

Internet Banking and Domestic Investment Nexus: The Nigeria Experience

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Abstract

Emergence of internet banking in the world has affected both domestic and foreign investment across countries. However, the level at which countries absorb the internet banking for investment purposes vary across countries. This study examines the internet banking and domestic investment nexus in Nigeria. In order to achieve this, two objectives were utilized: to examine the nature of the relationship between internet banking and domestic investment and to determine the extent of the effect of internet banking on domestic investment in Nigeria. The study used quarterly data from the period of 2012 to 2022. The stationarity of the data was tested using Augmented Dickey and Fuller Unit root test and the co-integration was done using bound test approach. The data were analysed using an autoregressive distributed lag model. The findings show that ATM has positive and significant effect on domestic investment in the long run but in the short run, it exerts negative and significant effect; interest rate has insignificant effect on domestic investment in the short run while in the long run it has negative and significant effect; Mobile Money (MM) has negative effect on domestic investment in the short run while in the long run it has a positive effect on domestic investment; NEFT has positive and significant effect on domestic investment in the short run while in the long run, it does not exert significant effect on domestic investment and; POS has positive and significant effect on domestic investment in the short run whereas in the long run, it has negative and significant effect on domestic investment. The study therefore recommends that internet banking should be encouraged and that internet banking security should be strengthened to increase the confidence of investors.

Keywords

Internet, Banking, Domestic, Investment, Nigeria

1. Introduction

The emergence of technology has greatly influenced the activities of the banking industry and banks have traditionally been in the forefront of harnessing technology to improve their products and services (Ibrahim & Daniel, 2019). Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and demands Banks to serve their customers electronically. Also, the prospects of reducing cost of operation and improve service delivery have motivated banks into investment in technology (Simpson, 2002). This buttressed on the assertion of Ovia (2001) on the phenomenal changes in the banking sector which could be seen in the enormous volume and complexity in service delivery or product liberalization of finance and process re-engineering in business.

Surendran (2012) noted that the Perceived Usefulness (PU) and the Perceived Ease of Use (PEOU) are two factors mentioned in Davis's Technology Acceptance Model (TAM) that influences users' decision to use a particular technology system. However, Obiri-Yeboah et al. (2013) observed that even when the e-banking system is easy to handle, users eventually lose interest in it when they observed that it is not useful to them. Therefore banks that fail to respond to the emergence of e-banking in the market are likely to lose their customers (Salehi & Alipour, 2010); Lee (2009) stressed that its adoption seem not to be yielding the anticipated results, thereby creating a gap between the actual returns and its proposed objectives.

In the recent time, it has been observed that a large number of studies have totally ignored the internet banking and compare electronic money with substitution of currency through electronic gadgets such as a virtual currency and smart cards. Internet banking is simply when devices are being used. Just like Freedman (2000) proposes, the electronic money and internet banking are made up of three devices; access cards, stored value cards and network money. Electronic money or digital currency is a digital form of cash stored and exchanged electronically. It aims to provide a convenient and efficient method of a conducting financial transactions. However, one striking thing about this view is that electronic money and internet banking are no longer processes but devices. Shy and Tarkka (2002), Santomero and Seater (1996) earlier presented models that identify conditions which alternative electronic payments substitute for cash. However, Lin, Lin, Yang, Chuang and Hsu (2023) show that user's acceptance of innovative technologies and various external variables such as the user's external environment, internal characteristics, and information system quality were strongly positively correlated with perceived usefulness, perceived ease of use, and behavioral intention regarding the electronic payment behaviors of consumers. Also, Okifo and Igbunu (2015) observed elimination of fear of the unknown, paving way for cashless society to be the likely benefits of electronic banking in Nigeria while the challenges include among other things security, public acceptability, and lack of uniform platform operated by banks. Internet

banking facilitate access to finance for investment either in the form of equity or debt financing.

