Effects of Deposits through Agency Banking on Profitability of the National Microfinance Bank in Moshi Municipality, Tanzania

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Abstract
Deposits in commercial banks are a source of liquidity in operations. The objective of the study was to investigate the effects of deposits through agency banking on profitability of the National Microfinance Bank (NMB) in Moshi Municipality. Three National Microfinance (NMB) bank branches were used for the study. The theory of the firm was used to inform the study. A concurrent research design was used with a mixed research approach involving quantitative and qualitative data collection. Secondary data on the volume of deposits by the bank agents was obtained from the bank branches and key informant interviews using an interview guide was done to branch managers and agency banking section of each branch officers where in total 7 interviews were conducted. Data was processed and analyzed based on information collected. Quantitative data were analyzed using descriptive statistics where means were obtained. Later Analysis of Variance was conducted before a regression analysis being done. Qualitative data was analyses using content analysis where themes were generated. Findings indicated that there is a significant effect of deposits by agency banking with $p>0.05$ (0.002). This implies that, as deposits through agency banking increases, then profitability of the bank increases by 0.002 units. The study concludes that an increase in the number of agents increases the profitability of the National Microfinance Bank in Moshi Municipality since a large a big volume of deposits have effects on profitability. Also, a decrease in volume of deposits negatively affects the profitability of the bank since deposits provides banks with adequate funds to lend and to earn interest income. It is recommended that NMB should invest more resources towards increasing their number of agents to increase their profitability. NMB should also develop deposit mobilization strategies through agency banking to ensure that their clients use agency-banking services so that deposit levels are kept high all the time.

Keywords: Agency banking, Deposits, Profitability

1. Introduction

Banks are said to play a crucial role in resource distribution to facilitate credits to business organizations and individuals thus enabling economic growth and investment (Nimwesiga, 2019; Kanyore, 2018; Santu et al., 2017). Existing proof proposes that, new bank delivery methods substantially reduce the cost of conveying core banking activities, even after the capital investment required is taken into account thereby making banks more competitive (Bett&Bogonko, 2017). Across the world, multiple bank delivery channels have been emphasized as key in reducing costs and enhancing banks' profits, providing convenient services to customers and also simplifying the effecting of transactions (Muthinja&Chipeta, 2018). As for the economically developed countries, Macharia et al, (2021) notices that, on average, 33%of the mature population in the United States and European countries use Mobile Banking (MB). Mobile banking as a bank delivery channel dates back to the late 1990s when the German company pay box in collaboration with Deutsche Bank, launched the first service (Khattak&Saiti, 2021). Agency banking, on the other hand, encompasses banks contracting with non bank retail agents as outlets for financial services (Shabbir et al, 2018; Zu& Chen, 2018).

An agency bank is defined as an entity that acts in some capacity on behalf of another bank, it, thus, cannot accept deposits or extend loans in its own name; it acts as agent for the parent bank (Mwariri&Awuor, 2020; Nyagadza et al., 2020). An example is a retail outlet contracted by a financial institution or a mobile network operator that processes clients' transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, or receive government benefits or a direct deposit from their employer (Mwang'onda, 2020).

Dynamism in the business world has changed a lot and it has been characterized by stiff competition among the players and the banking industry is not an exception (Khattak&Saiti, 2021; Shabbir et al, 2018; Zu& Chen, 2018). As a result, competition amongst the commercial banks has pushed banks towards becoming more innovative (Zu& Chen, 2018). These innovations include an introduction of but not limited to Automated Teller Machines (ATMs), Credit Cards, Mobile Banking, Internet Banking, youth oriented accounts, women oriented banking, Shariah compliant banking, children accounts and later on the world has witnesses a massive within the banking sector an introduction of agency banking (Bold, 2011). Though commercial banks continue to invest in rolling out brick and mortar branches that are complemented by various delivery channels, the challenge of access to formal financial services remains a big impediment to financial performance (Khattak&Saiti, 2021).

