

E-BANKING DEVELOPMENT AND PERFORMANCE OF FINANCIAL INSTITUTIONS IN RWANDA (CASE STUDY I&M BANK)

¹EMMANUEL MUGANDURA, ²DR. PATRICK MULYUNGI, ³DR. JAYA SHUKLA

Abstract: In Rwanda there is delay in payment of checks between banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases was common. General objective of this study is to examine the impact of e-banking development and performance of financial institutions in Rwanda. The researcher used a descriptive research design, where qualitative and quantitative approaches were used. The population of the study was composed of 36 employees of I&M bank. Data was analyzed by use of both descriptive and inferential statistical, as well as multiple regression model and diagnostic tests. E-banking strongly affect the financial performance of I&M bank ($R=0.987$) with variations on e-banking tools contributing 97% to its. The F-statistics ($F=3.244$) is greater than the P-value (0.000) hence a further confirmation that aspects of e-banking significantly influence the financial performance of the bank. I&M bank's profitability in terms of; return on asset and return on equity kept increasing from 2014 to 2017. It is evident that the ROA increased greatly from 2014 to 2017 and this is represented by 0.421 to 0.624 respectively and this evidences the best performance of the bank in those years. In 2015 the contribution of e-banking was 3.8%, in 2016 (8.5%) and in 2017(9.7%). This means that e-banking have positively contributed to I&M bank performance. The study concludes that there is positive relationship between e-banking and financial performance of I&M bank. The researcher recommends that policy makers and players in the market especially financial institutions should increase the awareness to the public about the cashless economy by adopting more usage of e-banking. With the significant increase in financial inclusion recorded in Rwanda, this bankable population should clearly be made aware of the benefits of adopting e-banking practices, such as reduction in the time wastage and costs.

1. INTRODUCTION

1.1 Background of the study

The increased competition in the world commercial banks improved customer services provided by banks across the globe. The technological innovations significantly attributes to this improvement of customer services offered by the banks. This revolution has set a motion in the banking sector for the provision of a payment system that is compatible with the demands of the electronic market (Arnaboldi and Claeys, 2008). Further, technology has changed the traditional preconditions for service delivery, dramatically in recent years (Acharya and Jones, 2013). The new millennium brought with it new possibilities in terms of information access and availability simultaneously, introducing new challenges in protecting sensitive information from intruders while making it available to others. Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and hence demands Banks to serve their customers electronically. Banks have traditionally been in the forefront of adapting technology to improve their products and services (Aladwani, 2011). The Banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate.

Electronic banking is a product of e-commerce in the field of banking and financial services (Ovia & Mcmillan, 2011). Banks are also offering payment services on behalf of their customers who shop in different e-shops. It is an umbrella

term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution, (FinCen, 2009).

Kalakota and Winston (2009) arguably indicated that e-payment systems are becoming central to online business process innovation in the world, as commercial banks look for ways to serve customers faster and at lower cost. In line with this, Chhabra (2009) suggested that electronic payment systems are being used in air ticketing, insurance, banking, retail, health care, online markets and even governments in fact, everywhere money needs to change hands. There are many evident advantages of an electronic mode of transfer compared to the conventional clearing house, because banks are increasingly turning to technology for managing their payments (Kumar, 2009). Some of the value attributes include secure payments, cost cutting, payment on due date and easier cash management compared to conventional systems. They have invested huge amounts of money, in implementing the self-banking services with the objective of improving the quality of customer service. The development of e-banking services is expected to decongest banking halls and reduce the incidences of long queues in banking halls. ICT based financial services have made a significant contribution in reducing the cost of offering financial services (CI&M BANK 2009).

High tech banking systems has been introduced and become adapted in the Rwanda financial system very recently. Currently, the e-banking services delivered at every corner of the country. Information and Communication Technology (ICT) is at the centre of this global change curve of Electronic Banking System in Africa today Stevens, (2010). Assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value added products and services. Managers in Banking industry in Rwanda cannot ignore Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information System. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness Banking. The advancement in Technology has played an important role in improving service delivery standards in the Banking industry. In its simplest form, Automated Teller Machines (ATMs) and deposit machines now allow consumers carry out banking transactions beyond banking hours. With online banking, individuals can check their account balances and make payments without having to go to the banking hall (Md Nor and Pearson, 2008). This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash hence improving customer relationship management system.

