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Cashless Policy and Commercial Banks' Profitability In Nigeria

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ABSTRACT

The study examines the effects of the adoption of cashless policy on the profitability performance of commercial banks in Nigeria. By using ATM and POS as proxy for the adoption of cashless policy and ROA and ROE as proxy for profitability and using the Ordinary least Square multiple regression analysis, the study reveals that there is a high positive correlation between the adoption of cashless policy and commercial bank profitability in Nigeria. The multiple regression analysis also revealed that the use of cashless policy instruments particularly ATMs and POS increases the ROA and ROE of the banks. It is therefore recommended that the cashless policy should be strengthened and all bottle necks like poor power supply and all loopholes that could lead to fraudulent exposure be tactically proactively tackled.

Key Words: 'Cashless Policy', 'Nigerian Commercial Banks', 'Profitability'

INTRODUCTION

Banks are the mainstay of every economy and occupy central positions in the country's financial system as essential agents of economic development. By intermediating between the surplus and deficit savings units within an economy, banks mobilize and facilitate efficient allocation of funds thereby increasing the quantum of investments and economic activities. In developing economies like Nigeria, financial sector developments have been accompanied by structural and institutional changes because of its crucial role in the economic development of the nation. In pursuance of its core mandate, the CBN have engaged in series of reforms aimed at making the financial system formidable and enhancing the overall economic growth of Nigeria (Ajayi, 2014).

The cashless policy introduced by the CBN is aimed at achieving a cashless economy and was conceptualized by the apex bank to increase the proficiency of Nigeria's payment systems which will in turn improves the quality of service being offered to the banking public.One of the prerequisites for the development of national economy according to Ajayi and Ojo (2006) is to encourage a payment system that is secure, convenient and affordable. In this regard, developed countries of the world, to a large extent have substantially moved from paper to electronic payment systems (Humphrey, 2004).

The Nigerian cashless system of payment has been evolving in line with the global payments evolution. Cashless system of payments and instruments are significant contributors to the broader effectiveness and stability of the financial system. Innovations in technology and business models have implications for the efficiency and safety of cashless system of payments hence the nation's quest of migrating from cash to cashless economy has been on the front burner. Against this backdrop, the study sought to examine cashless policy as regards the

Nigerian Banking Industry with a view to exposing the issues relating to it, possible challenges profitability implications for commercial banks in Nigeria.

Statement of Research Problem

In Nigeria, banking transactions have witnessed a slow pace of technological transformation due to high level of financial illiteracy, poor and irregular power supply and to some extent lack of trust on payment system not involving physical cash. Banking customers have therefore been subjected to high transaction cost with customers spending several hours in banks to do simple transactions as opposed to cashless transactions which according to (Ashike:2011) reduces processing/transaction time, offers multiple payment options and gives immediate notification on all transactions on customers' account. The long hours spent in banks and inefficiency through cumbersome documentations reduces customer satisfaction as well as increasing transactions cost and other overheads for banks (Ogun:2011).The absence of cashless policy in Nigeria has over the years contributed to high cost of cash movement and cash management by banks thereby impacting negatively on banks profitability. It also contributes to lack of transparency in business dealing in Nigeria ((Jaiyeola, 2011). According to Nonor (2011), most Nigerians are still unbanked as the slow adoption of cashless policy has as well slowed down the inculcation of savings habit necessary to encourage investment and a boost in economic activities and development of the national economy. In line with the Central Bank of Nigeria policy synopsis for introducing the cashless policy, Akara (2016) noted that the absence of the cashless policy gives loopholes to rampant inefficiency and corruption, money laundering and other cash-related fraudulent activities.

According to the Global FINDEX Survey in 2011, around one-third of Brazilians and South Africans with debit cards use e-payments, compared with one in ten Nigerians. The 2% of Nigerian adults who currently e-payments represent a small fraction of the 19%holding debit cards. Similarly, data from EFInA's Access to Financial Services in Nigeria2012 survey (A2F, 2012) highlight Nigerians' limited adoption of electronic payments such that only 0.7% of banked adults use POS terminals, 0.8% of banked adults use the internet, and less than 2.5% using mobile phones for banking transactions.