2. Literature Review

The origin of the internet is rooted in 1950s in the United States of America (National Media Museum, 2020). The first ever message was tested and sent from computer science professor Leonard Kleinrock's laboratory at University of California, Los Angeles (UCLA) to the second network-node at Stanford Research Institute (SRI) (Wikipedia, 2016). In order to internet banking needs of clients, banks need web-empowered features for keeping clients and attracting prospective ones (Maduku, 2013).

Internet banking and payment services in Nigeria are recognized by the Central Bank of Nigeria to be at the early stages of development (CBN, 2003). Internet banking involves carrying out customer internet banking activities using internet enabled device(s). Internet banking is not geographically tied to where the customers are. More importantly, in what is becoming a much wider digital transformation of consumer banking, internet banking has the potential to replace or devalue the legacy systems of incumbents, as it allows users to access online almost all services traditionally available from a branch (Lyons & Zhu, 2024). The description of internet banking by Lyon and Zhu (2024) shows that investors are more likely to access and control the flow of funds through the use of internet services than the traditional banking system that is devoid of the use of cable in banking system. Also, in terms of pulling fund for investment, Guerrero (2011) argues that internet banking has the potential to generate savings of about one per cent of GDP annually.

Chiemeke, Ewwiekpaefe and Chete (2006) show that internet banking is being offered at the rudimentary level of interactivity with most of the bank having mainly information sites and providing little internet transactional services. These banks showed low security level which is an indication that they have not adopted 128-bit Secure Sockets Layer (SSL) encryption security measures. Similarly, Ogbonna, Atsan and Okoro (2020) examine the effect of electronic banking on domestic investment in Nigeria and observed that the pool of electronic banking transactions does not affect the domestic investment in Nigeria significantly. Electronic banking transactions via POS, Mobile Banking and Internet Banking all showed negatively insignificant relationship with domestic investment while ATM and NIP showed positive but insignificant relationship with domestic investment in Nigeria.

Nwankwo and Agbo (2021) investigate the effect of automated teller machine transactions, point of sale terminals transactions and mobile banking transactions on the performance of commercial banks. The study shows that automated teller machine transactions have positive and significant effect on the performance of commercial banks in Nigeria while both point of sale terminal transaction and mobile banking transactions have negative and weak effects on the performance of the commercial banks. Similarly, Wu and Pea-Assounga (2022)

examine the relationship between internet banking and bank investment decision, as well as gaging the mediating effects of sustainability and competitive advantage as attributes of investment decisions. The study shows that internet banking, sustainability, and competitive advantage constructs are significant antecedents of banks because they highlight valuable attributes for banks to attain future benefits.

Also, internet banking is argued to affect economic growth as [Ogbeide-Osareti and Ishiwu \(2020\)](#) observed that Automated Teller Machines (ATMs) and Mobile Banking (MB) show statistically significant effect on economic growth in Nigeria. Similarly, studies like [Wu and Pea-Assounga \(2022\)](#) ascertain the relationship between internet banking and investment decision while [Ibrahim and Daniel \(2019\)](#) examined E-banking and development of the banking sector.

3. Methods and Data

This work is anchored on the Neo-classical investment theory of optimal capital accumulation serves as this theoretical underpinning. It states that output and the cost of capital services about the cost of output determine the desirable capital stock. The cost of capital goods, the interest rate, corporate income taxation, etc., influence the cost of capital services. As a result, changes in the result or the cost of capital services relative to the cost of output influence the desired capital stock and, therefore, investment.

In line with the theoretical framework where the cost of capital (interest rate) corporate income tax are observed to affect investment, this study modifies the functional form to include E-banking or internet banking variables which are assumed to affect the cost of capital available for investment and hence the volume of investment in an economy. Therefore, the functional specification of the model is given as;

$$INV = f(\text{INT}, \text{internet banking Variables}) \quad (3.1)$$

where

INV stands for domestic investment

INT stands for interest rate

Internet banking variables include:

Point of Sales (POS)

Automatic Teller Machine (ATM)

Mobile Money (MM)

National Electronic Fund Transfer (NEFT)

The linear relationship between investment and internet banking variables

$$INV_t = \beta_0 + \beta_1 INT_t + \beta_2 POS_t + \beta_3 ATM_t + \beta_4 NEFT_t + \beta_5 MM_t + \mu_t \quad (3.2)$$

Equation (3.2) measures the long run effect E-banking or internet banking on domestic investment in Nigeria.

where

β_0, \dots, β_7 are the parameters to be estimated.

