

Effect of Fintech Evolution on Deposit Mobilisation in Nigerian Deposit Money Banks from 2012 to 2024

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Abstract

This study examined the effect of fintech evolution on deposit mobilisation in Nigerian deposit money banks from 2012 to 2024, using ATM, POS, internet banking and mobile banking transaction values as proxies for digital channels. The study adopted an ex post facto longitudinal design and used secondary monthly data from the Central Bank of Nigeria and Nigeria Deposit Insurance Corporation. Descriptive statistics, correlation and regression analyses were applied. Findings revealed strong positive correlations between digital channels and aggregate deposits. However, regression results showed that digital channels jointly explained deposit mobilisation substantially but were not statistically significant at the 5% level. POS and internet banking had positive effects, while ATM and mobile banking had negative effects. For monthly deposit growth, explanatory power was weak, with only ATM showing a significant positive effect. The study concludes that fintech evolution is relevant to deposit mobilisation, but its effect is channel-specific and insufficient to explain short-term deposit growth.

Keywords: Deposit mobilisation, Deposit money banks, Digital banking channels, Financial inclusion, Fintech evolution

1. Introduction

The Nigerian banking sector has undergone profound transformation driven by financial technology (fintech) innovations, particularly in digital payment channels. The period between 2012 and 2024 is significant for the banking ecosystem as it experienced major disruptions caused by fintech-related development and major regulatory interventions driven by the Central Bank of Nigeria's (CBN) cashless policy of 2012 which transformed service delivery, financial inclusion, payment systems, and customer expectations (Ovat, 2012)

Over the period, improved KYC practices, fraud controls, and payment system regulation further reinforced the cashless policy and increased customer confidence in the adoption of digital channels for banking transactions, including

payments and cash deposits through Automated Teller Machines (ATMs), Point-of-Sale (POS) terminals, internet banking services (IBS), and mobile banking service (MBS), alongside bank-led USSD platforms and the expansion of agent networks (CBN, 2017; Ohiani, 2021). These technologies promised enhanced efficiency, reduced operational costs, and improved deposit mobilisation, which is the lifeblood of Deposit Money Banks (DMBs) (Nwankwo & Okoli, 2023; Osakwe & Akunna, 2023).

Although digital payment platforms theoretically facilitate greater financial inclusion by enabling 24/7 access to banking services, particularly in unbanked or underbanked rural areas (Ohiani, 2021), empirical findings remain inconclusive. Some studies affirm positive correlations between digital channels and deposit mobilisation (Nwankwo & Okoli, 2023), while others show mixed or even negative effects for POS and internet banking (Osakwe & Akunna, 2023). Money and Iyoha (2025) opined that impact of digital channels on financial deepening ratio (FDR), a measure of impact of innovation on deposit growth and financial accessibility, is not significant thus implying that the current deployment of digital payment platforms does not significantly enhance sustainable financial inclusion. Hence this paper seeks to analyse the effect of fintech evolution, operationalised by digital channels transaction values on deposits in DMBs in Nigeria.

Although prior Nigerian studies have examined the relationship between electronic banking and bank performance or deposit-related outcomes, the evidence remains mixed and fragmented. Some studies focus on profitability rather than deposit mobilization (Iyobo & Shaba, 2025), while others examine selected digital channels or narrower deposit measures such as demand deposits or private sector deposits (Abubakar & Adebamiwi, 2025). This study extends the literature by examining the effect of major digital banking channels (ATM, POS, IBS, and MBS) on aggregate deposit mobilisation in Nigerian deposit money banks over the post-cashless-policy period from 2012 to 2024. While some studies have examined the influence of electronic banking on the growth of DMBs, studies that explicitly connect digital channels with deposit growth are rare. This study seeks to bridge this gap by examining the effect of digital channels on both deposit mobilisation and monthly deposit growth within the period of study.

The broad aim of this study is to analyse the effect of fintech evolution on deposits in DMBs in Nigeria by conducting a longitudinal analysis between 2012

and 2024. Specifically, the study examines how digital channels (ATM, POS, IBS and MBS) transaction values relate to (i) deposit mobilisation (aggregate deposits) and (ii) monthly deposit growth (percentage change in aggregate deposits).

The study tested the following hypotheses:

H₀₁: Digital channels (ATM, POS, IBS, and MBS) transactions values have no significant effect on deposit mobilisation (aggregate deposits) in DMBs.

H₀₂: Digital channels (ATM, POS, IBS, and MBS) transactions values have no significant effect on monthly deposit growth (%) in DMBs.