Bank clients especially in the remote areas are forced to travel long distances and spend huge amounts of money on transport in order to access a branch (Nyagadza et al., 2020). In addition to the cost of transport is the time spent commuting to and fro that could have been spent more productively (ibid). To curb these challenges, a number of central banks around the world have released legislation that allows commercial banks to contract third party retail networks as agents (Mwando, 2013). Merchandising outlets are forced to extend their limited sources of financing in a bid to meet the regulations so as to fulfill the legal requirements necessary to operate as banking agents (Mwando, 2013). Such requirements usually involve having a specific level of capital investment to assure the regulators of the sustainability of the venture (Malik-Abdulmajeed, 2021). Inability of the retail outlets to fulfill these requirements prevents the expansion of retail banking to areas of low income earners. Unless the tight regulations are eased, few retail outlets would be able to meet the standards required by the policy makers (Lyamn et al, 2018).

Agency banking was first developed in Brazil, a country which was an initial adopter of the exemplary agency banking and has significantly mellowed over the years covering 99% of the countries metropolises (Ouma, 2013). Furthermore, nations like Peru, Colombia, Mexico, Pakistan, and the Philippines also started experimenting with banking agent networks (ibid). Additional countries have also exploited the agent banking model to develop financial services, including the republic of South Africa and Kenya. This adoption has enhanced performance greatly in the African continent (Kiragu, 2011). Agent banks also help increase savings especially with the low income population. Agents can be savings advocates, with key functions designed to be played by agents. Everybody needs a safe place to save, and costs can be reduced for agent banks by leveraging on the existing infrastructure, and minimizing credit risks to make it safe and hence increasing profitability for the banks (CGAP, 2010).

Most of the developing nations have seen the agency banking model enhance economic performance (Kingori&Gekara, 2015). In the increasing performance of banking agents, Veniard (2010) outlines that compared to operating a bank branch, agency banking systems are cheaper up to three times to operate. Fixed costs are significantly reduced as there is a lot of leveraging on the existing retail outlets, an opportunity that eliminates the need for banks to fund creation of infrastructure to have the businesses running. There is also the dimension of increased revenues as bank agents are able to facilitate bill payments and person-to-person transactions that earn the bank some revenue in the end. Despite the fact that customers can as well access all these services from their respective banks, the agents enhance proximity, efficiency, and timely access as at the agent points there are no longer (Veniard, 2010).

In the beginning, agency banking was seen to have given another revenue generating avenue to the banks through the deposits and withdrawals by customers, which ultimately increased the profitability of the banks (Ndungu& Wako, 2015). Studying how agency banking contributes to financial performance of banks, Njagi (2013) found that aspects such as low costs for the transactions, banks regulation of the agents, and quick access to financial services impacted positively on the performance of the banks on the financial dimension across the Kenyan nation. In another study on the role agency banking serves in enhancing the deepening of the financial sector in upcoming markets by Barasa and Mwirigi (2013) found that agency banking has played a pivotal role in enhancing the penetration of banking services in unbanked markets hence enhancing financial sector deepening in Kenya.

A study by Kambua (2015) examined the effect of agency banking on the performance of banks financially in Kenya. The study found that there was a positive connection between cash deposits, volume of deposits, volume of withdrawals and financial performance. Kabira (2013) also studied the effect of agency banking on the performance of commercial banks with the results indicating that there is no direct correlation between the number of agents that commercial banks operate and the volume of transactions. Mimano (2014) also studied agency banking in Kenya with a view to determining its effect on the Kenya's commercial banks profits growth and concluded that agency banking has resulted in greater uptake of financial services, which has resulted in more revenues for the banks argumenting profit levels for the banks. Hence, this study was directed at assessing the effects of agency banking on profitability of the National Microfinance Bank in Moshi Municipality, Tanzania.

1.2 Statement of the Problem

The banking industry plays a great role in building the sustainable economy of any country. Hence, the innovation and improvement of the industry in the economy within the country and the world is certain (Kuboja, 2018). Empirical studies describe that there is a positive relationship between sustainable economic growth of a country and growth and stability through profitability of the financial services sector (Chisimbili, 2015). Tanzania commercial banks are faced with challenges on how they can tackle customers so as to improve profitability through deposits and become stable entities in the financial sector. Thus, by the approval of the regulator (the central bank of Tanzania) a decision to establish agency banking was reached so as to increase the number of customers and through deposits and enhance profitability as a result of increased capital base in circulation (Kuboja, 2018).