The challenges of the relatively low embrace of the use of electronic payments have seriously affected the implementation of the policy by bank customers, the general public as well as the commercial banks and other financial intermediaries. Most recent studies in Nigeria, for example, Adewoye(2013), Ajayi (2014), Alagh(2014) and Ashike (2011) did not directly examine the impact of cashless policy on bank profitability therefore creating a gap on how the policy affects the bottom line profit of the banks. Thus the objective of this study is to examine how the CBN cashless policy affects bank profitability performance in Nigeria.

Research Questions

The following research questions are formulated to guide the study:

i. Does the adoption of CBN's cashless policy in Nigeria affect banks profitability?
ii. Does the use of ATMs in banking transaction affect banks profitability in Nigeria
iii. To what extent does the point of sale (POS) cashless policy transactions affect bank profitability in Nigeria?

Aim and Objectives

The general objective of the study is to examine how the CBN cashless policy affects bank performance in Nigeria. However, the specific objectives are:

i. To investigate the effect of the Automated Teller Machine (ATM) on banks profitability.

ii. To determine the impact of point of sale (POS)on banks profitability.

Research Hypothesis

The following null hypotheses are formulated to guide the study at 5% significance level:

H_{01}: There are no significant effects of Automated Teller Machine (ATM) on banks profitability in Nigeria.

H_{02}: There are no significant effects of Point of Sale (POS) services on banks profitability in Nigeria

Scope of the Study

The study covered six (6) banks in Nigeria comprising both old and new generational banks which are First Bank plc, Skye Bank plc, Wema Bank plc, Guaranty Trust Bank plc, Zenith Bank plc and United Bank of Africa plc respectively, for a period of six (6) years from 2009 to 2014.

CONCEPTUAL LITERATURE REVIEW

E-payment systems are the instruments, organizations, operating procedures, information and communication systems employed to initiate and transmit payments from a payer to a payee and for settling payments that is, transfer money (Imafidon, 2013). The E-payments channels are the apparatus used to safely and efficiently transfer monetary value in exchange for goods and services as well as financial assets (Oloruntoyin and Olanloye, 2012).According to Atteh (2012), payment systems are related collection of structure of instruments for settling payments and transactions or part thereof. Although the system work together but each of the instruments share attributes of being exchangeable with one another through substitution and convertibility mechanisms.

Okafor (2008) described the ATM as an electronic device which allows a financial institution's customer to use a secured method of communication to access their accounts, make cash withdrawals or cash advances using credit cards and checking their account balances without need for human Teller or Cashier.

Tijani (2013) observed that payment systems are accessible and can be measured in terms of their reliability, transaction costs and risks. The reliability of payment system can be increased if all factors surrounding the efficiency of the electronic payments could be upgraded to prevent system breakdown and area of financial risks which may arise in form of liquidity risk, credit risk and systematic risk.

EMPIRICAL LITERATURE REVIEW

Odior&Banuso (2013) examined the challenges, benefits and prospects of cashless policy and their study found that some of the challenges that have the capacity to hamper the success of cashless policy are power supply and poor infrastructures to mention but a few. On the other hand, their study revealed that cashless policy will promote economic growth and provide banks with more liquidity for lending to needy sectors and contribute to eliminating corruption if the right infrastructure and trust is instituted.

Muyiwa *et al.,* (2013) found that the introduction of cashless policy will contribute in reducing robbery incidences; attraction of more foreign direct investment and creation of employment.

Oyewole *et al.,* (2013) examined electronic payment systems and its impact on economic growth in Nigeria, and their study found that e-payment system has a positive impact on economic growth in terms of real GDP and that the introduction of ATMs in doing financial transaction impacts directly on economic growth, while other forms of e-payment channels showed a negative impact on economic development.

Newstead (2012) examined the influence of cashless payment on economic growth and found a positive relationship between cashless payment and economic growth. Specifically, it was found that cashless transactions were growing twice as fast in developing economies as compared across the world. This assertion by Newstead was not supported with appropriate statistical figures, showing the pace of cashless growth in the developing economies as compared to figures of cashless growth in the developed economies.

Mallat&Tuunainen (2008) examined the adoption of mobile payment systems by merchants and found that the main purpose of mobile payment adoption is to increase sales and reduce the costs of payment processing and showed a positive influence on business sales growth. But, it carries challenges such as: complexity of the systems, unfavorable revenue sharing models, lack of critical mass, and lack of standardization.