The remainder of this paper is structured as follows. The conceptual review section clarifies the key constructs of deposit mobilisation, deposit growth and digital payment channels. This is followed by the theoretical review, which discuss the theoretical underpinning of the study. The empirical review section then synthesises prior evidence on fintech adoption and deposit outcomes. This is followed by conceptual framework, methodology, data presentation and analysis, hypotheses testing and discussion of findings. The final section concludes the study and provides recommendations for deposit money banks and regulators on how to strengthen digital channels for improved deposit mobilisation and deposit growth.

2. Literature Review

2.1 Conceptual Review

Deposit Growth

Deposit growth refers to the increase in the value of customer deposits held by banks over a defined period. It differs from deposit mobilisation, which describes the process through which banks attract and retain deposits; deposit growth measures the outcome of that process. In banking studies, deposit growth is commonly measured as the year-on-year percentage change in aggregate deposits or as bank deposits relative to GDP (Yakubu & Abokor, 2020). Deposit growth is important because deposits constitute a major funding source for deposit money banks, supporting lending, investment, liquidity management, and financial intermediation (Nwankwo & Okoli, 2023; Yakubu & Abokor, 2020). The literature shows that deposit growth is influenced by bank-specific and macroeconomic factors such as bank stability, efficiency, branch access, money

supply, inflation, and economic growth (Yakubu & Abokor, 2020). In a fintech-driven banking environment, digital channels such as ATM, POS, internet banking, mobile banking, USSD, and agency banking may enhance deposit growth by improving convenience, reducing transaction costs, expanding access, and strengthening financial inclusion (Ohiani, 2021; Osakwe & Akunna, 2023).

Deposit Mobilisation

Deposit mobilisation is the means by which banks attract, collect, retain, and grow funds from customers for intermediation, liquidity management, lending, and investment. It is a core banking function because deposits constitute a stable source of funding and enable banks to channel idle savings into productive economic activities (Hailu, 2024; Bernard, 2019). Conceptually, deposit mobilisation covers different deposit types, which include demand, savings, current, and fixed deposits, and may have their source from households, businesses, institutions, rural customers, and digitally active users. Prior studies describe deposit mobilisation as core to commercial banking operations and economic development, while also showing that it is influenced by bank-specific and macroeconomic factors such as profitability, loan-to-deposit ratio, inflation, economic growth, interest rates, branch networks, and financial depth (Banke & Yitayaw, 2022; Hailu, 2024). In contemporary banking, mobilisation occurs through both physical and digital channels, including branches, agents, ATMs, POS terminals, mobile banking, internet banking, USSD, and online transfers. Evidence from Nigeria shows that digital banking applications, especially ATM, POS, online, and mobile banking transactions, are increasingly relevant to deposit mobilisation (Abubakar & Adebamiwi, 2025). Financial inclusion also expands the depositor base by improving access to formal financial services among underserved customers (Appah & Tebepah, 2023). Therefore, this study conceptualises deposit mobilisation as measurable inflows into customers' accounts within a specified period across multiple channels.

Digital Payment Channels

Digital payment channels encompass electronic platforms facilitating financial transactions without physical cash, including Automated Teller Machines (ATMs), Point-of-Sale (POS) terminals, mobile banking, and internet banking (Osakwe & Akunna, 2023; Nwansi & Dibiah, 2021). ATM is an electronic banking channel that enables customers to withdraw cash and complete other basic banking transactions without human teller intervention (Uchenna, Uwaleke, Achema, Otiko, Satumari & Okolie, 2025). A Point of Sale (POS) terminal is a

device that allows merchants to accept card-based payments for goods and services directly from customers. Internet banking (also known as online banking) is a digital platform deployed by banks to enable customers to access and perform financial services through the internet. Mobile banking refers to banking services which are provided through mobile phones either with short message services (SMS), unstructured supplementary service data (USSD) or applications installed on smartphones. It enables convenient, real time transactions such as transfers, payment and savings. While the adoption of these channels by DMBs in Nigeria was initially driven by banks' response to increasing technological innovation, changing customer needs, intense competition for market share and need to boost customer confidence in the banking system after the financial crisis of 1998, various regulatory intervention to enhance financial inclusion, reduce cash dependency, and optimise banking efficiency through the CBN's cashless policy of 2012 further accelerated the adoption of digital payment channels (CBN, 2017; Ohiani, 2021).