In this aspect, banks do recruit agents, support agents efforts by training and giving licenses in cross selling of financial products, as such increase the net customer profitability. It is also true that, for this model to be effective, banks need to do extra work, like promoting and marketing of the services and use of employees from their branches to cross some additional financial services to agent clients (Veniard, et al, 2010). The tasks are not easy said. NMB is one among commercial banks faced with the outlined activity challenges in the whole process of adoption to agency banking so as to tap the benefits of deposits and maximize profit (Chisimbili, 2015). Hence, this study sought to assess the effects of agency banking through deposits on profitability of national microfinance banks in Moshi municipality, Tanzania. it was hypothesized that:

***H*$_1$** *- Deposits through agency banking have no significant effects on profitability of NMB*

H*$_2$– Number of agency banking has no significant effects on profitability of NMB*

2. Theoretical Framework

The Firm Theory is one of the neoclassical economic theories propounded in the 1970s and being revised a number of times. The current version of the theory is by Walker (2017). The theory of the firm, especially neoclassical theory describes the nature, scope, and purposes of the firms. The main tenet of this theory is that, the firms exist in order to maximize the profits through the construction of a distinction between revenue and costs. Thus, under this theory, the firm's behavior is understood to be driven by profit maximization and for this purpose, it is very essential for a firm to make a decision regarding the costs, demand, and technology. Every commercial bank management's objective is to maximize profits which are a difference created between revenue and costs. The operations costs of banks consist of both fixed costs and variable costs. However, in the traditional branches operations fixed costs are relatively important for the reason that the fixed costs are normally incurred regardless these banks make sales or otherwise, and they always deny the flexibility of banks in controlling costs (Dzombo et. al, 2017).

According to Accenture (2008) and Oracle (2017) in order to achieve profits maximization, banks need to adopt a comprehensive cost-efficient operational model such as branchless banking so as to target more revenues and allow cost control flexibility.This theory is relevant for this particular study as it advocates that every business organization is driven by the motive of maximizing profits. This theory influences decisions for allocating resources, methods of production, adjustments in prices, modes of operation and in banks particularly in huge consideration.

3. Empirical Literature Review

Agency banking has been said to improve banks operations in a number of ways among which improves areas of operations and result into profitability of the banks (Brotoboh and Ekwevugbe, 2020). Ali and Puah (2018) in their study on internal determinants of bank profitability and stability: An insight from the banking sector of Pakistan using a regression analysis found that agency banking has played a great role in increasing deposits of the commercial banks. Furthermore, the study also found that it has promoted financial inclusion among the population which was not able to be banked by the formal banking sector in Pakistan. It was concluded that, agency banking was a positive model toward promoting financial inclusion in the country due to the fact that, the costs for agency banking were found to be lower corresponding to the costs for running traditional bank branches. Agency banking appeared to cover a large geographical area which in turn helps to make things easier in accumulating deposits from a wider area and shortened distance for clients on reaching services point.

Mwariri and Awuor (2020) did a study on the influence of adoption of agency banking strategy on the financial performance of micro-finance institutions in Nanyuki town in Kenya. They studied the effect of agent banking on the performance of Small and Medium Enterprises (SMEs) in Kenya. The main objective of the study was to establish the effect of agency banking on the performance of SMEs in the study area using a descriptive statistics approach. The researchers used a descriptive survey method and data were collected through questionnaires. The study found that, at a rate of 55.6% the independent variables which were intermediary bank transaction services, deposits and account opening services contributed to variability on the performance of SMEs as the dependent variable. Also, in respect of the performance of the SMEs, the study noted that 42.5%, 44.7%, and 40.6% of the respondents felt that to a great extent the use of agent banking has been associated with increasing sales volume, capita returns, and resulted in profitability of the respective banks.

Musau and Jagongo (2015) researched how Kenyan banks utilize agency banking to enhance deposit levels. By use of descriptive research study design, the researchers consensually included all the banks across the country which had taken the initiative to roll out to the agency banking. They used questionnaires for the data collection, and for the analysis employed the use of inferential descriptive statistics methods. They established that aspects such as availability, regulation of the agencies, the infrastructure to support the smooth running of the agency, and security issues especially with the deposits at different points of the agents were of critical influence in regard to how banks viewed the agency banking platform in terms of profitability. The study concluded that it is paramount for banks to have greater attention to security issues and also to employ proper methods in the vetting of the persons they mandate with the responsibility of becoming banking agents so that clients' money are protected but also banks' profitability level is kept intact .