It is expected that interest rate which is the cost of borrowing should exert negative relationship with investment while all other factors are expected to exert positive influence on investment.

Model 3.2 will be estimated using ordinary least square (OLS) technique. This is because among the class of all unbiased estimators, least square estimators are BLUE.

The study conducted stationarity test using Augmented Dick-fuller Unit root test. It is expected that if interest rate should exert negative effect on domestic investment while other variables are expected to show positive relationship with domestic investment. Other pre-estimation test such as co-integration and correlation matrix will be conducted. Also, post-estimation test such as residual diagnostic (normality test, heteroscedasticity and autocorrelation) test. This would help to ensure that the coefficients of the parameter estimates are free from heteroscedasticity and autocorrelation.

The data for this study is basically secondary data and will be sourced from World Bank and Central Bank of Nigeria. There are various methods, procedures and algorithms proposed in the statistical and economic literature to solve the problem of transforming a low-frequency series into a high-frequency one (Pavía-Miralles, 2010). As a result, this study converted annual data to quarterly data using disaggregation method of an Autoregressive Integrated Moving Average (ARIMA). The disaggregation methods proposed by Lisman and Sandee (1964), Zani (1970) and Greco (1979) were devised to estimate the quarterly series corresponding to year t as a weighted average of the annual values of periods $t - 1$, t and $t + 1$. The study estimates the quarterly series through a fix weight structure. The study will use E-views 12 for the analysis.

4. Result Presentation

Descriptive Statistics

The descriptive statistics of mean, standard deviation, skewness, Kurtosis, Jarque-Bera and probability of Jarque-Bera is shown on **Table 1**.

Table 1. Descriptive statistics of variables.

	ATM	INT	INV	MM	NEFT	POS
Mean	7.80E+08	6.859163	20.49250	2.73E+08	43944519	6.48E+08
Median	8.01E+08	6.021198	15.11283	47804561	13466461	1.46E+08
Maximum	1.67E+09	13.86898	39.47052	1.86E+09	2.08E+08	4.09E+09
Minimum	2.95E+08	0.867273	14.06390	2297688.	5765896.	2587595.
Std. Dev.	4.15E+08	3.779889	7.855285	4.50E+08	60770439	1.20E+09
Skewness	0.797709	0.188588	1.033610	2.279659	1.619030	2.149649
Kurtosis	2.668673	2.121263	2.754915	7.341299	4.100656	6.068530
Jarque-Bera	4.535862	1.562171	7.403010	67.70852	19.98147	47.66222
Probability	0.103526	0.457909	0.024686	0.000000	0.000046	0.000000

Continued

Sum	3.20E+10	281.2257	840.1925	1.12E+10	1.80E+09	2.66E+10
Sum Sq. Dev.	6.89E+18	571.5024	2468.220	8.11E+18	1.48E+17	5.77E+19
Observations	41	41	41	41	41	41

Authors, 2024.

Table 1 shows the descriptive statistics of the data used in this study. It could be observed that ATM has the highest mean value followed by POS, MM, NEFT, INV and INT. Also, POS showed greater deviation from its mean value followed by ATM, MM, NEFT, INV and INT. Looking at the skewness, it shows that all the variables have evidence of positive skewness. However, some of the variables (ATM, INT, and INV) were found to be platykurtic (with kurtosis values less than 3). This means that they have thinner tails and could be said to be a continuous and discrete uniform distribution like Bernoulli distribution. Also, MM, POS and NEFT showed evidence of leptokurtic (with kurtosis values greater than 3). This has tails that asymptotically approach zero more slowly than a Gaussian distribution and produces more outliers than the normal distribution. The Jarque-Bera value shows that only ATM and INT were individually normally distributed while INV, MM, NEFT and POS do not follow normal distribution. Lastly, the total number of observations used in this study is 41. This is large enough to solve the problem of loss of degrees of freedom.