For example: bank customers can pay for airline tickets and subscribe to initial public offerings by transferring the money directly from their accounts, or pay for various goods and services by electronic transfers of credit to the sellers account. As most people now own mobile phones, banks have also introduced mobile banking to cater for customers who are always on the move. Mobile banking allows individuals to check their account balances and make fund transfers using their mobile phones. Customers can also recharge their mobile phones via SMS. E-banking has made banking transactions easier around the world and it is fast gaining acceptance in Rwanda. For the purpose of this study the researcher chose I&M bank Rwanda ltd as a case study in order to study the impact of e-banking development on the performance of financial institution in Rwanda.

1.2 Statement of the Problem

Most Banks in Rwanda are gearing toward investing large sum of money in Information and Communication Technology. Expectedly e-banking should improve the customer service satisfaction, increase the banks' efficiency, and reduces the operating costs in the long run by (Kaav, 2014).

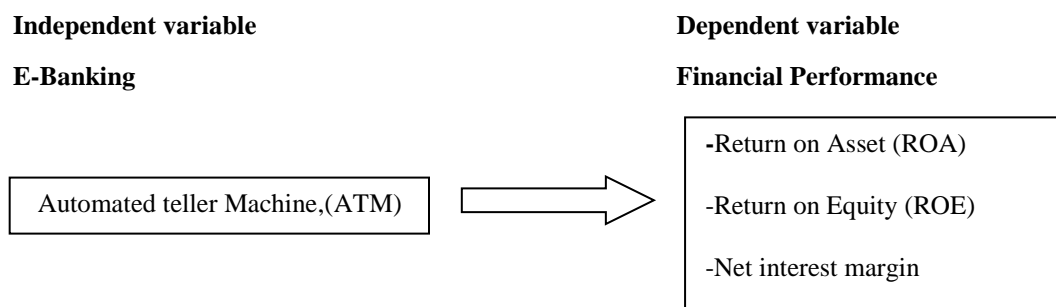
However, despite the fact that e-banking has been introduced in Rwanda for the last ten years, customer complaints are still rampant mainly due to; the delay in settlement of cheques between banks, time wasted by customers on queues in the banking halls waiting for services, and many human errors as a result of manual work as well as fraud related cases. It is also noted that in Rwanda banks are still investing in breaks-and-motor branches which is one of the major issues that e-banking was introduced to resolve. It is upon these factors that the researcher was motivated to examine the effect of e-banking development on performance of financial institutions in Rwanda. Researcher believes that when well-developed, e-banking should be more convenient to customers and make easier banking transactions, improve customer services hence improved banks' performance.

1.3 Specific Objective

-To examine the influence of Automated teller Machine to the financial performance of I&M bank.

2. CONCEPTUAL FRAMEWORK

The below conceptual framework shows the relationship between the independent variables (e-banking) and the dependent variable (financial performance). The figure also suggests an interrelationship between the two groups of variables as identified and explained in the literature review.



3. RESEARCH DESIGN

The researcher used a descriptive research design, where quantitative and qualitative approaches were applied. In quantitative approach researcher collected data in form of numbers by using documentation technique, and qualitative approach by using questionnaire technique.

4. TARGET POPULATION AND SAMPLING TECHNIQUES

The results of the study generalized all employees of I&M bank at the head quarter. The population of the study was composed of 36 employees from departments of e-banking, ICT and Finance and accounting.

During this study, the researcher used purposive sampling method and took the entire population from three relevant departments. There is no need for sampling technique since the entire population was involved in the study. A purposive sampling is a non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling.

5. DATA COLLECTION INSTRUMENT

Data collection instruments used for this study were questionnaires and documentation techniques. The questionnaire is composed of close ended questions, which are formulated in line with the research objectives. For documentation technique, the researcher reviewed the financial statements of I&M bank.

