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INFLUENCE OF MOBILE BANKING ON FINANCIAL PERFORMANCE OF LISTED TIER 1 COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study sought to determine the influence of mobile banking on financial performance of listed tier 1 commercial banks in Kenya. The study adopted a causal research design to test the cause and effect relationship between the variables. The target population for this study was at two levels. The first target population was at institutional level where the study targets 6 listed tier 1 commercial banks in Kenya in operation as at 31 December 2016. Primary data was collected by administering open and close-ended questionnaire to the respondent. Secondary data was extracted from the annual financial reports released in their annual reports by the banks and annual supervision reports released by the Central Bank of Kenya. Analysis was done with the help of statistical package for social sciences (SPSS) version 21 and Microsoft excel 2016. Regression analysis was used find out the effect of mobile banking on the financial performance of Listed Tier one commercial banks in Kenya. The study findings established that mobile banking has a negative but insignificant relationship with financial performance. The study recommends that Listed Tier 1 commercial banks should continuously invest in alternative channels as it would afford them a better cost control measure compared to traditional investments but come up with several other ways of utilizing and returns from mobile banking.

Keywords: *Mobile Banking, Financial Performance*

INTRODUCTION

The enactment of The Banking Act (amendment) 2015 introduced price controls in the Kenya's banking industry. This saw the lowering of loan interests to 14 per cent, 4% per cent above the Central Bank Rate (CBR) while interest paying deposits are at 70 per cent of the regulators rates. With Net interest income contributing to 72 per cent of overall revenues of

the listed commercial banks, reduction in profitability is expected and hence lowered return on equity (Cytonn Investments, 2016). To moderate against lowered profitability, banks are responding through alternative banking Channels such as mobile, internet and agency banking. What remains unclear is how these new methods of delivering financial services affect the financial performance of Tier 1 commercial banks.

Traditionally, commercial banks have used branches, ATM and call centers to interact with their customers, though newer direct channels such as social media, mobile, and Internet have emerged recently (Awinja, 2015). Branches have always played an important role and remain a key banking channel. With customer needs and preferences frequently changing, coupled with ever present innovations on technology has increased the popularity and usage of other direct channels in the past ten years (Cytonn Investments, 2016). The current economic scenario gives banks an opportunity to identify channels that are most important to their customers, and provide a positive experience across them. Banks are shifting their customers from high-cost to lower-cost channels, thus reducing their total cost-to-serve. This will help banks leverage their distribution networks by offering the right products to the right customer segment through a desired channel, resulting in overall cost savings and an enhanced financial performance (Mabwai, 2016).

Banks globally are investing in enterprise mobile financial service solutions to deliver more mobile-based banking services and reduce the overall cost of operations. As the adoption rate of online banking continues to increase globally, banks are expected to increase their online marketing presence by leveraging technologies and social networks, which have evolved as an integral part of the banking channel mix (Saluja & Wadhe, 2015). Though branches remain an important channel for customers, transaction volumes across branch networks are estimated to have grown only marginally through 2016-17, and are expected to remain flat in the future. In contrast, the online transaction volumes within the online channel are estimated to have grown at the highest rate through 2016-17, and are expected to continue growing at a healthy pace going forward (Central Bank of Kenya, 2016). According to the Central Bank of Kenya (CBK), as at 31st March 2016, there were 17 commercial banks that had contracted 40,224 agents which had facilitated over 170.5 million cumulative transactions valued at Ksh. 930.2 billion as compared to 16 commercial banks that had 34,381 agents that had facilitated 149.4 million transactions valued at Ksh. 817.7 billion as at 31st March 2015. The number of banking transactions undertaken through bank agents increased from 10.3 million in quarter one of 2015 to 55.8 million transactions in quarter one of 2016. Similarly, the value of

banking transactions undertaken through agents increased from Ksh. 65.0 billion to Ksh. 176.7 billion over the same period. This was mainly due to increased confidence and acceptability of the agency banking model by banks and the public as an economical, convenient delivery channel (Central Bank of Kenya, 2016).

The past thirty to forty years have seen the global banking sector revolutionize as a result of onslaught on new technologies and many amendments to the laws governing utilization of such technologies (Kohali & Sheleg, 2011). As a result, several banks have started adapting their distribution channels and shifting from frontal personal service to direct sales and selling via phone, email or electronic transactions. This creates value addition both to the bank and its customers. Recent economic meltdown and marketplace complexness have placed great pressure on the banking institutions. The demand for a digital lifestyle and the technological revolution it brings to homes and the workplace, coupled with a significant demographic shift and a new regulatory framework, are subjecting the finance sector to a host of new challenges in a time of severe market uncertainty (Kohali & Sheleg, 2011).

