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ABSTRACT

Commercial banks are crippling with challenges in respect to their profitability. Ideally, the government of Kenya is leveraging on these banks to finance the ambitious Big-Four Agenda. However, consistent posting of losses of these banks creates doubts on whether the government will achieve the aforementioned Big-Four Agenda. This study established the relationship between agency banking and mobile banking with profitability of commercial banks in Kenya. The study was guided by the financial intermediation theory, the modern portfolio theory, the agency theory and the technology acceptance model theory. An explanatory descriptive research design was adopted targeting 41 commercial banks in Kenya. Secondary data was collected from central bank reports and publications as well as the respective banks over a period of 2016-2020. The study collected data on number of mobile banking agents, volume of transactions through mobile banking, the value of net income and the total equity from the respective commercial banks. Data was analyzed descriptively and inferentially prior to the diagnostic tests. Statistical Package of Social Sciences was used to analyze data while findings were presented using tables and figures. The study established that mobile banking (β=.261, $p<0.05$) had significant effect on return on equity among commercial banks in Kenya and this is significantly moderated by bank size. The study concluded that the relationship between financial inclusion strategies and profitability of commercial banks in Kenya is significant. The study recommended that business development managers, regional marketing managers working in commercial banks in Kenya should increase the agency network while creating awareness among customers on us of bank agents to carry out transactions like payment of bills. The management team should borrow experience of the Kenya Commercial Bank by slashing all the transaction costs of mobile banking.

Keywords: *Agency Banking, Mobile Banking, Commercial Banks*

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INTRODUCTION

Profitability is one of the objectives that guide existence of commercial banks. In today's dynamic era commercial banks striving to improve their profitability through innovation in products, governance and services among other innovation. The ability of financial institution to deliver products and services in the most efficient and effective manner is therefore key to performance and profitability of the banking sector. However, generation of revenues and thus profitability require that commercial banks apply strategies that allow the unbanked population to have access to bank services hence financial inclusion strategies (Ratnawati, et al., 2018). Technology has introduced new ways of delivering banking services and products to the customers, such as ATMs, and internet banking as opposed to the traditional mode of branch networks and this results to increased bank gains. These developments in the banking industry have positive impacts on service quality and future of the banking activities. The ability of financial institution to deliver products and services in the most efficient and effective manner is therefore key to performance and profitability of the banking sector (Tan et al, 2017).

Innovative channels which have been adopted by banks as service delivery mechanisms such as mobile banking, agency banking and ATMs of availing financial services to this calibre of populace and consequently making money, without necessarily using the traditional branch networks or Automated Teller Machines (ATMs) has helped the banks reach the unbanked population. This has helped increase the level of formal financial inclusion in unserved and underserved areas and as a consequence positively impacting the banks revenues and profits (Okoye, et al. 2017).

However, commercial banks experiences financial crises ranging from peaks in nonperforming loan ratios, loose credit, and inferior capital adequacy ratios, over banking due to excessive competition, less profitability and lack of innovation. The modern commercial banks are trying to improve their profitability by innovating in products, governance and services among other innovations (Maherali, 2017). In Sub-Sahara Africa, Nsiah, et al (2021) shared that financial inclusion enhances profitability of banks that ultimately contribute to alleviation of poverty. Nsiah et al. (2021) suggested the need for government and development partners in sub-Saharan region to come up with policies that may support provision of supporting environment that may encourage financial institutions to avail financial facilities that are voluntarily affordable and available in unrestricted domain.) There are ideological perspectives in the relationship between financial inclusion and banks profitability. This is derived from the various minimal low costs, different areas in location of banks and the little deposits which together adds up to increased levels of banks' profits. In a typical sense, the loans are given collateral free, meaning that they are charged at very high-interest rates. The financial institutions gain from such strategy (Okoye, et al., 2017). Another perspective of profits is determined as a multiple of small loans, good interest rate and high repayment leading to higher profitability.