Cheng *et al.,* (2011) risk perception of the E-Payment Systems using adult consumers in Malaysia and found that e-payment systems impacts negatively on firm's sales growth; also they further found that E-payment system has positive influence on consumers purchase intentions.

Echekoba and Ezu (2012), in a research carried out in Nigeria, observed that 68.2% of the respondent complained about long queues in the bank, 28.9% complained of bad attitude of teller officers (cashiers) while 2.89%complained of long distance of bank locations to their home or work places. Likewise, in her 24th NCS national conference in December 2011, CBN data shows that 51% of withdrawal done in Nigeria was through Automated Teller Machine (ATM), while 33.6% was through Over the Counter (OTC) cash withdrawals and 13.6% through cheques. Payment was also done through point of sales machine (POS) which accounted for 0.5% and web 1.3%.Therefore, if the introduction of ATM in Nigeria cash withdrawals system reduced OTC withdrawal; then it will implies that introduction of cashless policy supported by application of information technology can achieve more to reduce over dependent on cash payment in the Nigerian economic system.

Adewoye (2013) empirically studied the impact of mobile banking on service delivery in the Nigerian Commercial Banks through the use of questionnaire. He found out that the introduction of e-banking services has improved banking efficiency in rendering services to customer. His findings shows that mobile banking improve banks service delivery in a form of transactional convenience, savings of time, quick transaction alert which has recuperate customer's relationship and satisfaction.

Olorunsegun (2010) used cluster sampling technique to study the impact of electronic banking in Nigeria. He found that most banks in Nigeria have effective electronic banking systems that have improved customer's relationship and satisfaction.

Though these and some other authors have carried out various studies in electronic banking in Nigeria, this study will add value by specifically examining how cashless policy has impacted on the profitability of banks using ROA and ROE as proxies for the performance of the selected banks covered by the study.

METHODOLOGY

Data Collection

Data collections for this study were from secondary sources of information. The sources include the Central Bank of Nigeria (CBN), financial statement of commercial banks, textbooks,

and journals, write ups and various publications such as CBN statistical bulletin and periodical bulletin.

Research Design

A regression method of ordinary least square (OLS), Augmented Dickey Fuller unit root test and Johansen co-integration test of research design were adopted to ascertain the effect of the adoption of CBN's cashless policy in the Nigerian banking industry.

Population and Sample

A sample of 6 banks was selected from the population of 15 banks listed in the Nigerian Stock exchange for a period of 6 years from 2009-2014.

Analytical Framework

This study used the Auto Regressive Distributed Lag (ARDL) bound test. The bound test is basically computed based on an estimated error correction version of autoregressive distributed lag (ARDL) model, by Ordinary Least Square (OLS) estimator (Pesaran*et al.,* 2001). An F-test of the joint significance of the coefficients of the lagged levels of the variables was used to test the hypothesis of no co-integration among the variables against the presence of co-integration among the variables. The null hypothesis of no co-integration between bank profitability, Automated Teller Machine and Point of Sale was given as:

$$H_{01}: \varphi_1 = \varphi_2 = \varphi_3$$
$$H_{02}: \varphi_4 = \varphi_5 = \varphi_6$$

The alternative hypothesis was given as:

$$H_{a1}: \varphi_1 \neq \varphi_2 \neq \varphi_3$$
$$H_{a2}: \varphi_4 \neq \varphi_5 \neq \varphi_6$$

The F-test has a nonstandard distribution irrespective of whether the variables are 1(0) or 1(1). Pesaran*et al.,* (2001) put forward two sets of adjusted critical values that provide the lower and upper bounds used for inference. One set assumes that all variables are 1(0) and the other assumes that they are all 1(1). The optimal lag length for the specified ARDL model was determined based on the Akaike Information Criterion (AIC).