Table 1: The views of respondents related to ATMs

Statements	Mean	St. Dev.	Comments
ATM quickens the withdraw transactions for I&M bank customers without necessarily going to its branches	4.87	.336	Very Strong Homogeneity
The use of ATM machine influences the performance of commercial banks	4.92	.265	Very Strong Homogeneity
Using ATM 24/7h increases customer convenience which contributes to increased customer base.	5.00	.067	Very Strong Homogeneity

Source: Primary data, 2018

From the above findings, respondents revealed an outstanding contribution of Automated Teller Machine (ATM) to the performance of I&M bank. Following the question that was asked by the researcher in order to understand the contribution of ATM to the performance of I&M bank, it was revealed that all respondents agreed and strongly agreed about the presence of these activities in the banks. The views of respondents show that ATM facilitates the use of some services of banks without going to the branches. ATM machine influences the performance of I&M bank by providing available services 24/7 and reducing the investment costs for bank. All this result was evidenced by mean ranging (4.87, 4.92 and 5.00) and St. Dev (.336, .265 and .067). This means that overall response is Very Strong and Homogeneity.

The study finds that Automated Teller Machines contribute to the effectiveness of banking sector. The tremendous growth and development of technological advancement has been the driving force of the market nowadays. The deployment of ATM facilities revolutionized the banking sector. The Rwandan banks are aggressively promoting issue and use of ATM cards, credit cards, debit cards, and smart cards to enhance their performance and kill competition.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987 ^a	.973	.973	.102
a. Predictors: (Constant), e-banking				

According to results in above Table 2 shows that, e-banking strongly affects the financial performance of I&M bank (R=0.987) with variations on e-banking tools contributing 97% to the performance of the bank.

Table 3: ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.798	1	33.798	3.244E3	.000 ^a
	Residual	.927	89	.010		
	Total	34.725	90			
a. Predictors: (Constant), e-banking						

ANOVA results further show the aspects of e-banking in I&M bank. The Table 3 shows the sig value (0.000) less than the level of significance (0.05). The F-statistics (F=3.244) is greater than the P-value (0.000) hence a further confirmation that aspects of e-banking significantly influence the financial performance of I&M bank. Further, the residual value (0.927) is less than the regression value (33.798) which means that aspects of e-banking influence I&M bank performance. This shows that the overall model was insignificant.

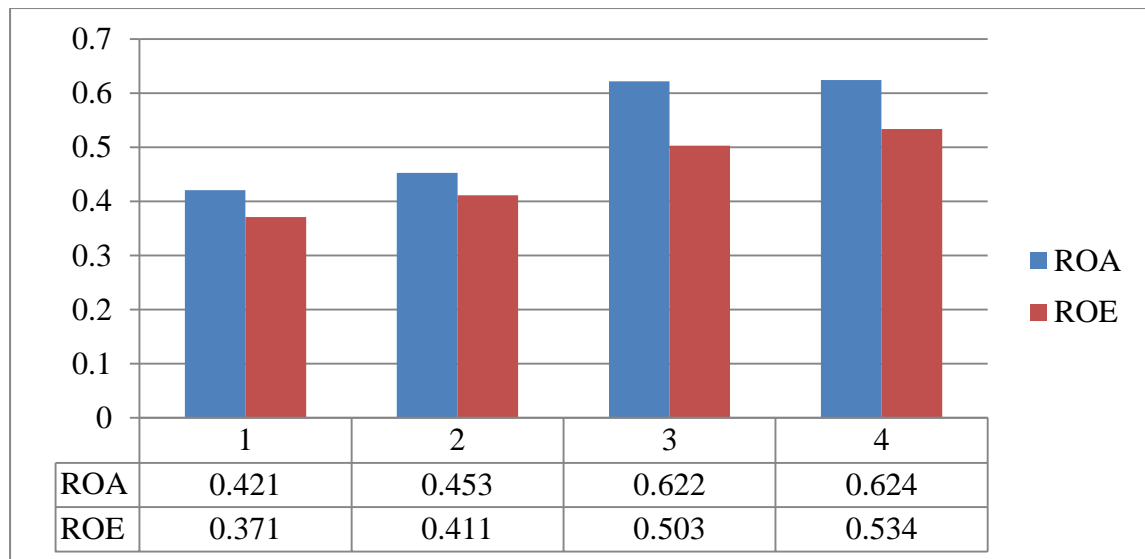
Table 4: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.196	.077		2.553	.012
	e-banking	.959	.017	.987	56.954	.000
a. Dependent Variable: Financial Performance						