Mwaniki (2014) in his study found that mobile banking has transformed the business of money transfer and created various innovations that have cut on the transaction costs for the banks and the customers that have resulted to high financial performance in the sector.

The study by Nzyuko and Jagongo (2017) failed to capture the moderating outcome of variables like bank size and regulations by the Central Bank of Kenya that are equally critical as far as profitability of commercial banks is fretful. Samuel and Mbugua (2019) looked at financial inclusion initiatives and financial performance, with focus on SMEs owned by women and not commercial banks.

There are 44 commercial banks in Kenya that are categorised into public and private institutions based on ownership. The private institutions are further classified as local and foreign owned entities (Central Bank of Kenya [CBK], 2020). However, in the recent past, most of these commercial banks have consistently posted poor records of financial performance up fronting their closure. These include the National Bank of Kenya (NBK), Consolidated Bank of Kenya Ltd (CBKL) and Development Bank of Kenya (DBK). Much of the woes of these entities has been blamed on their risk management frameworks (Barasa et al. 2017). Financial inclusion strategies seek to ensure that the unbanked population has access to formal financial services within the economy (Otiato, 2016).

Statement of the Problem

In Kenya, majority of the commercial banks are crippling with challenges in respect to their profitability. This is because of trends connected to profitability being unstable. Banks been posting financial losses. However, this has been consistent, raising question of whether they are able to acquire any profit. In commercial banks, profitability is the main aspect which contributes largely to how a bank performs. The connection that exist between financial inclusion, agency banking and bank profitability remains an unresolved issue especially in the Kenyan context thus the aim of this study.

Research Objective

- To find out the relationship between agency banking and profitability of commercial banks in Kenya
- To assess the relationship between mobile banking and profitability of commercial banks in Kenya

The following hypotheses were used to guide the study:

- **H_{01}:** Agency banking has significant relationship with profitability of commercial in Kenya
- **H_{02}:** Mobile banking has significant relationship with profitability of commercial banks in Kenya

LITERATURE REVIEW

Theoretical Review

The study was guided by the financial intermediation theory, the modern portfolio theory, the agency theory and the technology acceptance model (TAM) theory will be used to underpin the study. The financial intermediation theory will be the main theory to guide the study followed by the modern portfolio theory.

Financial Intermediation Theory

The proponents of this theory include Gurley et al (1960) and Goldsmith (1969). Financial intermediation recognizes the commercial banks as intermediaries that seek to enhance financial inclusion in the economy. The rationale why intermediaries exist is to be in position of lowering the transaction costs and asymmetry of information. According to Gurley et al (1960), financial inclusion involves ensuring that surplus is deposited with the financial institutions in place so that the same is lend to units having deficit in an economy. When there is a market that provides support huge intermediaries enhances the quality of financial commodities that are in place for customers including lenders and the borrowers (Thakor & Boot, 1997). The resultant effect of this is to widen the acceptance of the products and services by the final consumers because they are of high quality.

This theory is used to anchor how different strategies like the use of mobile and agency banking platforms may enhance financial inclusion among commercial banks which in turn may boost the level of profitability.

The Agency Theory

The agency theory was advanced by Meckling and Jensen (1976) who sought to provide the link between the principal and the agents in the course of their interaction. The role of the agent is to make sure the undertakings are within the requirements of the principal. This however might not be the case as there usually exists conflicting views between these two parties. Thus, the self-interested behavior of the agents breeds the conflicting interests. The alignment between these two parties requires existence of some checks and balances hence the mechanisms to monitor. These include competitive remuneration of the agents.

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The position of this theory to the study was that it was used to anchor the agency banking variable and its implication on profitability. The existing conflicting interests between agents and principal provide an indication of existence of mixed nexus between agency banking and the profitable position of the banking entities.

