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SERVICES AUTOMATION AND PERFORMANCE: EVIDENCE FROM DEPOSIT MONEY BANKS IN NIGERIA

Yusuf Abdullahi*

Abstract: *The study focuses on automated banking services and performance of money deposit banks, the automated services represented by electronic banking and performance proxied by return on asset, return on equity and volume of deposit by customers. The study examines the impact of e-banking on the performance of deposit money banks in Nigeria. Secondary data is extracted and used for analysis from the financial statement of all the 20 banks within 2007-2011 and simple regression is used as tool of analysis. The result reveals that electronic banking has positively, strongly and significantly impacted on the performance of money deposit banks in Nigeria. It is therefore recommended that the management of the banks to increase investment on electronic banking services in order to improve the return on asset and equity as well as volume of deposit from customers.*

*Department of Business Administration, Ahmadu Bello University, Zaria

1. INTRODUCTION

There is nothing as constant as change. The ever increasing customer s sophistication and their urge for speedy, efficient and accurate service delivery has made the banking environment not only dynamic but ultimately becoming complex in nature. The ever-expanding commerce has engendered globalization, which has effectively reduced the world commercial community to a global village. Similarly, the importance of business knowledge is not thing new, what is new is the recognition of the need to manage it like any other asset for efficient performance to mange knowledge, banks need to learn how to share information throughout the organization and to implement systems for creating new knowledge (Nickels et al, 2002)

Technological developments, particularly in the area of telecommunication and information technology are impacting significantly on businesses. To make a prompt, reliable and detailed information empowers business to make the right decision at the right time. Increasing customer service delivery, market share, becoming the high quality or low cost producer, developing new products and increasing workers productivity depend more on the kind and quality of the development of IT are in organization.

E-banking concept becomes popular when banking activities and information technology are merged. The banking transaction becomes easy after the introduction of computers in banking sector. The banks are enables to automate the accounting process and back office function like maintenance of deposits, calculation of interest and maintenance of general ledgers. The automation of front office function improves the customer service with reduction in processing time, hence improving the overall performance of Nigeria banks.

Many Nigerian Banks have over the years streamlined their organizations, tailored their products and services delivery and automated their operations to enhance their performances and capture the market. As the struggle to enhance performance by the deposit money banks, the focus is moving to the complete automation of all their operation and services. The system or industry is highly competitive and competition is expected to motivate new players of local and global scope enters the market. As the competitive terrain becomes more challenging, banks need to maintain their competitive edge, and to do this; they have to adopt new technology.

Consequently, Nigerian banks Return on Equity in information technology (IT) equipment have grown rapidly in the last ten years (Zakaria, 2006). There has been return on equity in computer software, hardware and telecommunication equipment, the corollary which has been the introduction of electronic Banking in Nigerian Baking Industry.

Banks that are not able to brace up to this new development are rapidly losing their customers. Online, real-time banking system has now become commonplace as customer are offered the ease of operation an account in any branch of the bank's network. From the foregoing, it is crystal clear that, technology is the key driver of change. For the change to be beneficial, the use of technology should be business driven to meet clearly detained goals. Thus, the choice of electronic banking in Nigerian banking system is not a mean stride. This underpins the essence of this research work, which aims at the impact of banks' services automation on the performances of Nigerian deposit money Banks.

Since Nigerian banks gravitation to e-banking, rooted in the urge to completely satisfy the demand of their customers, and improve the efficiency and effectiveness of their operation; customers could transact business anywhere just with a push of a button; 24 hours a day, 7 days a week; enjoy quick service delivery etc just because, transactions can be processed faster and most conveniently. All these are expected to give rise to higher volume of turnover with its attendant overall Return on Asset to the banks.

Lamentably, there still exist some problems militating against Nigerian banks from reaping the full benefit of e-banking. There is incessant system break down and inconsistence services on the on-line connectivity. This has affected banks effectiveness and efficiency of operation with its attendant negative impact of their productivity and overall return on asset. Therefore, this paper examines the impact of automated bank services on the performance of deposit money banks in Nigeria. In view of this, the study hypothesis that electronic banking has no significant impact on the return on equity, return on asset and volume of deposits in Nigerian deposit money banks.

This study investigates the impact of e-banking on the performance of Nigerian banks. The banks are restricted to only money deposit banks. The study covers a period of twelve (5) years (2007-2011). The electronic banking consists of total expenditure on electronic banking in the selected banks within the period of the study. While the proxies of performance are return on equity, return on asset and volume of deposits.