In an attempt to optimize services and minimize costs, banks are frequently migrating towards a 24-7 service and customers are enjoying the greater sense of freedom that this creates. Availability is the name of the game as clients demand instant access to loans, deposits and our account status. In a bid to drive even greater differentiation from the competition, financial services institutes are now exploring alternative banking channels, including the internet, telebanking, self-service halls, cell-phone and fax banking (Kohali & Sheleg, 2011).

Statement of the Problem

The enactment of The Banking Act (amendment) 2015 introduced price controls in the Kenya's banking industry. This saw the lowering of loan interests to 14 per cent, 4% per cent above the Central Bank Rate (CBR) while interest paying deposits are at 70 per cent of the regulators rates. With Net interest income contributing to 72 per cent of overall revenues of the listed commercial banks, reduction in profitability is expected and hence lowered return on equity (Cytonn Investments, 2016). To mitigate against lowered profitability, banks are responding through alternative banking Channels such as mobile, internet and agency banking. What remains unclear is how these new methods of delivering financial services affect the financial performance of Tier 1 commercial banks.

Review of literature on empirical research establishes that studies that have looked at the synergy between alternative banking channels and financial performance remain fragmented

and inconclusive. For instance, Valluri (2011) reviewed the role of Alternate Channels in Banking and Wealth Management and concluded that with the help of technology, the banking industry can develop or expand into new channels to survive in the current competitive environment (Valluri, 2011). However, the study was carried out in India and it's not clear if the findings are portable to the Kenyan situation. Locally, a study by Awinja (2015) sought to determine the effect of service delivery channels on operational performance of commercial banks in Kenya. The study concluded that internet banking offers more convenience and flexibility to customers. The researcher however did not consider the effect the service delivery channels would have on financial performance of commercial banks. Kamau (2014) did a study on the effects of financial innovations on the financial performance of commercial banks in Kenya. The study findings established that financial innovations had great impact on the financial performance of the banks. To the best of the researcher's knowledge, no study had been done on the effect of mobile banking on the financial performance of listed Tier 1 commercial banks in Kenya.

Objective of the Study

The general objective of this study was to examine the influence of mobile banking on financial performance of listed Tier 1 commercial banks in Kenya.

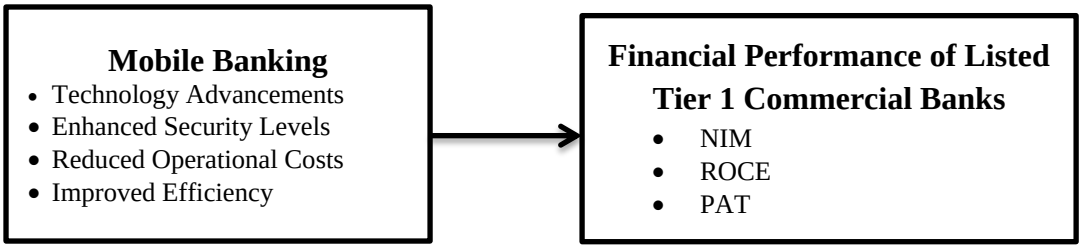
LITERATURE REVIEW

The theory of financial intermediation

Financial intermediaries' theories are based on the economic theories of imperfect information that were advanced by the seminal papers of Akerlof (1970), Spence (1973) and Rothschild and Stiglitz (1976). The existence of financial intermediaries is due to the reduction in transaction and information costs that arise due to information unevenness amongst borrowers and lenders (Coase, 1937). The effective functioning of markets is assisted by financial intermediaries, and any aspects that influence the volume of credit passing through financial intermediaries can have significant macroeconomic effects. Literature has explained the existence of financial intermediaries from two points of views. In the first instance, financial intermediaries are viewed as providers of liquidity, while the second perspective focus on the financial intermediary ability to transform the risk characteristics of the underlying assets. In both instances, financial intermediation reduces the cost of channeling funds between borrowers and lenders thus occasioning a more resource allocation efficiency (Claus & Grimes, 2013).