Empirical Review

Agency Banking and Profitability

Ndambuki (2016) conducted a study on agency banking and how it is connected with profitability. The study was informed by the fact that banking entities including. The adopted design was longitudinal descriptive survey. In total, 20 banking entities were covered by the inquiry focusing on a period from 2006 all through to 2015. The selection of the banking entities to participate was done purposively basing on the available information and the degree of consistency in financial reporting. Information from second hand sources was gathered from CBK publications and reports. The study failed to establish a significant link between agency banking and profitability. Argamo (2015) covered variables like accessibility, cost of service and customer transactions through agency banking. To select the participants, stratified method was embraced. The inquiry noted that agency banking is significantly linked with profitability. The recommendation raised was for the banking institutions to grow the number of bank agents.

The study by Kingori and Gekara (2015) was done in Thika covering the agents of the cooperative, Kenya Commercial Bank and Equity Bank. Information from the participants was gathered from primary sources. It was noted that agency banking and financial performance are linked with each other in significant terms. In a study by Karimi (2018), the adopted design was descriptive and a total of 11 agents were sampled and covered. The adopted method of selection of the respondents was stratified sampling. It was noted that the costs of transaction of agency banking were so high and that security of the transactions and customers was still evident. The study recommended the need to strengthen the internal control systems to enhance the effectiveness of the agents.

While focusing on Zimbabwe, Santu, et al. (2017) did an evaluation of agency model of banking that had been embraced by institutions. The adopted design was descriptive and information was gathered from banking entities that had embraced agency banking. In total, 5 entities were selected and included in the inquiry. It was shown that the banking entities that had embraced agency banking had expanded into other regions which had widened the base of the customers. In operating the agency model of banking, a number of constraints were identified including legal as well as reputational risk and protection of consumers.

For the study by Odhiambo and Ngaba (2019) the adopted design was descriptive with 120 participants being selected. The inquiry noted suggested for the need to improve the level of customer care and increasing the level of awareness of the agency banking services to the end users. It was noted that the costs of transaction of agency banking were so high and that security of the transactions and customers was still evident. The study recommended the need to strengthen the internal control systems to enhance the effectiveness of the agents.

Mobile Banking and Profitability

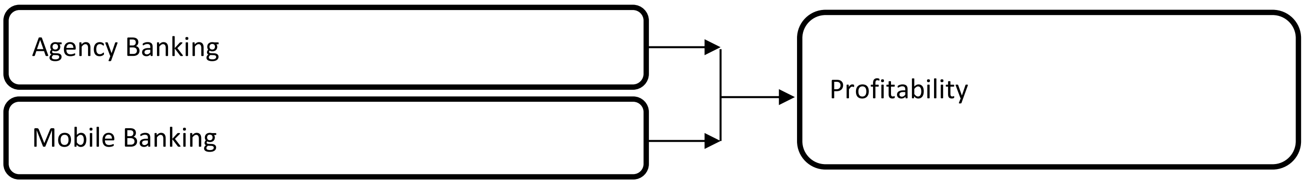
An inquiry conducted in Bangladesh by Islam, Kabir, et al. (2019) placed emphasis on adoption of online banking and the link with profitability. Both ROA and ROE were the proxies of performance and a total of 30 listed banking entities were targeted and included in the inquiry. It was shown that unlike banking entities without online platforms, those banks that have embraced online banking have higher ROA and ROE. In Jordan, Zalloum et al. (2019) focused on services of mobile banking and their link with electronic word of mouth (EWM). In Uganda, Nondo (2020) used a case of students in Cavendish University to provide the link between mobile banking and their saving behavior. The variables used in the inquiry include adoption and growth of m-banking, m-banking money saving tools, cost of m-banking and effectiveness resulting from m-banking. The inquiry was supported by an exploratory design and selection of the participants was done purposively. It was noted that mobile banking boosts the ability of users to save.