The contribution of this study is far reaching and cannot be over emphasized. Considering the cumulative impact of banking system on the Nigerian economy, a research work of this nature should be able to provide useful information to all stakeholders in the industry. Again, the work would be of particular importance to banks in assessing the return on asset of e-banking and determine the probability and acceptability or otherwise of the e-banking product or services. Also, it will place stakeholders of banks on sound footing to be able to assess the performance of their banks in terms of return on asset, return on equity and customers patronage.

The remaining part of the paper consists of literature review, methodology, results and discussion and then conclusion with recommendations.

2. LITERATURE REVIEW

Banking system is the backbone of the economy and information technology in turn has become the bedrock of banking activities (Devamohan, 2002). Electronic banking is having profound impact on the structure of the banking industry in Nigeria and is changing the nature of the traditional competition. The structure of the industry is changing rapidly, making it more difficult for banks to be differentiated based on service done. In the short run the electronic banking services have to compete based on price, product and service offerings and in the long run banks may need to position themselves differently in the value-chain to survive (Wigand, 1997).

Banking in Nigeria provides numerous services to customers. The services provided through the various products offered and can be classified into financial intermediation, transactional services, foreign exchange services, trade services, financial advisory services, return on equity management and custodian services. In line with global trends, banking business in Nigeria too has been under growing tremendous changes especially from the mid 1990s. Consequently, in the past few years, Nigeria banks and generally the financial services industry have embraced e-money, which has been made possible by advancements in information technology. Giving the competitive financial environment of this twenty-first century, Nigeria banks have no any choice. Indeed, technological innovation presents banks with the opportunity to gain a competitive advantage over others, through cost effective delivery system as evidence in other countries that have long embraced e-commerce. The

new payment system could, in principle, improve efficiency in payment operations help reduce the use of currency (Sanusi 2010).

Saleh and Andrea (2001) assert that electronic banking has been around for some time in the form of automated teller machines and telephone transactions. More recently, the internet, a new delivery channel for banking services that benefit both customers and banks have transformed the mode of service delivery and performance. Access is fast, convenient, and available around the clock, where ever the customer's location. Also, banks can provide service more efficiently and at lower costs. Electronic banking also make it easier for customers to compare banks' services and products, increases competition among banks and allow them to penetrate new markets by expanding their geographical reach. Some even see electronic banking as an opportunity for countries with underdeveloped financial systems to leapfrog developmental stages. Customers in such countries can access service more easily from banks abroad and through wireless communication systems, which are developing more rapidly than traditionally "wired" communication networks.

Electronic banking or e-banking is a web based service that enables a bank's customer accesses their accounts. It allows the customers to log on to the bank's website with the help of a bank-issued identification and a personal identification number; this increases the volume of their deposits (Devamoham, 2002). The other aspect of e—banking is e-payment. Payment is generally known as a transfer of funds from the payer to the payee. The electronic payment or e-payment is a payment carried out electronically. That is, the payment that is initiated, processed and received electronically is known as e-payment. In e-payment funds are held, processed and received in the form of digital information and their transaction is initiated via electronic instrument called the ATM card. The concepts of e-banking and Internet banking are used as synonymous in the banking industry, though in reality banking activities carried out through the Internet just constitute a part of the whole gamut of e-banking.

Similarly, electronic banking, according to Clear-Leading (2009), is about using electronic means to transfer funds directly from one account to another. Electronic banking according to Al-Abds (2008) is an umbrella term for the process by which a customer may perform banking transactions without visiting a brick-and-mortar institution. It is also seen as the use of computer and electronic technology as a substitute for checks and other paper

transactions (ICAN, 2009). From the foregoing, we deduce that electronic banking is not a mere transfer of fund electronically, or the use of internet as a remote delivery channel; neither can it be narrowed down to a process of performing banking transaction without visiting a brick and mortar nor an electronic technology used as a substitute for checks and other paper transaction; it however encompasses a combination of the aforementioned and avenue for performance improvement.

Information and communication technology has made the world a global village and removed the time and geographical barriers. With the use of electronic network, billions of naira can move across borders by click of a computer key and this creates tremendous impact on the performance of the banks and the economy at large (Balachandher, 2007).