4.1. Unit Root Test

The study adopted the Augmented Dickey and Fuller (ADF) unit root test with intercept and trend in the equation. The null hypothesis for this test is that the variables contain unit root. This is to be rejected if the ADF test statistic value is greater than ADF 5 percent critical value. This test is presented on **Table 2**.

Table 2. ADF unit root test with intercept and trend.

Variable	Level Form		First Difference		Order of Integration
	5% level	ADF test Stat.	5% level	ADF test Stat.	
ATM	-3.557759	-3.687585			I (0)
INT	-3.562882	-4.903442			I (0)
INV	-3.552973	1.183180	-3.568379	-3.594905	I (1)
MM	-3.540328	4.111610			I (0)
NEFT	-2.945842	-0.228722	-2.945842	-3.921353	I (1)
POS	-2.960411	7.716932			I (0)

Authors, 2024.

Table 2 shows the ADF unit root test of the variables. The equation for the unit root test included intercept and trend. The result shows that ATM, INT,

MM and POS were stationary in their level while INV and NEFT became stationary after first difference. This means that the study has a mixture of order zero and order one variables.

4.2. Correlation Test

This test is used to examine the level of relationship that exist between two variables. It is presented in matrix form and the correlation coefficient between two pairwise variable should not be greater than 0.8 (Gujarati & Sangetti, 2005). This is presented on **Table 3**.

Table 3. Pairwise correlation matrix test.

	ATM	INT	INV	MM	NEFT	POS
ATM	1.000000					
INT	-0.791611	1.000000				
INV	0.722928	-0.604042	1.000000			
MM	0.636011	-0.704248	0.707578	1.000000		
NEFT	0.763890	-0.617976	0.773954	0.593510	1.000000	
POS	0.662796	-0.706219	0.680385	0.771404	0.644767	1.000000

Author, 2024.

Table 3 shows the pairwise correlation matrix of the variables. It could be observed that all the variables have their pairwise less than 0.8 and none of the variables has pairwise value of 0. This means that there exists pairwise correlation between these variables and that none of the variable has full or complete information about the other. The implication of this is that there would be absence of multicollinearity among the explanatory variables included in the model.

4.3. Co-Integration Test

The presence of I(1) and I(0) in the model shows that bound test approach to cointegration would be more appropriate in checking for the existence of long run association among the variables in the model. This is presented in **Table 4**.

Table 4. Result of bound test co-integration test.

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n = 1000				
F-statistic	191.4658	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Continued

Actual Sample Size	39	Finite Sample: n = 40		
		10%	2.306	3.353
		5%	2.734	3.92
		1%	3.657	5.256
		Finite Sample: n = 35		
		10%	2.331	3.417
		5%	2.804	4.013
		1%	3.9	5.419

Author, 2024.

Table 4 shows the result of bound test co-integration test. The null hypothesis for this test is that there is no level relationship among the variables in the model. This is to be rejected if the value of F-statistic is higher than the lower and the upper bound of It could be observed that the F-statistic. The result shows that both at finite sample and asymptotically, the value of F-statistic (191.4658) is greater than the 5 percent value for the upper and lower bound respectively. This shows that the null hypothesis is to be rejected at 5 percent level. Thus, there exist long run association among the variables included in the model.

4.4. Regression Output

The regression output of the effect of internet banking on domestic investment in Nigeria is presented in the form of the Conditional Error Correction Model. This shows the short run dynamics of the model and the long run effect of internet banking on domestic investment in Nigeria.

Table 5. Regression results.