In Nigeria, Usman (2020) did an assessment of mobile banking and its connection with financial performance. The information used in this inquiry was obtained from first hand sources. The analyzed findings indicated that mobile banking has no direct and significant link with financial performance. Thus, the inquiry inferred that an increase in the rate of adoption of mobile banking may lower performance in financial terms. A related study in Nigeria by Uwalaka and Eze (2020) looked at mobile banking and how it is linked with satisfaction of the customers. The key emphasis of the inquiry was on security, proficiency, ease of usage and responsiveness related with mobile banking and how these attributes enhance satisfaction of the end users. The inquiry was supported by survey design and the sample was determined as 384. Information was gathered from first hand sources. It was shown that responsiveness, ease of utilization, proficiency and security of mobile banking are all linked with satisfaction of the end users.

Figure 1

Conceptual Framework

Conceptual Framework



Independent Variable **Dependent Variable**

MATERIALS AND METHODS

Research Design: A descriptive explanatory descriptive research design was adopted in this inquiry, so as to bring out the link between strategies of financial inclusion and the link with profitability. According to Aduaka and Awolusi (2020) descriptive design provides a description of the underlying issues in an inquiry while sharing out evidence in settings that are natural.

Population of the Study: Population covers the elements that have related attributes which form the basis of the inquiry. In total, 41 banking institutions excluding Charterhouse Bank Limited, Imperial Bank Ltd and Chase Bank (K) Limited (CBK, 2020) were targeted.

Sample Design and Sample Size: Sampling involves selection of the elements from the target population which need to be covered in the final inquiry. The essence of sampling was to establish a manageable sample that can easily be covered. This study adopted census and thus no sampling was conducted. The essence of census was to cover all the banks.

Data Collection: Data was collected from secondary sources including the CBK reports and publications by the National Treasury as well as the respective banks. Annual data was collected covering the 5-year period (2016-2020). The period was selected because it was relevant in obtaining the required data.

Data Analysis and Presentation: The information collected from the field was coded into SPSS tool in readiness for analysis. Multiple regression helped to test the effect of financial inclusion strategies on profitability. Besides regression analysis, correlation analysis was also carried out. The following regression model was used to estimate the link between financial inclusion and profitability:

P= $\beta_0 + \beta_1 AB + \beta_2 MB + \varepsilon$

Where;

P-Profitability

AB- Agency banking

MB-mobile banking

ε is the error term

β_0 is the regression beta coefficient

Diagnostic Tests: Diagnostic tests covering normality test, muilticollinearity test and autocorrelation test were conducted prior to inferential analysis. Figures and f tables aided in the presentation of the findings of the study.

RESULTS AND DISCUSSION

Summary of Descriptive Statistics

The values of means and standard deviations were generated and appropriately interpreted to describe the data as summarized in Table 1.

Table 1

Summary of Descriptive Statistics

	Mean	Std. Dev
Agency banking	2.561	.609
Mobile banking	3.781	.845
Profitability (ROE)	.064	.376

Table 1 gives the values of means and standard deviations on agency banking as 2.561 and 0.610, mobile banking having 3.782 and 0.846 and ROE with 0.064 and 0.377. This means that commercial banks in Kenya do leverage on financial inclusion to generate 6.4% of their profits using their equities.

Tindal and Bogonko (2017) observed that in order for commercial banks to generate positive ROE, they need to enhance their existing mobile banking and ATM banking platforms.

The findings indicate the value of R square as 0.617, which deduces that 61.7% change in ROA among commercial banks in Kenya is explained by their financial inclusion strategies. Thus, compared to ROE, financial inclusion strategies contribute more towards ROA of the commercial banks in Kenya. The results indicate that mobile banking (β=.034, $p<0.05$) exerted the greatest and significant effect on ROA of commercial banks in Kenya followed by ATM banking (β=.021, $p<0.05$), internet banking (β=.016, $p<0.05$) and agency banking (β=.008, $p<0.05$). This means that mobile banking, ATM banking, internet banking and agency banking are all significant factors contributing towards ROA of commercial banks in Kenya.