Using linear regression analysis from SPSS software, e-banking were regressed to find out how it influence the performance of I&M bank. Beta and t-values, (beta=0.987,t=56.954 and sig=0.000). This means that when e-banking increased one unit, performance will increase (0.959).

$$Y=0.196+0.959x+\varepsilon$$

Figure 1: The contribution of e-banking to the financial performance of I&M bank



Source: I&M bank Financial Reports (2014, 2015, 2016 and 2017)

As revealed in Figure 1, I&M bank's profitability in terms of return on asset and return on equity kept improving from 2014 to 2017. It is evident that the ROA increased greatly from 2014 to 2017 and this is represented by 0.421 to 0.624 respectively. This evidences a good performance of I&M bank in all these years. The analysis of the financial reports indicates that I&M bank's ROE increased from 0.371 in 2014 up to 0.534 in 2017.

6. CONCLUSION

From the research findings presented in this study concludes that there is positive relationship between e-banking and financial performance of I&M bank. It should be noted that ATM plays a great role in the financial performance of I&M bank. This is manifested in increased profitability, return on equity, and return on assets.

7. RECOMMENDATION

From the above conclusion, the researcher recommends that policy makers and players in the market especially financial institutions, to increase the awareness to the public about the cashless economy by adopting more usage of e-banking. With the significant increase in financial inclusion recorded in Rwanda, this bankable population should clearly be made aware of the benefits of adopting e-banking practices, such as reduction in the time wastage and associated costs.

It is also recommended that, the public should be encouraged to use e-banking by introducing significant incentives to the best users. Financial institutions would benefit once the public adopts e-banking by reducing the costs incurred on breaks-and-motor approach, and this saving would be higher than the incentives and campaign costs.

REFERENCES

- [1] Acharya and Jones, (2013).E-payment and its Challenges.*Daily Champion*, P.A. 13.*Commerce*,: 2013-30.
- [2] Aladwani, (2011). *The Effects of Electronic Payment Channels on Growth of Deposit Base of Nigerian Deposit Money Banks*. International Journal of Research in Computer Application and Management, 4 (12), 77- 81.
- [3] Arnaboldi and Claeys, (2008). Central Bank of Kenya. *Quarterly report on Development in the Kenyan banking Sector for the period ended 30th June 2011*.
- [4] Ceylan, et.al., (2008). *The Relationship between Electronic Banking and Financial Performance among Commercial Banks in Kenya*. Journal of Finance and Investment Analysis, 1 (3), 99- 118.
- [5] Chhabra (2009), *Guidelines on Electronic Banking in Kenya*. August. Central
- [6] CI&M BANK, (2009). "Financial innovation in internet banking: A comparative analysis. "CI&M BANK/PG/15
- [7] Kaav, (2014),*Information Technology in Business Industry, Operational Application*,

- [8] Kalakota and Winston, (2009), *The performance of Internet-based business models*: Evidence from the banking industry. *Journal of Business* 78 (3), 893–947.
- [9] Kumar, 2009). *Guideline On Agent Banking*. Nairobi, Government of Kenya Printers,
- [10] Ovia & Mcmillan (2011). *Business Performance Management - Efficiently Managing Business*
- [11] Poon, (2003). *Can Central Banking Survive the IT Revolution?* *International Finance*, Vol. 3, No.2 Problems and future Challenges. *C.B.N Bullion*, Vol. 56, P.A 7-24.