2.2 Theoretical Review

Financial Intermediation Theory

This study is underpinned by Financial Intermediation Theory which explains the role of financial institutions, in mobilising funds from surplus economic units and allocating such funds to deficit units for productive investment and economic development. The theory is rooted in the work of Gurley and Shaw (1960), who argued that financial intermediaries enhance economic efficiency by facilitating the flow of funds between savers and borrowers. Diamond (1996) further explained that banks perform delegated monitoring functions by reducing information asymmetry and monitoring costs between lenders and borrowers (Kithandi, 2025). In this sense, banks exist because direct financing between surplus and deficit units is often constrained by transaction costs, liquidity preference differences, risk management challenges and imperfect information.

The theory is particularly relevant to this study because fintech evolution has changed the mechanisms through which deposit money banks perform their intermediation function. Digital banking channel has been known to reduce transaction costs, improve convenience, expand access to financial services and increase customer participation in the formal banking system.

Financial Intermediation Theory is criticised for assuming banks remain the dominant intermediaries, despite fintech firms increasingly performing payment,

savings and credit functions. It also underplays customer adoption behaviour, digital competition, disintermediation risks and technology-related operational failures. In fintech-driven banking, information asymmetry and transaction costs may be reduced by digital platforms outside banks, weakening banks' traditional delegated-monitoring advantage (Diamond, 1996; Ohiani, 2021; Wang, Ouyang, & Liu, 2021).

2.3 Review of Empirical Literature

Pakhnenko, Rubanov, Hacar, and Yatsenko (2021) examined the obilization of financial services in European countries, focusing on how digital infrastructure and service adoption shape banking efficiency and competitiveness. The study showed that advanced digital infrastructure strengthens the benefits of digital financial services by improving operational efficiency, service quality, and customer access. Although the study was not deposit-specific, its findings suggest that mature digital ecosystems can support banking stability and financial deepening by reducing transaction frictions and expanding formal financial participation.

Li, Lu, Hou, Cui, and Darbandi (2021) investigated online banking channels and customer-related outcomes in a developed digital banking context. The study found that online banking improves customer satisfaction, retention, and market share by enhancing convenience, security, and service quality. The evidence indicates that internet-enabled banking strengthens customer engagement and supports banks' competitive position. For deposit 411obilization studies, the findings imply that when online channels are reliable and trusted, they can encourage customers to maintain stronger relationships with banks and use formal banking platforms more frequently.

Sathye (1999) examined internet banking adoption in Australia and found that security concerns and low awareness of internet banking benefits were major barriers to adoption. The study showed that internet banking could reduce operating costs and improve service delivery, but adoption depended on customer trust and perceived usefulness. Although conducted in a developed economy, the findings remain relevant because they show that digital banking channels do not automatically improve performance; customer confidence, awareness, and system reliability are essential conditions for effective digital banking adoption.

Nazaritehrani and Mashali (2020) examined the development of e-banking channels and bank market share in Iran, using survey data from Shahr Bank

branches in Tehran. The study found that internet banking, POS, and telephone banking positively influenced market share, while ATM and mobile banking were not significant. The findings suggest that digital channels affect banking outcomes differently, depending on customer use and channel maturity. The study is relevant because market share growth may strengthen banks' deposit base through wider customer acquisition and retention.

Abuamsha (2026) analysed the impact of digital financial services on the financial stability of banks in the Palestinian territories using panel data regression covering 2012 to 2022. Digital channels included ATM, credit card, debit/Visa card, and POS transaction volumes, while stability was measured through profitability, liquidity, market share, and risk. The study found that digital services positively influenced profitability, liquidity, and market share, but their overall effect was modest due to weak infrastructure, limited digital literacy, and regulatory constraints. The findings show that digital finance improves banking outcomes when supported by institutional capacity.

Nkwonta et al. (2026) compared the impact of internet banking on bank performance in Nigeria and Cameroon from 2000 to 2024 using ARDL analysis. The study found long-run relationships between digital banking and bank performance in both countries, but the effects differed by context. In Nigeria, POS, mobile money, mobile payments, and financial deepening improved performance, while internet banking and exchange rate had negative effects. In Cameroon, POS, mobile banking, mobile money, and financial deepening were positive, but ATMs and internet banking showed adverse effects.

Ngwengeh, Messomo, and Mbu (2021) examined digital financial services and commercial bank performance in Cameroon. The study measured digital services through digital savings, transfers, withdrawals, and payments, and found that most digital financial service components positively influenced profitability, except digital payments, which produced a negative effect. The findings indicate that African banks may benefit from digital finance when services support savings, transfers, and withdrawals, but payment channels may create cost, fraud, or operational risks if not well managed.