Correlation Analysis

Correlation analysis was performed to establish the strength and nature of relationship between financial inclusion and profitability. The study had two measures of profitability; ROE and ROA. The findings are as presented in the subsequent sections.

Correlation Results with Return on Equity as Measure of Profitability

Table 2

Correlation Results with Return on Equity as Measure of Profitability

		ROE	**Agency Banking**	**Mobile Banking**
Profitability	Pearson Correlation	1		
Agency Banking	Pearson Correlation	.323	1	
Mobile Banking	Pearson Correlation	.600	.461**	1

The results in Table 2 show that mobile banking has a strong and positive correlation with ROE of commercial banks in Kenya ($r=0.600$, $p<0.05$). On the other hand, agency banking ($r=0.323$, $p<0.05$) had a moderate and positive relationship with ROE among commercial banks in Kenya. The general inference drawn from the findings is that financial inclusion exerts a positive effect on ROE of commercial banks in Kenya. This means that strengthening financial inclusion would see an improvement in ROE reported by commercial banks in Kenya.

Regression Results and Hypothesis Testing

Financial Inclusion Strategies and Return on Equity as a Measure of Profitability

The tables in the subsequent sections outlines evidence

Table 3

Model Summary linking Financial Inclusion Strategies and Return on Equity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.646[a]	.417	.404	.29079

Table 3 shows the coefficient of determination R square as .417, which infers that 41.7% change in ROE of Kenyan banking entities is explained by their financial inclusion strategies.

Table 4

ANOVA Linking Financial Inclusion Strategies and Return on Equity

	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.592	4	2.648	31.317	.000[b]
Residual	14.797	175	.085		
Total	**25.390**	**179**			

Table 4 infers that the overall regression model linking financial inclusion strategies and ROE was significant ($F=31.317$, $P<0.05$).

Table 5

Beta Coefficients and Significance of Financial Inclusion Strategies and Return on Equity

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.959	.113		8.498	.000
Agency Banking	.031	.044	.050	.693	.490
Mobile Banking	.261	.034	.586	7.767	.000

Table 5 shows that m-banking ($\beta=.261$, $p<0.05$) had significant link with ROE. This finding means that mobile and ATM banking technologies are key contributors towards ROE of commercial banks in Kenya. The findings are supported by who Joshi (2019) explored the link between the service quality of ATMs and the level of satisfaction of the end users. It emerged from the analysis that ATM services and satisfaction of the end users are positively connected with each other (Shieh, 2010). On the other hand, agency banking ($\beta=.031$, $p>0.05$) had insignificant effect on ROE of commercial banks. These means that internet and agency banking channels are not core drivers of ROE of the commercial banks in Kenya.

CONCLUSION

Agency banking is a moderate but positive correlate of both ROA and ROE generated by Kenyan banks. Agency banking takes a significant role in driving ROA of Kenyan banks. However, its contribution towards ROE of Kenyan banks is negligible (Pasukodewo & Susanti, 2020). Bank size is a weak but positive correlate of both ROA and ROE. Similarly, bank size significantly moderates the relationship between financial inclusion strategies and ROA as well as ROE. This means that the size of the bank is important when it comes to application of the financial inclusion strategies to remain profitable.

Mobile banking is strongly and positively correlated with both ROA and ROE generated by Kenyan banks. Mobile banking is a significant predictor of both ROA and ROE generated by the Kenyan banks. However, the contribution of mobile banking towards ROE is far above the one exerted to ROA of the commercial banks in Kenya.

RECOMMENDATIONS

The business development managers together with regional marketing managers working among commercial banks in Kenya should increase the agency network while creating more awareness among customers on the need to use bank agents to carry out transactions like payment of bills.

The management team of the commercial banks in Kenya should borrow experience of the Kenya Commercial Bank by slashing all the transaction costs of mobile banking. This will increase its uptake and the average value and volume of transactions which would in turn improve and ROE.

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