Mutie et al. (2018) assessed the role of agency banking in increasing accessibility to banking services and helping in decongesting the banking halls in Kitui, Kenya through an analysis of the costs and benefits raised by agency banking and how these are distributed among the stakeholders. The study used descriptive survey design and a sample of 100 account holders in Equity bank in Kitui. The study findings established that agency banking had availed banking deposits by bringing services closer to the customers through accessibility hence saving the customers the transport cost but also improving banks deposits. The study also found that agency banking is efficient in terms of transaction cost and time saving and most of the respondents were impressed by their performance.

From the various empirical studies presented (Masau and Jagongo, (2015); Gichungu and Oloko, 2015; Mutie et al., 2018; Kingori and Gekara, (2015); Gwahula, 2013; Khamis, (2016); Hawkins, (2012); Gwahula (2013), it seems that most of the studies conducted within Tanzania and also in other countries are related to overall performance of the commercial banks while others tried to examine the role of agency banking either in promoting financial or on the overall performance of the commercial bank. This situation emerges in the studies which examine the effects of deposits through agency banking on the profitability of the National Microfinance Bank in Moshi Municipality.

4. Materials and Methods

The study was done in three branches of NMB in Moshi Municipality named Mandela, Mawenzi and Mbuyuni. The study adopted a concurrent research design where collection of quantitative data and qualitative data was done at the same time. This design is useful in understanding inconsistencies between quantitative results and qualitative findings. The design is chosen because it can usually be conducted relatively within a short period of time and fewer resources. Moreover, quantitative studies are useful in showing the processes of data collection and interpretation clearly (Barnham, 2015). Furthermore, it is useful in getting appropriate and adequate data to determine variables of interest (Barnham, 2015).

Likewise, qualitative design is opted to complement the quantitative data to enhance the findings. The approach gives flexibility in data acquiring as it employs several other techniques such as interviewing or observation. The three NMB branches were used as a sample and case of this study for the purpose of representing the whole population for the reasons that the bank is one of the forerunners in delivering banking service under agency banking model (BoT, 2018). As the unit of analysis is NMB bank, the agents and the clients of the bank through agents were not part of the study. Only the volume of transactions by the agents was obtained from the bank branches for analysis. Also, key informant interviews were done to branch managers and section heads that deal directly with agency banking. The data collected was analyzed using regression to analyze the relationship between the dependent and independent variables and hypotheses being accepted or rejected. The analytical model used was in the form of the following equation below:

$$Y = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \epsilon$$

Whereby;

Y = Profit Maximization using return on assets (ROA).
X_1 = Agency Banking Withdraws (measured by the value of withdraws transactions)
X_2 = Agency banking deposit (measured by the value of deposit transactions).
X_3 = Agency banking bills payment (measured by the value of bills payment transactions).
β0 = Constant term = the error term which stands for the unexplained variations in the model.

5. Findings and Discussion

5.1 Descriptive Statistics Results

In order to understand the characteristics of the data obtained, a descriptive statistics was run. Data results are as indicated in Table 1 below.

Table 1: Descriptive Statistics Summary

	N (Branches)	Min	Max	Mean	Std. Dev
ROA (Ratio)	3	-0. 012	0.576	0.254	0.211
Number of agents (Ln)	3	1.122	1.587	1.321	0.511
Number of Deposits (Ln)	3	2.002	2.132	2.005	0.612

Source: Field Data, (2022)

Table 1 gives the summary of the descriptive statistics for the data obtained. Findings indicated that, on average profitability (ROA) of the bank branches studies stood at 0. 254, with - 0.012 being the minimum and 0.576 being the maximum ROA respectively. The results also show that on the average, the number of agents determined using the Natural log (Ln) is 1.321 with 1.122 being a minimum value and 1.587 the maximum value. Findings further indicate that the average volume of deposits is 2.005 with maximum and minimum values of 2.132 and 2.002 respectively. ROA indicated a standard deviation of 0211 while number of agents and number of deposits indicated a standard deviation of 0.511 and 0.612 respectively. In all the three variables, the standard deviation indicated that the amount of variation or dispersion of values in ROA was low showing that the values tend to be close to the mean while that of the number of agents and deposits were a bit high which indicates that the values are spread out over a wider range.