Model Specification

The econometric model to consider in this study takes ATM and POS as the explanatory variables and ROE and ROA as dependent variable respectively. These variables are used at constant prices to obtain a reliable parameter estimates in the time series regression as follows:

$$ROE = f(ATM, POS) \quad (1)$$
$$ROA = f(ATM, POS) \quad (2)$$

Specifying equation (1) and (2) in an exponential regression model, we have:

$$ROE = \alpha ATM^{\beta_1} POS^{\beta_2} e^{\mu_t} \quad (3)$$
$$ROA = \alpha ATM^{\beta_3} POS^{\beta_4} e^{\mu_t} \quad (4)$$

In this form, the coefficients $\beta_1, \beta_2, \beta_3 \& \beta_4$ can be directly estimated by applying estimated log-linear regression techniques via logarithmic transformation, and those coefficients will be the elasticity. Taking natural logs of both sides of the equation, we have:

$$\log ROE = \log\alpha + \beta_1 \log ATM + \beta_2 \log POS + \mu_t \quad 5$$
$$\log ROA = \log\alpha + \beta_3 \log ATM + \beta_4 \log POS + \mu_t \quad 6$$

We then differentiate partially with respect to the log of each variable to obtain elasticity of ROE and ROA and a priori sign expectation of equation (5) and (6):

$$\frac{\partial \log ROE}{\partial \log ATM_t} = \left[\frac{\partial ROE}{\partial ATM_t}\right]\left[\frac{ATM_t}{ROE_t}\right] = \beta_1 > 0 \quad 7$$
$$\frac{\partial \log ROA}{\partial \log ATM_t} = \left[\frac{\partial ROE}{\partial ATM_t}\right]\left[\frac{ATM_t}{ROE_t}\right] = \beta_3 > 0 \quad 8$$
$$\frac{\partial \log ROE}{\partial \log POS_t} = \left[\frac{\partial ROE}{\partial POS_t}\right]\left[\frac{POS_t}{ROE_t}\right] = \beta_2 > 0 \quad 9$$
$$\frac{\partial \log ROA}{\partial \log POS_t} = \left[\frac{\partial ROE}{\partial POS_t}\right]\left[\frac{POS_t}{ROE_t}\right] = \beta_4 > 0 \quad 10$$

Where:
ROE and ROA = Return on Equity and Return on Assets as proxy of bank profitability of commercial banks;
ATM = Automated Teller Machine; and
POS = Point of Sale.
$\beta_1, \beta_2, \beta_3 \& \beta_4$ = Coefficient parameters of the explanatory variables.
μ_t = Stochastic error term.

RESULT OF EMPIRICAL ANALYSIS

Descriptive Statistics

The computed values of these statistics are reported in Table 4.1 below:

Table 4.1: Result of Descriptive Statistics of the Variables

	LOGROA	LOGROE	LOGATM	LOGPOS
Mean	-2.966667	-0.791111	9.162778	12.54972
Median	-2.760000	-0.665000	7.640000	11.46500
Maximum	-2.120000	2.630000	16.81000	20.71000
Minimum	-6.380000	-2.870000	5.960000	8.420000
Std. Dev.	0.844847	1.034598	3.066601	3.180575
Skewness	-2.311870	0.582531	0.872383	0.801916
Kurtosis	8.951665	5.418153	2.384500	2.573604
Jarque-Bera	85.20193	10.80725	5.134575	4.131141
Probability	0.000000	0.004500	0.076743	0.126746
Sum	-106.8000	-28.48000	329.8600	451.7900
Sum Sq. Dev.	24.98180	37.46376	329.1415	354.0621
Observations	36	36	36	36

Source: E-view Result

From Table 4.1, the mean and standard deviation of the variables respectively are: ROA (-2.97, 0.85), ROE (-0.79, 1.04), ATM (9.16, 3.07) and POS (12.55, 3.18). The mean values of the variables reveal that they all have positive averages over the study period except for ROA and ROE, and the standard deviation shows a non-volatile effect of the studied variables. On the

average, the Point on Sales of 3.18% is high with deviation from the mean at 12.55%. However, the whole were positively skewed with exception of ROA.

Jarue-Bera test reject the normality of ROA at 1% level since 85.20 being higher than the X^2 value of 23.27 and 19.23 at 5% and 1% respectively. ROE (10.81), ATM (5.13) and POS (4.13) suggest normality. The results are as depicted by skewness and kurtosis of the data.