Boateng and Nagaraju (2020) analysed the impact of digital banking on profitability among deposit money banks in Ghana from 2012 to 2018 using partial least squares regression. The study found that most digital banking

indicators had positive relationships with return on assets, except mobile money and E-zwich, which were negatively related to profitability. The findings suggest that digital banking can support African banks' performance, but channel-specific effects vary. This supports the need to examine digital banking tools separately rather than treating them as a single construct.

Uzoma, Omankhanlen, Obindah, Arewa, and Okoye (2020) studied digital finance and financial inclusion in Sub-Saharan Africa using GMM and ECM approaches. The study found a positive long-run relationship between digital finance and financial inclusion. This suggests that digital financial services can expand formal financial access across African economies. Although the study did not directly measure deposit mobilization, improved inclusion can enlarge the depositor base, encourage formal savings, and strengthen banks' intermediation capacity in markets where many individuals remain unbanked or underbanked.

Gita and Oriavwote (2025) examined digital banking tools and savings performance in Nigeria using CBN time series data from 2009 to 2023 and ARDL estimation. The study found a long-run relationship among digital banking tools and savings performance. Mobile banking and POS transactions had positive and significant effects on savings performance, while ATM usage was insignificant. The study concluded that digital banking enhances savings mobilization in Nigeria, particularly through mobile and POS channels, but ATM capacity to stimulate savings remains low.

Opudu and Igo (2024) investigated electronic banking transactions and the intermediation function of deposit money banks in Nigeria using quarterly CBN data from 2009 to 2019 and OLS regression. The study found that internet banking had a positive and significant effect on financial intermediation, ATM had a negative but insignificant effect, and POS had a negative significant effect. The findings show that not all electronic channels support banks' core intermediation role, implying that deposit mobilization effects may depend on whether channels generate inflows or mainly facilitate withdrawals and payments.

Babarinde (2023) examined digital finance and banks' credit allocation in Nigeria using VAR, variance decomposition, and Pearson correlation techniques for 2009Q1 to 2019Q4. Digital finance was measured by ATM, POS, and WebPay transaction values. The study found strong positive correlations between digital finance and credit allocation, but no long-run relationship and no significant

impact of digital finance on credit allocation. ATM and WebPay had positive but insignificant effects, while POS had a negative insignificant effect. The study suggests that digital finance adoption had not yet significantly transformed banks' credit allocation function.

Alake and Fapetu (2025) assessed digital banking operations and financial inclusion in Nigeria using quarterly data from 2009 to 2023 and ARDL analysis. Financial inclusion was proxied by the number of bank accounts, while digital banking variables included ATM, POS, mobile banking, and internet banking transactions. The study found a long-run relationship, with ATM and POS having positive and significant effects on financial inclusion. Mobile and internet banking were positive but insignificant. The findings imply that physical electronic channels remain important for expanding formal financial access in Nigeria.

Iwedi (2024) investigated digital payment channels and economic growth in Nigeria, focusing on electronic payment instruments such as POS, ATM, and web banking. The study found that POS significantly improved bank asset-related growth, while ATM had weaker effects and web banking had minimal impact. Although the dependent variable was not deposit 414mobilization, the study supports the argument that digital financial infrastructure contributes to banking-sector expansion. The results also reinforce the importance of separating channel effects because digital tools do not contribute equally to banking outcomes.

Osakwe and Akunna (2023) examined the effect of internet banking on the growth of deposit money banks in Nigeria. The study reported mixed evidence, showing that some electronic channels may produce negative or insignificant effects on total deposits because of transaction charges, fraud exposure, service failures, and customer trust concerns. The findings are important because they challenge the assumption that digital banking always increases deposits. They suggest that deposit mobilization depends not only on channel availability but also on affordability, security, service reliability, and customer confidence.

Abubakar and Adebamiwi (2025) studied digital banking applications and deposit mobilization of banks in Nigeria. The study focused on how digital banking applications influence deposit mobilization through improved access, convenience, and customer engagement. The findings indicate that digital channels can support deposit 414mobilization when customers use them to save,

transfer, and maintain funds within formal banking platforms. The study is relevant because it directly connects digital banking applications with deposit mobilization, thereby supporting the present study's focus on fintech evolution and deposit outcomes in Nigerian deposit money banks.