According to Sergeant (2000), the benefits of e- banking are in manifold ranging from different and arguable lower barriers to entry, opportunities for significant cost reduction, the capacity to rapidly re-engineer business processes to greater opportunities to sell across border and all these lead to increase in performance. A more thorough analysis of the benefits of electronic banking to both banks and customers is found in the work of Lustsik (2004). According to him the first benefits for the banks offering internet banking services is better branding and responsiveness to the market. Those banks that would offer such services would be perceived as leaders in technology implementation. Therefore, they would enjoy a better brand image. The other benefits are possible to measure in monetary terms. The main goal of every company is to maximize profits for its owners and banks are not in any exceptions. Automated banking services offer a perfect opportunity for maximizing profits. He further asserts that according to a survey, an estimated cost of providing the routine business of a full service branch in USA is $1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM banking and 15 cents for internet banking. In Finland, one online transaction costs a bank an average of just 11 cents, compared to $1 for a transaction in the branch. In Estonia, the fee for transaction concluded in bank office is 9-12 EEK, fees on transactions via automated telephone banking is 0-6 EEK, fees for automatic Europe, cost of transactions in e-banking are low as a tenth of the cost of banking through conventional means. Credit card interest charges are up to 19% per annum by conventional banks, whereas egg, a specialized Internet banks, charges up to 9.9%. Similarly Smile Co.uk (The Cooperative Bank's internet banking) pay 4.75% on a current

account compared to 0.1% paid by Liovids TSB. An online loan application to wells Fargo in California can receive a decision in three seconds.

Dogarawa, (2006) opines that electronic banking improves bank's efficiency and competitiveness, so that existing and potential customers can benefit from a greater degree of convenience in effecting transactions. This increase level of conveniences offered by the bank, when combined with new services, can expand the bank's target customers beyond those in traditional markets. Consequently, financial institutions are therefore becoming more aggressive in adopting electronic banking capabilities, and stored value programs. Such technological advances have brought greater sophistication to all users. However, these developments have also brought a number of risks. A bank any be face with different levels of risk and expectation arising from electronic banking as opposed to traditional banking. Furthermore, customers who rely on e—banking services may have greater intolerance for a system that is unreliable or one that does not provide accurate and current information. Clearly, the longevity of e-banking depends on its accuracy, reliability and accountability. The challenge for many banks is to ensure that savings from the electronic banking technology more than offset the cost and risk involved in such changes to their system.

It is therefore important in the present environment for Governments keep their regulatory system under review. Many countries are responding to the changes in financial markets by rationalizing their regulatory systems. In today's highly mobile financial markets, countries, which do not ensure that their regulatory system remain up to date, may pay a serious cost in the form of lost business.

Hence in Nigeria, the CBN acknowledges that the application of inventions facilitated by advancements in computing and telecommunications technology has opened new possibilities that extend far beyond the types of services that had traditionally defined, and indeed, the financial services industry (Sanusi, 2009).

Practical bankers and analysts alike have written a number of reviews on the guidelines with a view to exposing their strengths and weakness with particular emphasis on the Information and Communication Technology (ICT) section (Oseesanya, 2004). On the average, the guidelines have addressed the most salient issues associated with e-banking especially given the nature of Nigeria's economy. However, there is still more room for

improvement if really e-banking business is to be successful and compete with other countries.

3. METHODOLOGY

The choice of the methodology has been guided by the objectives and the nature of the data required for the study. The methodology adopted consists primarily of a detailed impact of e-banking transaction on the performance of Nigerian banks. Consequently, inferences have been drawn regarding the extent of the impact. There are various research methods available to researchers; however, the method adopted by a researcher in a particular study depends on the problem and the situation that the researcher is confronted with. Therefore, for the purpose of this study, correlational research design is adopted and only secondary data is used.

The population of this study is 20 banks operating as money deposit banks in Nigeria. The population of this study is specifically selected because the main objective of the study is to examine the impact of e-banking on the performance of Nigerian banks. The study considers all the 20 banks as sample adopting census sampling technique, so that as far as possible all features of the population is represented.

Under the secondary source, the data were collected from the published financial statements of the sampled banks covering the period of twelve (5) years (2007-2011). The period is selected for two reasons. Firstly, this is the period when Nigerian e-banking industry experienced tremendous reforms and patronage due to the effort made by the equipment e-banking association of Nigeria. The association organises many workshops and seminars to create awareness in the business of e-banking in Nigeria. Secondly, the economic reforms made it compulsory for the banks to compete for survival which lead to improvement in the value of e-banking business in the Nigerian banking sector. The common techniques for analysis that are used in research include chi-square, t-test, f-test, regression, correlation coefficient and simple percentage. However, for the purpose of this research, simple linear regression and f-test have been used. This is because they actually capture and address inter-relationship of the data collected from the secondary source.

4.1 RESULTS AND DISCUSSION

Simple linear regression has been used to estimate the relation between the dependent variables (Profits, Return on Equity and Volume of deposits) and the independent variable,

which is represented by the cost of e-banking in Naira. The technique of t-test has also been used to estimate the regression coefficient of the variables.