			Dependent Variable: Log (INV)		
Short-Run Result			Long-Run Result		
Variable	Coefficient	Prob.	Variable	Coefficient	Prob.
C	5.570159	0.0000	C	-27.51221	0.0002
LOG(INV(-1))*	0.202461	0.0004	LOG(ATM)	1.684421*	0.0003
LOG(ATM(-1))	-0.341030*	0.0000	INT	-0.034190*	0.0009
INT(-1)	0.006922*	0.0000	LOG(MM)	1.028173*	0.0002
LOG(MM(-1))	-0.208165	0.0000	LOG(NEFT)	-0.052368	0.3240
LOG(NEFT(-1))	0.01060	0.2020	LOG(POS)	-1.154771*	0.0003
LOG(POS(-1))	0.233797*	0.0000			
DLOG(ATM)	-0.481467*	0.0272	EC =	LOG(INV)	-1.6844*
DLOG(ATM(-1))	0.728675*	0.0000	LOG(ATM)	-0.034*INT	+1.0282*
D(INT)	0.003893	0.3511			

Continued

D(INT(-1))	-0.009281*	0.0077	LOG(MM)	0.0524*	LOG(NEFT)
DLOG(MM)	-0.368546*	0.0000	-1.1548*	LOG(POS)	-27.5122
DLOG(MM(-1))	0.473543*	0.0000			
DLOG(NEFT)	0.036263*	0.0034			
DLOG(POS)	0.464816*	0.0000			
DLOG(POS(-1))	-0.561577	0.0000			
CointEq(-1)*	-0.202461	0.0000			
R-squared	0.949977				
Adjusted R-squared	0.949962				
F-statistic	66448.54	Durbin-Watson stat		2.041424	
Prob(F-statistic)	0.000000				

Authors, 2024.

Table 5 shows the result of short run dynamics and the long effect of internet banking on domestic investment in Nigeria. The variables in the model are in their log form. This shows that the interpretation should be in the form of elasticity. It could be observed that most of the internet banking variables, Mobile Money (MM), Automatic Teller Machine (ATM), National Electronic Fund Transfer (NEFT) and Point of Sales (POS) were found to be statistically significant in the model. However, interest rate which measures the cost of borrowing for investment was not significant in the short run. This is not surprising as there exists a time lag for a percentage change in interest rate to exert an effect on the level of domestic investment in Nigeria. It is not surprising to observe the positive and significant effect of one period lag of investment on the current value of investment.

The coefficient of determination measured by the R-squared value (0.949) shows that the explanatory variables in the model explains about 94.9 percent of the variations in domestic investment in Nigeria. This shows that the remaining 5.1 percent is explained by other variables not included in the model. Also, the value of F-statistic (66448.54) and its probability value ($0.0000 < 0.05$) show that the general model is significant at 0.05. Similarly, the Durbin Watson value of 2.04 shows that the estimated regression model is free from autocorrelation.

The short-run impact of the individual independent variables in the model was examined and the study found that holding other variables in the model constant, 1 percent increase in mobile money (MM) would lead to about 0.37 percent decrease in domestic investment. In other words, increasing the value of Mobile Money by 10 percent would lead to about 3.7 percent decrease in domestic investment. Interestingly, mobile money is observed to crowd out investment in Nigeria. Also, the study observed that Automatic Teller Machine (ATM) exerts negative but statistically significant effect on domestic investment in Nigeria. The study showed that holding other variables in the model constant, 1

percent increase in the number of ATM users would lead to 0.48 percent decrease in domestic investment in Nigeria. It is evident that with the use of ATM, customers could easily withdraw money at interval even off-banking hours. This is supposed to encourage domestic investment; however, it shows that most of the withdrawers through ATM were directed to other transactions that do not increase investment.

However, the National Electronic Fund Transfer (NEFT) was found to exert positive and statistically significant effect ($0.0034 < 0.05$) on domestic investment in Nigeria. The study found that holding other variables in the model constant, 1 percent increase in NEFT would lead to about 0.04 percent increase in domestic investment in Nigeria. This is an indication that national electronic fund transfer (NEFT) supports domestic investment in Nigeria.