2.4 Conceptual Framework

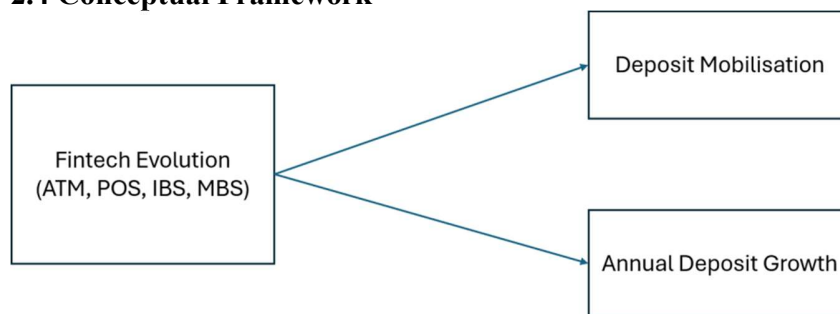


Figure 1 Conceptual model for effect of fintech on deposit mobilisation and monthly deposit growth (Researcher, 2026)

In this study, the conceptual framework treats deposit outcomes as two related measures: (i) Deposit Mobilisation (aggregate deposit level) and (ii) Monthly deposit growth (percentage change in aggregate deposits). The same fintech/digital channel variables (ATM, POS, internet banking and mobile banking transaction values) are posited to influence both outcomes.

The deployment of ATM, POS, Internet Banking and Mobile Banking by the banking sector has not only made banking easy for the customers but it has also reduced the cost of doing business for the banks while also serving as means of deposit mobilization.

Therefore, adoption of digital platforms (which includes ATM, POS, internet banking and mobile banking channels) is expected to facilitate financial inclusion and improve deposit performance. The conceptual expectation is that higher transaction values on these channels would have a positive and significant effect on (i) the level of deposits mobilised and (ii) the rate of deposit expansion (deposit growth), driven by improved accessibility, convenience, and operational effectiveness of the channels when in use.

3. Methodology

3.1 Research Design

The study adopted ex post facto longitudinal research design covering the period from 2012 to 2024 and used historical industry-level data which is appropriate for measuring the relationships among digital transaction channels and deposit mobilisation indicators. The study employed qualitative research methodology as the most appropriate because the variables are numerical and easier to analyse statistically.

3.2 Population of Study

The population of the study included CBN licensed and NDIC protected Nigerian Deposit Money Banks operating within the banking system during the period of study. The study captured all 35 listed DMBs as at 2023 (NDIC, 2023) and assumed that mergers, acquisitions or dissolution of banks should not have major impact as most Nigeria banking populace have accounts across several banks. The study was also linked to industry-level data on fintech-related digital transaction channels and deposit mobilisation indicators from 2012 to 2024. While aggregate deposit and monthly deposit growth formed the dependent variables, ATM, POS, IBS, and MBS transaction values were the independent variables.

3.3 Sample Size and Sampling Technique

The study adopted census sampling technique, using secondary data that covered the entire population of DMBs through CBN and NDIC reported aggregate industry-level figures. The sample size consisted of 156 observations spanning the period from 2012 to 2024.

3.4 Method of Data Collection

The study utilised secondary data obtained from credible and publicly accessible institutional sources. The aggregate deposit data was sourced from NDIC reports while the digital channels data (ATM, POS, IBS, and MBS) was sourced from CBN statistical bulletin.

3.5 Validity and Reliability of the Instrument

Data validity: the study used data from credible industry, namely the Central Bank of Nigeria and the Nigeria Deposit Insurance Corporation. Data validity was further assessed through completeness checks to confirm that all required monthly observations for the study variables were available for the period 2012 to 2024.

Data reliability: the study utilised consistently reported secondary data over the 13-year period of study. The use of industry-level dataset and clearly defined variable measures enhance replicability, for contextual analysis to obtain comparable results.

3.6 Method of Data Analysis

The study applied descriptive statistics, correlation analysis, and regression analysis. Descriptive statistics were used to summarise the central tendency and dispersion of the variables. Correlation analysis was used to assess the direction and strength of association among variables. Regression analysis was used to test the effect of fintech transaction channels on aggregate deposits and monthly deposit growth.

3.7 Model Specification

The empirical model for examining the relationship between fintech adoption and deposit mobilization was adapted from Iyobo and Shaba (2025) as restated below:

$$ROA = \beta_0 + \beta_1ATM + \beta_2POS + \beta_3MOB + \mu \text{ ----- (i)}$$

Where, ROA is Return on Assets; ATM is Automated Teller Machine, POS is Point of Sales transactions, MOB = Mobile Banking, β_0 is the intercept while μ is the error term.

