for Evaluation. 9th AfrEA Conference, Abidjan, Cote d'IvoireSession: 'Perspectives on the 4IR and the African Evaluation Practice. *The Independent Development Evaluation of the African Development Bank*

KPMG (2018). A call to action: Disruptive technologies barometer: Media sector. Retrieved fromhttps://home.kpmg.com/xx/en/home/insights/2016/12/disruptive-technologies-barometer-media-sector.html