More so, point of sales (POS) was found to exert positive and statistically significant effect ($0.0000 < 0.05$) on domestic investment in Nigeria. The study found that holding other variables in the model constant, 1 percent increase in POS services would lead to about 0.46 percent increase in domestic investment. This further implies that increasing POS services by 10 percent would lead to about 4.6 percent increase in domestic investment in Nigeria. The coefficient of cointegration equation shows was found to be negative and statistically significant. It measures the speed of adjustment of the short run dynamics towards long run equilibrium. The study found that quarterly, about 20.25 percent of the fluctuations in the short run get adjusted towards long run equilibrium. This shows that it takes about 1 year and 3 months for the model to fully get adjusted towards long run equilibrium.

However, from the long-run result, it could be observed that $\log(\text{ATM})$, INT , $\log(\text{MM})$, and $\log(\text{POS})$ were found to exert significant effect on domestic investment. Most of the variables such as $\log(\text{ATM})$, INT , and $\log(\text{MM})$ assumed their correct a priori signs while $\log(\text{POS})$ was found to be negative instead of positive. The study found that holding other variables in the model constant, 1 percent increase in ATM would lead to about 1.684 percent increase in domestic investment. This shows that ATM supports domestic investment in the long run. Also, the interest rate which measure the cost of borrowing was found to exert negative and statistically significant effect on domestic investment in the long run. The study found that holding other variables in the model constant, 1 percent increase in interest rate would lead to a decrease in investment by -0.03 percent. It is not surprising to see the trade-off between investment and interest rate as this conforms to theory.

Mobile money (MM) was found to exert positive and statistically significant effect on domestic investment. The study found that holding other variables in the model constant, 1 percent increase in MM would lead to about 1.03 percent increase in domestic investment in Nigeria. It further shows that to increase domestic investment by 10.3 percent, the value of mobile money must increase by 10 percent. Also, POS was observed to exert negative but statistically significant effect on domestic investment in the long run. The study found that hold-

ing other variables in the model constant, 1 percent increase in POS would lead to about 1.15 percent decrease in domestic investment. Lastly NEFT shows statistical insignificant effect in explaining domestic investment in the long run.

4.5. Post Estimation Test

The post estimation test conducted in this study after the regression analysis are the normality test, serial correlation test, heteroscedasticity test and Ramsey Reset test for model specification. The essence of these tests is to ensure that the OLS estimators in the regression are Best Linear, Unbiased and Efficient estimator to allow for policy consistency.

4.5.1. Normality Test

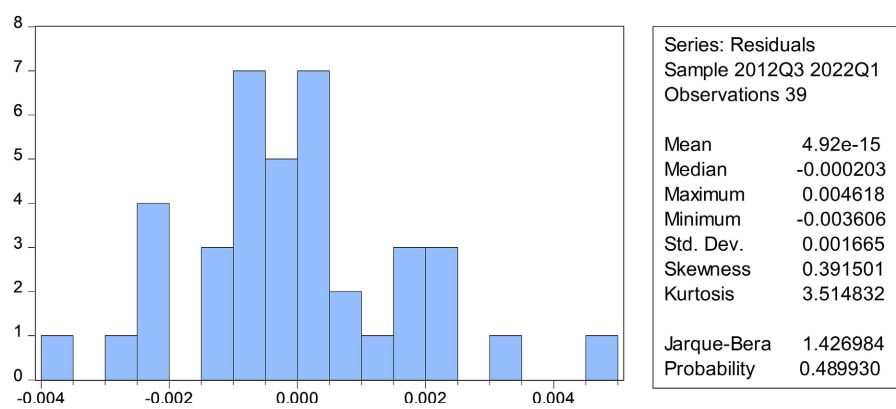


Figure 1. Result of normality test.