Correlation Analysis of the Variables

Correlation matrix between independent variables is represented in Table 4.2:

Table 4.2: Correlation Matrix between the Variables

	LOGROA	LOGROE	LOGATM	LOGPOS
LOGROA	1.000000			
LOGROE	0.6933695	1.000000		
LOGATM	-0.492922	-0.226556	1.000000	
LOGPOS	-0.438652	-0.170662	0.984903	1.000000

Source: E-view Result

As seen in Table 4.2, there are high data correlations among the variables. These high pair-wise correlation coefficients show the presence of multicollinearity among the variables implying the presence of a perfect or exact linear relationship among all the variables of the regression model.

Stationarity Test Results

The stationarity of the variables were examined using the Augmented Dickey Fuller tests. The results of the stationarity test of the variables are presented in Table 4.3. The results reveal the order of integration and the significance level of the variables of the model.

Table 4.3: Result for Stationarity test

Variable	ADF Statistic	Critical value	DW	Lag	inference
ROA	-6.5673	-2.9571	2.1805	2	I(2)
ROE	-6.7757	-2.9511	1.9911	2	I(1)
ATM	-6.0513	-2.9511	2.0584	2	I(1)
POS	-6.1876	-2.9511	2.0193	2	I(1)

Source: Author Computation from E-view 7

After the application of the ADF test on the first and second difference series, the computed variables of the ADF statistics are more negative than the MacKinnon critical values; we therefore reject the null hypothesis that the time series data variables are non-stationary (have a unit root). The time series exhibit difference stationarity (i.e. stationary at first and second difference).

Johansen Maximum Likelihood (ML) Co-integration Test Results

Having established the presence of unit root in most of our variables, we conducted multivariate co-integration tests using Johansen Maximum Likelihood tests to determine whether a long run relationship exist between the variables of the model. The results of the 6years annual series (2009-2014), are presented below:

Table 4.4a: Johansen's Co-integration Test Result

Johansen Test Statistics

Testing Hypothesis	Trace value	Critical value [prob]**	Max-Eigen value	Critical value [prob]**
None*	89.9344	47.8561[0.0000]	44.5526*	27.5843[0.0001]
At Most 1*	45.3818	29.7971[0.0004]	25.4850*	21.1316[0.0114]
At Most 2*	19.8969	15.4947[0.0101]	12.6552	14.2646[0.0884]

*Denotes rejection of the null hypothesis at the 5% level. Figures in parentheses are MacKinnon-Haug-Michelis p-values, (1973).

Source: Author Computation from E-view 7

Table 4.4b: Johansen's Co-integration Test Result

Johansen Test Statistics

Testing Hypothesis	Trace value	Critical value [prob]**	Max-Eigen value	Critical value [prob]**
None*	83.8330	47.8561[0.0000]	43.8565*	27.5843[0.0002]
At Most 1*	39.9765	29.7971[0.0024]	16.8653	21.1316[0.1784]
At Most 2*	23.1111	15.4947[0.0029]	15.3685*	14.2646[0.0333]

*Denotes rejection of the null hypothesis at the 5% level. Figures in parentheses are MacKinnon-Haug-Michelis p-values, (1973).

Source: Author Computation from E-view 7

The results of the Johansen's co-integration test as shown in Table 4.4a and 4.4b, reflects the two statistics test namely, the trace statistic and the maximum eigen-value proposed by Johansen and Juselius (1990). From the Tables, the trace statistic is small when the values of the characteristic roots are closer to zero (and its value will be large in relation to the values of the characteristic roots which are further from zero).

The other test, the maximum eigen-value is an alternative test statistic which tests the null hypothesis that the number of r co-integrated vectors is r against the alternative of (r+1) co-integrated vectors. (i.e. the null hypothesis r = 0 is tested against the alternative that r = 1; r = 1 against the alternative r = 2). If the estimated value of the characteristic root is found to be close to zero, then the maximum eigen-value will be small.

The co-integration results in Table 4.4a and 4.4b above suggest the existence of three co-integrating vectors as the trace statistics rejects the null hypothesis of no co-integrating vector at 5% significant level and accept the alternate hypothesis three co-integrating vectors. Similarly, the maximum eigenvalue rejects the null hypothesis of r = 0 co-integrating vector at 5% significant level and accepts the alternate hypothesis of two co-integrating vectors. Therefore, since both test statistics suggest the presence of three and two co-integrating vector, we can conclude that the variables are co-integrated and follow long-run equilibrium relationship.