5.2 Regression Analysis Model

In this study, the hypotheses were tested using a regression model for significance of variables by using the F –test and ANOVA (Analysis of Variance) while to determine the degree of significance of the regression coefficients, the study used the t-test. The F and t test were determined at 95% confidence level. Results of the regression model are shown in Table 2.

Table 2: Regression Analysis Model Results

a. Predictors: (Constant), Volume of Deposits, Number of Agents

Model Summary

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	0.265[a]	1.651	0.110	2.009

Source: *Field Data (2022)*

Regression analysis contains the model summary, analysis of variance (ANOVA) and a summary of the regression coefficients. Findings from the study indicate that, the R square value (Coefficient of determination) is 0.651 which shows that the independent variables (number of agents, volume of deposits) explain only 16.5% of the variation in profitability of the National Microfinance Bank in Moshi Municipality. The other 84.5% is explained by other factors outside the model and the error term used for this particular study.

5.3 ANOVA Findings

Furthermore, the Analysis of Variance (ANOVA) was done and findings are as indicated in Table 3.

Table 3: ANOVA

ANOVA[a]
a. Dependent Variable: ROA
b. Predictors: (Constant), Volume of Deposits, Number of Agents,

Model		Sum of Squires	Df	Mean Square	F	Sig[b].
1	Regression	22.631	2	3.671	1.671	0.011
	Residual	35.640	13	1.933		
	Total	58.371	15			

Source: Field Data (2022)

Findings indicated that the regression model is significant and a fit to investigate the effect of deposits through agency banking on profitability of NMB in Moshi Municipality. Evidence is shown by the P-value (Sig.) of 0.011, which is less than 0.05 at 95% confidence level.

5.4 Regression Coefficients

Table 4: Regression Coefficients

Coefficients: *a. Dependent Variable: ROA*

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
1		B	Std. Error	Beta		
	(Constant)	7.076	2.551		1.007	0.041
	Number of Agents	0.198	0.012	0.115	1.341	0.069

Volume of Deposits	-0.217	0.162	-0.226	-1.209	0.002

Source: Field Data, (2022)

From the data results in Table 4 gives the following regression equation was obtained:

$$Y = 7.076 + 0.198X_1 - 0.217X_2 + \varepsilon$$

The findings from the regression analysis indicated that deposits through agency banking influence profitability of NMB in Moshi Municipality. The findings imply that an increase in the number of agents increases the profitability of NMB in Moshi Municipality by 0.012 units as the number of agents ensures that the bank reaches all customers satisfactorily. The findings of the study also established that the volume of deposits negatively and significantly influences profitability of the National Microfinance Bank in Moshi Municipality. This means that a unit decrease in volume of deposits negatively affects the profitability of NMB by 0.002 units since high volume of deposits provides banks with adequate funds to lend and to earn interest income from the business. The findings are in agreement with that of Mutie et al. (2018) who found thatdeposits through bank agents improved performance of banks and liquidity management in Nigerian banks. The findings also were in agreement of the banks managers of the three branches studied where one of the key informants said that:

> *'Agents have assisted a lot in terms of reaching targets for deposits. As a result, liquidity levels have improved significantly to enhance operations without any problems'. (Interview conducted on 23rd June, 2022 at 14hrs).*

6. Conclusions and Recommendations

6.1 Conclusions

Findings of the study have indicated that the number of agents positively affects the profitability of NMB in Moshi Municipality. Based on the findings, the study thus concludes that an increase in the number of agents increases the profitability of the National Microfinance Bank in Moshi Municipality since a large number of agents ensure that the bank branches reach many customers in all areas conveniently. The study findings also established that the volume of deposits negatively and significantly affects profitability of NMB. The study thus concludes that a decrease in volume of deposits negatively affects the profitability of the bank since deposits provide banks with adequate funds to lend and to earn interest income.

6.2 Recommendations

Based on the conclusions of the study, it is recommended that an increase in the number of agents increases the profitability of NMB in Moshi Municipality. The study therefore recommends that NMB should invest more resources towards increasing their number of agents to increase their profitability. The study also concluded that decrease in volume of deposits negatively affects the profitability of the bank. The study therefore recommends that NMB should develop deposit mobilization strategies through agency banking to ensure that their clients use agency-banking services so that deposit levels are kept high all the time.

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