Figure 1 shows the result of normality test of the residual of the regression model. It could be observed that the Jarque-Bera and probability value of Jarque-Bera show that the residual of the estimated model is normally distributed.

4.5.2. Serial Correlation Test

Serial correlation in this study was conducted using Breusch-Godfrey test. The null hypothesis for this test is that the residual of the estimated model is not serially correlated. This is to be rejected if the probability value of observed residual squared is less than 0.05. Otherwise, the null hypothesis should not be rejected at 5% level. This is presented on **Table 6**.

Table 6. Serial correlation test.

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	4.495885	Prob. F (2, 21)	0.1237
Obs*R-squared	11.69251	Prob. Chi-Square (2)	0.4029

Author, 2024.

Table 6 shows that the probability value of Obs*R-squared is 0.4029 and it is greater than 0.05. This means that the null hypothesis that there is no serial cor-

relation in the residual of the estimated model cannot be rejected at 5% level.

4.5.3. Heteroscedasticity Test

This study makes use of the Breusch-Pagan Godfrey heteroscedasticity test. The null hypothesis for this test is that the variance of the residual of estimated model is homoscedastic. This is to be rejected if the probability value of Observed Residual Squared is less than 0.05, otherwise, the null hypothesis should not be rejected at 5%.

Table 7. Heteroscedasticity test.

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.614129	Prob. F (15, 23)	0.1464
Obs*R-squared	20.00057	Prob. Chi-Square (15)	0.1719
Scaled explained SS	8.746772	Prob. Chi-Square (15)	0.8904

Author, 2024.

Table 7 shows that the probability value of Obs*R-squared is 0.8904 and it is greater than 0.05. This means that the null hypothesis that the variance of the residual of the estimated model is homoscedastic. That is, the variance is constant at 5% level of significance.

4.5.4. Ramsey Reset Test

Ramsey reset test is a test of model specification. The null hypothesis for this test is that the model is correctly specified. The decision is to reject the null hypothesis if the probability value of t-statistic and F-statistic is less than 0.05, otherwise, the null hypothesis should not be rejected.

Table 8. Result of ramsey reset test.

	Value	Df	Probability
t-statistic	1.758431	22	0.0926
F-statistic	3.092078	(1, 22)	0.0926
Likelihood ratio	3.092078	1	0.0787

Author, 2023.

Table 8 shows the result of Ramsey reset test. It could be observed that the probability value of t-statistic and F-statistic are both greater than 0.05. This implies that the null hypothesis cannot be rejected at 5 % level. Therefore, the estimated model was correctly specified.

4.5.5. CUSUM and CUSUM of Square Test

This is a test of stability of the regression model. The null hypothesis for this test is that the model is dynamically stable. This is to be rejected if the trend line lies

outside the boundary lines. Otherwise, the model is dynamically stable. These tests are presented on **Figure 2** and **Figure 3**.

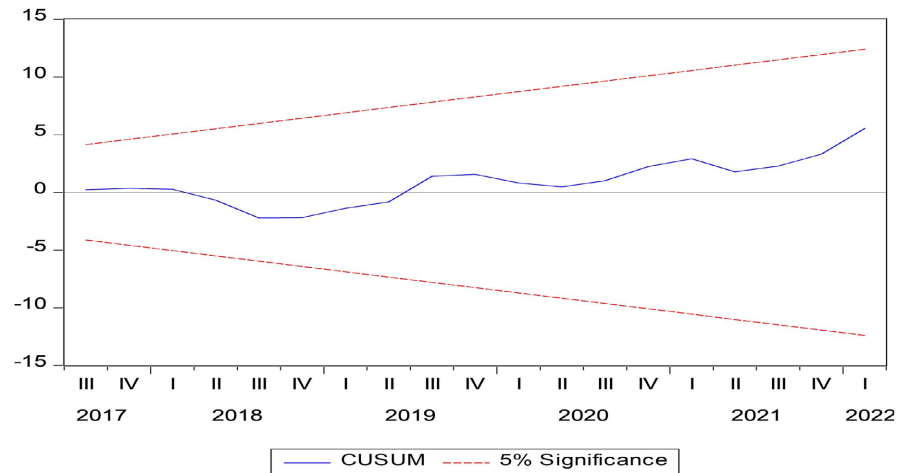


Figure 2. CUSUM test.