Financial intermediaries play a key role in credit markets because they reduce the cost of channeling funds between relatively uninformed depositors to uses that are information-intensive and difficult to evaluate, leading to a more efficient allocation of resources. Intermediaries specialize in collecting information, evaluating projects, monitoring borrowers' performance and risk sharing (Bizimana, 2016). Despite this specialization, the existence of financial intermediaries does not replicate the credit market outcomes that would occur under a full information environment. The existence of imperfect, asymmetrically-held information causes frictions in the credit market. Changes to the information structure and to variables which may be used to overcome credit frictions (such as firm collateral and equity) will in turn cause the nature and degree of credit imperfections to alter. Banks and other intermediaries are special where they provide credit to borrowers on terms which those borrowers would not otherwise be able to obtain (Claus & Grimes, 2013). Because of the existence of economies of scale in loan markets, small firms in particular may have difficulties obtaining funding from non-bank sources and so are more reliant on bank lending than are other firms. Adverse shocks to the information structure, or to these firms collateral or equity levels, or to banks' ability to lend, may all impact on firms access to credit and hence to investment and output (Bizimana, 2016).

Conceptual Framework



Independent Variable **Dependent variable**

Figure 1 Conceptual Framework

Empirical Review

Munaye (2009) studied the application of mobile banking as a strategic response by equity bank Kenya limited to the challenge in the external environment. Munaye (2009) reviewed the concept of mobile banking as a strategic response where its effects on financial performance were not considered. Wambari (2009) studied mobile banking in developing countries using a case of Kenya. This study sought to establish the importance of mobile banking in the day today running of small businesses in Kenya and to understand the challenges involved in using m-banking as a business tool and appreciate the advantages and

Kigen (2010) studied the impact of mobile banking on transaction costs of microfinance institutions where he found out that by then, mobile banking had reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base. Kigen (2010) sought to determine the impact that mobile banking bore on transactional costs of microfinance institutions. Zimmerman (2010) discovered that mobile banking in developing world was an object of skepticism among financial insiders while proponents argued that cell phones could revolutionize personal finance in poorer country, regulators warned of money laundering and most bankers worried that low customer balances wouldn't be worth transaction costs. From the above discussion of empirical literature, this study hypothesizes that mobile banking supports the delivery of mobile banking services in an economy.

Ching (2011) studied the factors affecting Malaysian mobile banking adoption from the point of an empirical analysis. This study aimed at extending the Technology Acceptance Model (TAM) to investigate mobile banking acceptance in Malaysia. More specifically, the objective of this study was to examine the relationships between constructs of perceived usefulness, perceived ease of use, social norms, perceived risks, perceived innovativeness, and perceived relative advantages towards behavioural intention in adopting mobile banking. The findings of this study revealed that perceived usefulness, perceived ease of use, relative advantages, perceived risks and personal innovativeness were the factors affecting the behavioral intention of mobile users to adopt mobile banking services in Malaysia.

Kingoo (2011) studied the relationship between electronic banking and financial performance of commercial banks in Kenya where he paid keen attention on the microfinance Institutions in Nairobi. Kingoo (2011) looked at the wider electronic banking whereas this study will only concentrate on mobile banking. Mwange (2013) sought to determine the impact of mobile banking on the Financial Performance of Commercial Banks in Kenya during a period of five years between 2008 through 2012. The study found evidence of positive relationship between mobile banking and bank performance. The study results show that Mobile Banking has a moderate influence on profitability of commercial banks in Kenya. Thus, there exists positive relationship between mobile banking and bank performance. Based on the summary of the major findings of the study it can be concluded that mobile banking offers banks several opportunities for increasing revenues (Mwange, 2013).

Mabwai (2016) sought to determine the effects of mobile banking on the financial performance of commercial banks. The study by Mabwai (2016) revealed that the number of

mobile banking transactions, capital adequacy, markets share and the size of the assets had a positive influence on the financial performance of commercial banks. According to Mabwai (2016), the adoption of mobile banking by commercial banks in Kenya has resulted in improved performance over the years. It was recommended that commercial banks should increase their focus and investments in mobile banking as this is the future of the banking industry in order for them to remain profitable (Mabwai, 2016).

METHODOLOGY

This study adopted a causal research design because it enables the study to test the cause and effect relationship between two or more variables, measures the extent of relationship between the variables and specifies the nature of functional relationship between two or more variables (Saunders, Lewis, & Thornhill, 2015). Causal research design is selected because it enables the study test how the independent variables – alternative delivery channels determines the financial performance of listed tier 1 commercial banks in Kenya. The target population for this study was at two levels. The first target population was at institutional level where the study targets 6 listed tier 1 commercial banks in Kenya in operation as at 31 December 2016. At this level, secondary data will be collected. The second level of target population is the senior officers of Treasury, The senior operation officers and senior finance officers in each of the six listed tier one commercial banks in Kenya of the 6 listed tier 1 commercial banks in operation in Kenya as at 31st December, 2016. In this case primary data will be collected through questionnaire. The study employed a census technique to identify the respondents. The study carried out a pilot test to test the validity and reliability of the data collection instruments in gathering the data required. The study used regression statistics to analyze the data with the help of SPSS.