The student's t test results

Statistical significance of the parameter estimates were conducted with student t-test and Fisher test. The summary of the results of student's t test of significance of the parameter estimates is presented in Table 4.5. Since the alternative hypothesis is expressed in the form of bi ≠ 0, a two-tail critical region is used. Each tail corresponds to half the chosen level of significance, that is, the area of each tail is 0.025 (or 2.5 percent) and with n-3 =33 degrees of freedom, the critical t value is 2.056.

Table 4.5a: The results of the student's test

Dependent variable	Explanatory variable	t_{cal}	Implication t_{tab} at 5% critical value	$t_{cal}>t_{tab}$ or $-t_{cal}<-t_{tab}$	$t_{cal}<t_{tab}$ or $-t_{cal}>-t_{tab}$	Decision
	Log ATM	-3.2757	2.056	-3.2757<-2.056		Null hyp. Is rejected.
	Log POS	2.1719	2.056		2.1719>2.056	Null hyp. Is rejected.
Log ROA	Constant	-0.0683	2.056		-0.0683>-2.056	Null hyp. Is accepted.
	ECM(-1)	-4.3688	2.056	-4.3688<-2.056		Null hyp. Is rejected.

Source: Author's Computation from E-view result

Table 4.5b: The results of the student's test

Dependent variable	Explanatory variable	t_{cal}	Implication t_{tab} at 5% critical value	$t_{cal}>t_{tab}$ or $-t_{cal}<-t_{tab}$	$t_{cal}<t_{tab}$ or $-t_{cal}>-t_{tab}$	Decision
	Log ATM	-2.0420	2.056	-2.0420<-2.056		Null hyp. Is rejected.
	Log POS	0.5634	2.056		0.5634<2.056	Null hyp. Is accepted.
Log ROE	Constant	0.0854	2.056		0.0854<2.056	Null hyp. Is accepted.
	ECM(-1)	-3.3963	2.056	-3.3963<-2.056		Null hyp. Is rejected.

Source: Author's Computation from E-view result

From Table 4.5a and 4.5b, ATM and POS are statistically significant where ROA is the dependent variable and ATM is statistically significant where ROE is the dependent variable. The significant effect of the variables is good in explaining the variation in ROA and ROE at the 5% level of significance. This implies that irrespective of the minimal effect of bank specific efficiency of commercial banks, ATM and POS has a prevailing effect on their volume of usage by customers.

The 'F' Distribution Test Result

The result of 'F' ratio distribution test with V_1 and V_2 degrees of freedom at 5% significant level for the Model is summarized in Table 4.6 below:

Table 4.6a: The results of 'F' distribution test

F_{cal}	Prob.	F_{tab}	Implication $F_{cal}>F_{tab}$	$F_{cal}<F_{tab}$	Decision
11.53	0.0000	3.27	11.53>3.27		Null Hypothesis rejected.

Source: Author's Computation from E-view results

Table 4.6b: The results of 'F' distribution test

F_{cal}	Prob.	F_{tab}	Implication $F_{cal}>F_{tab}$	$F_{cal}<F_{tab}$	Decision
4.589	0.0000	3.27	4.589>3.27		Null hyp. Is rejected.

Source: Author's Computation from E-view results

The observed F-ratio (F_{cal}) is compared with the theoretical F value with V_1 = k-1 = 2 and V_2 = N-K = 33 for the model at 5% level of significance. Based on the result, we hereby reject the null hypothesis and accept the alternate hypothesis. That is, for ROA, we conclude that there is

significant effect of the adoption of CBN cashless policy in Nigeria due to the overriding effect of ATM and POS. Also, for ROE, we can conclude that there is significant effect of the adoption of CBN cashless policy in Nigeria due to the overriding effect of ATM.