The study uses three dependent variables for determining the aggregate impact of e-banking on the performance of Nigeria banks. These three explanatory variables are return on asset, return on equity and volume of deposits. The study hypothesizes significant relationship between explanatory variables and e-banking in Naira.

The regression results are presented in Table 1 below.

Table 1: Automated Banks Services and the performance of Nigerian banks

Sample Statistics	Dependent Variables		
	Y_1	Y_2	Y_2
R	0.83	0.76	0.71
R^2	0.69	0.63	0.56
Beta Coefficients	22.05	19.22	14.16
Significant	0.001	0.010	0.003
Durbin-Watson	2.01	2.12	2.04

Source: SPSS Printout of Simple Regression .

Y_1 = return on asset, Y_2 = return on equity, Y_3 = volume of deposit

A null hypothesis that e-banking has no significant impact on the Return on Asset was formulated to ascertain whether e-banking has impacted on ROA of Nigerian deposit money banks or not. The hypothesis is tested and the regression result in table 1 reveals a positive correlation of 83% percent between e-banking and return on asset. This signifies that between pair of e-banking and Return on Asset there is strong and significant relationship. Also, it corroborates the result of the regression model that e-banking is playing a significant role in measuring return on asset and the positive nature of the correlation coefficient explains the model in the regression $y_1 = ∂ + β\ x$ .The result of the model reveals that for every ₦ 1 naira invested in the cost of e-banking brings about ₦22.05k increase in return on asset represented by beta coefficient. While the coefficient of determination (R^2) shows that e-banking occupies 69% of the value of return on asset and other contributors covered the remaining 31%. However, the coefficient probability calculated is significant at 5% level of significance on return on asset 0.02 ($P<0.05$). This therefore produced the evidence of

rejecting the null hypothesis that e-banking has no significant impact on return on asset of Nigerian deposit money banks.

In addition, a null hypothesis that e-banking has no significant impact on the return on equity of was formulated to ascertain whether e-banking has impact on ROE of Nigerian banks or not. The hypothesis is tested and the regression result in table 1 reveals a positive correlation of 76% percent between e-banking and return on equity. This signifies that between pair of e-banking and return on equity there is significant and strong relationship. Also, it corroborates the result of the regression model that e-banking is playing a significant role in measuring return on equity and the positive nature of the correlation coefficient explains the model in the regression $y_2 = ∂ + β\ x$ .The result of the model reveals that for every additional ₦ 1 naira invested in cost of e-banking brings about ₦19.22k increase in return on equity. While the coefficient of determination (R^2) shows that e-banking occupies 63% of the value of return on equity and other contributors covered the remaining 37%. However, the coefficient probability calculated is significant at 1% level of significance on return on asset 0.01 ($P<0.05$). This therefore produced the evidence of rejecting the null hypothesis that e-banking has no significant impact on return on equity of Nigerian deposit money banks.

Finally, a null hypothesis that e-banking has no significant impact on the volume of deposits was formulated and tested. The regression result in table 1 reveals a positive correlation of 71% percent between e-banking and volume of deposits. This shows that between pair of e-banking and volume of deposits there is positive and strong relationship. Also, it corroborates the result of the regression model that e-banking is playing a significant role in measuring volume of deposits and the positive nature of the correlation coefficient explains the model in the regression $y_3 = ∂ + β\ x$ .The result of the model reveals that for every ₦ 1 naira additional invested in cost of e-banking brings about ₦14.16k increase in volume of deposits. While the coefficient of determination (R^2) signifies that e-banking occupies 56% of the deposits and other contributors covered the remaining 44%. However, the coefficient probability calculated is significant at 1% level of significance on return on asset 0.003 ($P<0.05$). This therefore produced the evidence of rejecting the null hypothesis that e-banking has no significant impact on volume of deposits of Nigerian banks.

5. CONCLUSION AND RECOMMENDATION

In accordance with the research finding that e-banking explain the variables of banks performance, the study concludes empirically and statistically that automated banking services impacted strongly and positively on the three performance indicators namely return on asset, return on equity and Volume of deposits of the Nigerian deposit money banks. Thus, electronic banking is playing a significant role in influencing the performance of deposit money banks in Nigeria.

In line with the conclusion of this study, it is therefore recommended that the management of Nigerian deposit moneybanks should work very hard to improve the business of e-banking in their banks in order to increase the volume of proceeds accruable from e-banking business. They can do that through creating a unit or section that exclusively deals with e-banking transactions and follow it up vigorously with series of advertisements. The banks shareholders should encourage the management to engage in greater business of e-banking. This has the potentials of improving return on assets and equity as well as volume of deposits by customers.

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