This study adopts two model; one for assessing the effect of fintech evolution on aggregate deposits, while the other investigate the effect of fintech evolution on monthly deposit growth. In econometric form, the models are specified as adapted below:

$$\text{Model 1: } DEP = \beta_0 + \beta_1ATM + \beta_2POS + \beta_3IBS + \beta_4MBS + \mu \text{ ----- (ii)}$$

$$\text{Model 2: } ADG = \beta_0 + \beta_1ATM + \beta_2POS + \beta_3IBS + \beta_4MBS + \mu \text{ ----- (iii)}$$

Where:

DEP = aggregate deposits,

MDG = monthly deposit growth

ATM = automated teller machine transaction value,

POS = point-of-sale transaction value

IBS = internet banking transaction value

MBS = mobile banking transaction value,

β_0 = intercept,

$\beta_1 - \beta_4$ = coefficients of the independent variables

μ = error term

The study used natural logarithmic transformations for monetary values in order to address potential issues of interpretability resulting from substantial scale differences and sharp increases over time. The log transformation helps reduce scale differences, smooth extreme values, and improve interpretability. Monthly growth rate was not subjected to logarithmic transformation because it already measured proportional monthly change. The transformed model is therefore expressed as follows:

Model 1: $\ln DEP = \beta_0 + \beta_1 \ln ATM + \beta_2 \ln POS + \beta_3 \ln IBS + \beta_4 \ln MBS + \mu$ ---(iv)

Model 2: $MDG = \beta_0 + \beta_1 \ln ATM + \beta_2 \ln POS + \beta_3 \ln IBS + \beta_4 \ln MBS + \mu$ (v)

Acceptance Criteria

The study considered the following criteria for accepting or rejecting the hypotheses that have been defined for testing.

- Hypotheses were tested at the 5% level of significance ($\alpha = 0.05$)
- A null hypothesis (H_0) is rejected if the p-value < 0.05 ; otherwise it is accepted.
- The F-test was used to confirm overall model significance.
- R^2 and Adjusted R^2 assessed the explanatory power of the model.
- The F-statistic was used to assess whether joint coefficients are statistically significant or not.
- Coefficient signs (+/-) indicated direction of relationships.

4. Results and Discussions

4.1 Descriptive Analysis

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	Coeff of Variation
ATM	156	129.00	3264.80	1065.99	928.40	0.77	-0.97	87.09%
POS	156	3.12	22327.28	2644.64	5291.01	2.35	4.53	200.07%
IBS	156	2.05	188067.88	30131.84	47402.84	1.64	1.90	157.32%
MBS	156	2.05	39271.19	5139.15	9596.22	2.09	3.39	186.73%
DEP	156	935.35	9919.36	2797.94	2068.08	1.73	2.17	
MDG %	155	-36.94	7.69	1.95	8.35	-2.99	9.00	
Valid N (listwise)	155							

Source: Author's compilation (2026)

Table 1 presents the descriptive statistics for the study variables, covering ATM, POS, IBS, MBS, deposit mobilisation, and monthly deposit growth (MDG). ATM transaction value shows the highest consistency ($CV = \sim 87\%$) while POS is least consistent ($CV = \sim 200\%$), showing extreme variability in relation to its mean. IBS demonstrated the highest volatility with a standard deviation of ~ 47000 which implies excessive fluctuations within the study period. All variables show positive skewness which indicate that all distributions are right-tailed. While POS skewness suggest presence of extreme high value outliers with the highest skewness (2.562), ATM has the lowest skewness (0.779), making it the most symmetric. POS has the highest kurtosis (6.59) with significant outliers, while ATM with negative kurtosis (-1.191) reveal a flatter distribution with lighter tails and fewer extreme values.

In summary, table 1 shows that ATM demonstrates the most favorable statistical properties being most consistent, most symmetric, and the only platykurtic distribution. These behaviors suggest stable and predictable usage pattern. POS transactions manifest the most extreme statistical behavior with least consistency,

highest skewness and highest kurtosis which suggest highly variable adoption with significant outliers. IBS, on the other hand, reveals the highest volatility which suggests rapid and uneven adoption during the period.