RESULTS

Response Rate

Collection of primary data was carried out in October 2017 using self-administered questionnaires. Secondary data which was collected using data collection form and it was collected in the same time period. Sixty four (64) questionnaires were issued to randomly selected bank senior managers from six tier one listed commercial banks. Forty (40) questionnaires were returned representing a 64.5 percent response rate. The response rate is considered adequate given the recommendations by Saunders, Lewis and Thornhill (2007) who suggest a 30-40% response is adequate.

Effect of Mobile Banking on Financial Performance

The objective was to determine the effect mobile banking had on financial performance of listed Tier One commercial banks in Kenya. Likert scaled statements on the questionnaire were used to verify the objective. Questionnaire responses were based on Likert scale that was coded with numerical value assigned as follows: Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 and Strongly Agree = 5.

The results in Table 1 indicates that 78% of the respondents agreed that mobile banking reduced operation costs thus improving financial package while 12% of the respondents strongly agreed. Another 10% neither agreed nor disagreed with the statement. On whether investment in mobile banking could be recovered in less than three years, 83 percent agreed while 2% disagreed while 15% of the respondents were neutral. 65% of the respondents agreed that mobile banking had positive impact on banks financial performance. A mean score of 3.79 indicated a positive influence on financial performance by mobile banking. The standard deviation was 0.477 which meant the existence of the responses clustering within one standard deviation from the mean

Table 1: Effect of Mobile Banking on Financial Performance

STATEMENT	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	S.D
	%	%	%	%	%		
Mobile banking influence reduction of operational costs and hence better financial performance for the bank.	0	0	10	78	12	3.98	0.448
Mobile banking investments have payback period of less than 3 years and hence improved financial performance for the bank.	0	2	15	80	3	3.76	0.448
Incomes from Mobile banking have had positive impact on bank's financial	0	5	30	60	5	3.63	0.536

performance.

Average	**3.79**	**0.477**

Regression Analysis

Table 2: Model Summary

Model	R	R square	Adjusted R square	Standard Error of the Estimate
1	0.422[a]	0.196	0.168	0.91237630

[a] Predictors (Constant), Mobile banking

Source: Research Findings

Findings in Table 4.10 indicate that the value of R- Square is 0.196 which shows that 19.6% of the variation in the dependent variable (Financial performance) is explained by the mobile banking while 80.4% is explained by other variables not captured by the model. The R value of 0.422 shows that there is a direct and positive relationship between mobile banking and financial performance.

Regression Coefficients

Table 3 Regression Coefficients

Model	**Unstandardized coefficients**		**Standardized coefficients**	**t**	**sig**
	B	**Std. Error**	**Beta**		
Constant	3.171	.740		4.256	.000
Mobile Banking	-.008	.008	-.082	-.985	.326

$$\mathbf{Y = 3.171 +\!\!- 0.008X_3 + e}$$

Findings indicate that mobile banking has a negative but insignificant relationship with financial performance as shown by the beta coefficients of -0.008.

Analysis of variance

Table 4 Analysis of variance

Model	**Sum of squares**	**df**	**Mean square**	**f**	**Sig.**

Regression	1.453E12	1	2.906E11	6.999	0.0000
Residual	5.979E12	148	4.152E10		
Total	7.432E12	149			

Source: Research Findings

The results indicate that the regression model is significant at 5% level of significance as the p values of 0.000<0.05. This indicates that the regression model is fit and there is a significant relationship between mobile banking and financial performance of Listed Tier 1 commercial banks in Kenya.

Conclusions

The study concludes that mobile banking has a negative but insignificant relationship with financial performance. However, mmobile banking influence reduction of operational costs, have payback period of less than 3 years and the incomes from mobile banking have had positive impact on bank's financial performance. The adoption of mobile banking by listed Tier 1 commercial banks has a high potential of improving financial performance and therefore the potential of maximizing shareholders wealth but should only be adopted to certain level beyond which it will be of no additional value to the bank.

Recommendations

Listed Tier 1 commercial banks should continuously invest in mobile as it would afford them a better cost control measure compared to traditional investments in brick and mortal of physical branches. This helps to minimize the cost per unit of service and hence improved financial performance for the banks. However, the listed Tier 1 commercial banks should be innovative and come up with several other ways of utilizing and returns from mobile banking.

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