The Result of the Error Correction Model (ECM)

Information from the unit root tests, and the estimated co-integrating relationship were used to specify the short-run Error Correction dynamic Model. The test was conducted to reconcile the short-run and long run dynamism. The result obtained for the model is explained in Table 4.7 below:

Table 4.7a: Error Correction Model (ECM) Result

Dependent Variable	Explanatory Variable	Coefficient	Std. Error	t-statistic	Prob.
	D(log ATM)	-0.6243	0.1906	-3.2757	0.0027
	D(log POS)	0.3605	0.1660	2.1719	0.0379
D(log ROA)	Constant	-0.0081	0.1181	-0.0683	0.9460
	ECM(-1)	-0.7628	0.1746	-4.3688	0.0001

R^2 = 0.6058, DW = 1.778, F-statistic = 11.53

Source: Author's Computation

Table 4.7b: Error Correction Model (ECM) Result

Dependent Variable	Explanatory Variable	Coefficient	Std. Error	t-statistic	Prob.
	D(log ATM)	-0.2084	0.1021	-2.0420	0.0500
	D(log POS)	0.0313	0.0555	0.5634	0.5774
D(log ROE)	Constant	-0.0711	0.8320	0.0854	0.9325
	ECM(-1)	-0.6433	0.1894	-3.3963	0.0019

R^2 = 0.3796, DW = 2.0416, F-statistic = 4.59

Source: Author's Computation

Table 4.7a and 4.7b shows the Error Correction Model (ECM) for ROA and ROE respectively. The coefficient of the error correction model for the estimated ROA and ROE equations is statistically significant and negative. Specifically, if the actual equilibrium value is too high, the error correction term will bring it down, while if it is too low, the error correction term will raise it. The value of the coefficient however implies that when ROA and ROE is out of its long run trend, 76.28% and 64.33% of the error is corrected at each level to restore equilibrium but with a stronger and significant effect.

Statistically, the fit is only good for ROA with R^2 indicating 60.58% of the total variation when compared to ROE with R^2 value of 37.96% as explained by the included variables. The remaining 39.42 and 62.04 percent of the total variation in ROA and ROE is unaccounted for by the regression line and is attributed to the factors included in the disturbance term (μ). The presence of unit root in the residual series usually drive Durbin-Watson test towards zero, but the value of this statistic (2.04), which is approximately 2, is within the acceptable limit for zero autocorrelation and it is considered interesting because it reinforces the acceptance of the null hypothesis of no serial correlation in the residual of the model.

SUMMARY OF FINDINGS

The analysis based on the Return on Assets (ROA) model reveals that the use of automated teller machine (ATM) is negatively signed, although statistically significant in explaining the adoption of CBN's cashless policy in Nigeria. This implies that despite the initial slow embrace of the use of ATM by customers, there is still a high prevailing usage which in turn increases the asset of the banks and key positively into the CBN's cashless policy. This explains that as ATM usage volume increase, it increases the ROA of the bank through a cashless approach. Also, the point of sales (POS) is positively signed and statistically significant in explaining the adoption of CBN's cashless policy in relation to the Return on Assets (ROA). This means that as point of sales facilities increase, it discourages cash handling by individuals and encourages the cashless policy of the CBN. This is in agreement with the research work of Alagh (2014).This implies that as POS usage volume increase, it increases the ROA of the bank through a cashless approach.

Based on the Return on Equity (ROE) model, the findings revealed that Automated Teller Machine (ATM) is negatively signed, although statistically significant in explaining the adoption of CBN's cashless policy in Nigeria. This implies that as ATM usage volume increases, it increases the ROE of the bank through a cashless approach. Other variables used in the model for ROE are not statistically significant in explaining the adoption of CBN cashless policy. This is also in agreement with the research work of Alagh (2014).

CONCLUSION AND POLICY RECOMMENDATIONS

Cashless policy particularly the use of ATM increases the ROA of the bank through a cashless approach. This implies that as POS usage volume increase, it increases the ROA of the bank through a cashless approach. As well cashless policy also increases the volume of the use of ATM.As ATM usage volume increased, it increases the ROE of the bank through a cashless approach. From the data collected and analyzed, it is safe to conclude that the deployment of ICT enhances the application of various policies such as the cashless policy for improving bank performance. It is therefore recommended that the cashless policy should be strengthened and all bottle necks like poor power supply and all loopholes that could lead to fraudulent exposure be tactically proactively tackled.

More electronic payment devices like ATM and POS should be acquired and installed in remote areas to facilitate quick banking transactions and banking inclusion while the (CBN) as well as commercial banks should increase its awareness to the Nigerian Public and encourage literacy among bank customers in Nigeria to enable them appreciate and embrace policies that rely on information technology for banking transactions.

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