4.2 Correlation Analysis

Table 2. Correlation results

		Ln_ATM	Ln_POS	Ln_IBS	Ln_MBS	Ln_Deposit
Ln_ATM	Pearson Correlation	1	.962**	.971**	.978**	.916**
	Sig. (2-tailed)		.000	.000	.000	.000
Ln_POS	Pearson Correlation	.962**	1	.926**	.994**	.948**
	Sig. (2-tailed)	.000		.000	.000	.000
Ln_IBS	Pearson Correlation	.971**	.926**	1	.951**	.912**
	Sig. (2-tailed)	.000	.000		.000	.000
Ln_MBS	Pearson Correlation	.978**	.994**	.951**	1	.941**
	Sig. (2-tailed)	.000	.000	.000		.000
Ln_DEPt	Pearson Correlation	.916**	.948**	.912**	.941**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

Correlation is significant at the 0.01 level (2-tailed)

Table 2 presents the Pearson correlation result for the log-transformed values of ATM, POS, IBS, MBS and deposit mobilisation. This is to ensure that extreme values do not distort result and violate normality assumption.

The result show that all the digital channel variables have positive correlation with deposit mobilisation at the 1 per cent level of significance (ATM: $r = .916$, $p < .01$; POS: $r = .948$, $p < .01$; IBS: $r = 0.912$, $p < .01$; MBS: $r = .941$, $p < .01$). This implies that increased adoption of the digital channels is closely associated with deposit mobilisation in Nigerian DMBs during the review period.

4.3 Testing of Hypotheses

The hypotheses were tested at the 5 per cent level of significance using the regression results below. F-statistic and its associated probability value were used to determine the joint relationship between the coefficient of the independent variables and dependent variables (deposit mobilisation and monthly deposit growth)

Hypotheses testing results

Model 1:

	Coefficient	t-statistic	p-value
(Constant)	7.516	16.776	.000
Ln_ATM	-.188	-2.095	.038
Ln_POS	.422	7.394	.000
Ln_IBS	.089	6.343	.000
Ln_MBS	-.237	-3.691	.000
R-Squared	.921		
Adjusted R-Squared	.919		
F-Statistic	441.539		
Prob (F-Statistic)			

a. Dependent Variable: Ln_Deposit

Model 2:

	Coefficient	t-statistic	p-value
(Constant)	-60.143	-2.710	.008
Ln_ATM	12.353	2.781	.006
Ln_POS	3.104	1.108	.269
Ln_IBS	-.520	-.742	.460
Ln_MBS	-5.703	-1.810	.072
R-Squared	0.058		
Adjusted R-Squared	0.033		
F-Statistic	2.311		
Prob (F-Statistic)	0.060		

a. Dependent Variable: MDG %

H₀₁: Digital channels (ATM, POS, IBS, and MBS) transactions values have no significant effect on deposit mobilisation (aggregate deposits) in DMBs

Model 1 shows high explanatory power, with an R^2 of 0.921, meaning digital channels explain 92.1% of the variation in deposit mobilisation. However, the Prob (F-statistic) of 0.06 is above the 5% significance level, so the model is not statistically significant at 5%, though it is marginally significant at 10%. Individually, POS and internet banking have positive effects on deposit mobilisation, while ATM and mobile banking show negative effects. Therefore, the fintech evolution appears relevant to deposit mobilisation, but the joint evidence is weak at the conventional 5% level. Therefore, the hypothesis should not be rejected at the conventional level.

H₀₂: Digital channels (ATM, POS, IBS, and MBS) transactions values have no significant effect on monthly deposit growth (%) in DMBs

Model 2 shows weak explanatory power, with $R^2 = 0.058$, meaning digital channels explain only 5.8% of the variation in monthly deposit growth. The Prob (F-statistic) of 0.060 is above 5%, so the model is not statistically significant at the conventional level, though marginally significant at 10%. Individually, ATM has a positive and significant effect on deposit growth, while POS and IBS are not significant. MBS has a negative effect and is only marginally significant.

Therefore, the null hypothesis should not be rejected at the 5% level.

Discussion of Findings

The findings of this study show that fintech evolution, measured by ATM, POS, internet banking and mobile banking transaction values, has an important but mixed relationship with deposit outcomes in Nigerian deposit money banks between 2012 and 2024. For Model 1, digital channels explain a very high proportion of the variation in deposit mobilisation, with an R-square of 0.921. This implies that about 92.1 per cent of changes in aggregate deposits are associated with the selected digital banking channels. However, the Prob (F-statistic) value of 0.06 is above the 5 per cent significance level, indicating that the model is not statistically significant at the conventional level, although it is marginally significant at the 10 per cent level. Therefore, the null hypothesis for Model 1 is not rejected at the 5 per cent level. This result suggests that while fintech channels are strongly associated with deposit mobilisation, the joint statistical evidence is not strong enough to conclude a significant effect at the conventional threshold.