Figure 2 shows that the trend line lies within the border lines showing that the model is stable in the short run.

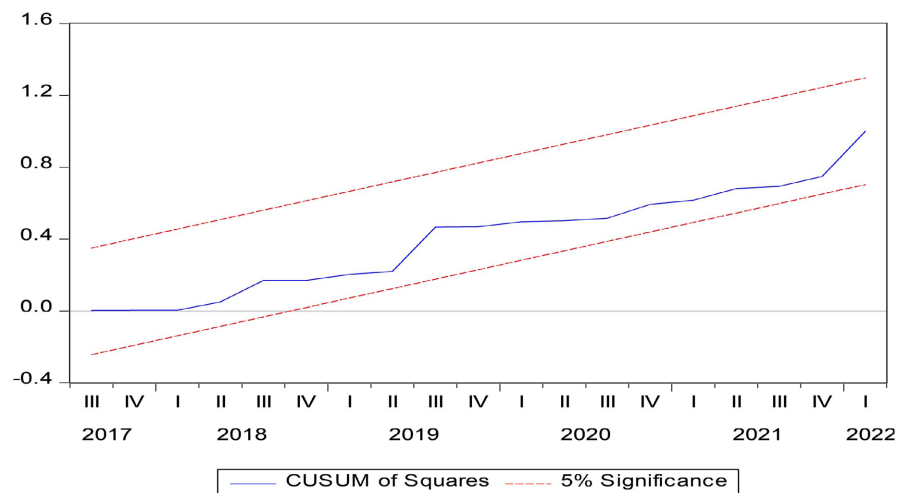


Figure 3. CUSUM of squares test.

Figure 3 shows that the trend line lies inside the border line. This shows that the model is stable in the long run.

4.6. Discussion of Findings

The use of internet banking is fast growing and most economies are upgrading to this current trend. This study examines the effect of internet banking on domestic investment in Nigeria. One of the findings shows that the number of ATM exert negative effect on domestic investment in the short run. However, the long run result confirmed the existence of positive and significant effect of

number ATM on domestic investment. This finding shows that the long run result conforms to the finding of Mercy (2014) who examined the effect of internet banking on economic development and established a positive relationship between economic development and the number of customers using internet banking, the number of ATMs and return on assets.

Other internet banking that exerts short run significant and positive effect on domestic investment are NEFT and POS. This is contrary to the findings of Ogbonna, Okoro, Atsanan, and Igwe (2020) who examine the effect of electronic banking on domestic investment in Nigeria. Ogbonna et al. (2020) found that electronic banking transactions via POS, Mobile Banking and Internet Banking all showed negatively insignificant relationship with domestic investment. In the long run, the effect of NEFT on domestic investment was observed to be statistically insignificant which is somewhat in line with the findings of Ogbonna et al. (2020).

5. Conclusion and Recommendation

The effect of internet banking on domestic investment has been widely discussed in this study by examining theories and empirical findings of other researchers. The study used an Autoregressive Distributed Lag (ARDL) model to examine the effect of internet banking on domestic investment. The short run dynamics and the long run of the model were examined. The speed of adjustment of the short run dynamics was observed to be 20.25 percent per quarter. The findings show that internet banking has strong relationship with domestic investment. Also, internet banking exerts significant effect on domestic investment in Nigeria.

Innovative technological changes in the financial sector permeate into the society with a time lag which perhaps depend on the perception and the need of users. This is not different from internet banking where the speed of adjustment by customers depends on their perception and needs. As a result, this study therefore recommends that internet banking should be encouraged and that internet banking security should be strengthened to increase the confidence of investors.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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