The individual coefficients in Model 1 further reveal that the effect of digital channels is not uniform. POS and internet banking show positive effects on deposit mobilisation, implying that merchant payments, electronic settlements and online banking convenience may support the retention of funds within the formal banking system. This finding agrees with studies such as Nwankwo and Okoli (2023), Nwansi and Dibiah (2021), and Adewumi, Akinlabi and Olowu (2023), which associate digital banking adoption with improved banking performance, transaction efficiency and deposit-related outcomes. Conversely, ATM and mobile banking show negative effects in the model. The negative ATM effect may be explained by the fact that ATM usage in Nigeria is often withdrawal-driven rather than deposit-driven, while the negative mobile banking effect may reflect outward transfers, bill payments, channel overlap or multicollinearity among digital channels. This mixed result is consistent with Osakwe and Akunna (2023), who reported that some electronic payment channels, including POS and WebPay, produced negative or insignificant effects on total deposits, suggesting that not all digital innovations automatically translate into deposit growth. For Model 2, the findings show weak explanatory power, with an R-square of 0.058, meaning that digital channels explain only 5.8 per cent of the variation in monthly deposit growth. The Prob (F-statistic) value of 0.060 is also above the 5 per cent significance level, indicating that the model is not statistically significant

at the conventional level, although it may be considered marginally significant at the 10 per cent level. Accordingly, the null hypothesis for Model 2 is not rejected at the 5 per cent level. Individually, ATM has a positive and significant effect on monthly deposit growth, while POS and internet banking are not statistically significant. Mobile banking has a negative effect and is only marginally significant. This suggests that short-term deposit growth is influenced by factors beyond digital transaction values, including macroeconomic conditions, customer income, interest rates, inflation, liquidity preference and bank-specific strategies. This interpretation is supported by Yakubu and Abokor (2020), Banke and Yitayaw (2022), and Hailu (2024), who emphasised that deposit growth is shaped by both bank-specific and macroeconomic determinants. Overall, the findings partly support the financial intermediation view that digital banking channels can enhance banks' ability to mobilise savings by improving access, convenience and transaction efficiency. However, the marginal overall significance of both models indicates that fintech evolution should be interpreted with caution. The evidence suggests that digital channels are relevant to deposit mobilisation, but their impact depends on how each channel is used and whether digital transactions represent deposit inflows, withdrawals, transfers or consumption payments. The findings therefore align with the mixed empirical evidence in the Nigerian banking literature: some studies report positive effects of fintech and electronic banking on bank performance and deposit mobilisation, while others report negative, insignificant or channel-specific effects. This study contributes to that debate by showing that fintech evolution has strong explanatory relevance for aggregate deposits but weak explanatory power for monthly deposit growth within the period reviewed.

5. Conclusion and Recommendations

Based on the findings of the study, it is concluded that fintech evolution has an important but mixed relationship with deposit outcomes in Nigerian deposit money banks during the post-CBN cashless policy period. The findings therefore suggest that ATM, POS, internet banking and mobile banking transaction values are relevant to deposit mobilisation, but their joint effect is not strong enough at the conventional significance level to warrant rejection of the null hypothesis. For monthly deposit growth, the model shows weak explanatory power and is also not statistically significant at the 5 per cent level. This implies that short-term deposit growth is influenced by other factors beyond digital transaction values, including macroeconomic conditions, customer income, liquidity preference, interest rates, inflation and bank-specific strategies.

In line with the findings, the study recommends that:

- i Deposit money banks should continue to invest in secure, reliable and accessible digital channels, but such investment should be linked directly to deposit mobilisation objectives rather than transaction volume alone.
- ii Deposit money banks should strengthen POS, agency banking and internet banking platforms because these channels showed positive relevance to deposit mobilisation and can deepen merchant collections, customer convenience and formal financial participation.
- iii Banks should review ATM and mobile banking strategies to reduce excessive withdrawal-driven and outward-transfer usage, while introducing features that encourage savings, wallet-to-account deposits, merchant settlement retention and automated deposit products.
- iv Regulators, particularly the Central Bank of Nigeria, should strengthen payment infrastructure, interoperability, consumer protection, cybersecurity standards and digital literacy programmes, while encouraging banks to report digital-channel data in ways that separate deposit inflows from other transaction categories.

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