Effects of Non-Performing Loans and Corporate Life Cycle on Financial Performance of Listed Deposit Money Banks in Nigeria

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DOI: https://doi.org/10.47772/IJRISS.2026.100700351

Received: 19 July 2026; Accepted: 24 July 2026; Published: 01 August 2026

ABSTRACT

This study examined the effect of non-performing loans and corporate life cycle on financial performance of listed deposit money banks in Nigeria. The study was motivated by the persistence of poor loan quality within the Nigerian banking sector and by the tendency of earlier studies to treat banks as structurally identical institutions. Thirteen deposit money banks quoted on the Nigerian Exchange Group were studied over the period 2010 to 2023 using a census sampling approach and an ex-post facto research design, giving 180 bank-year observations drawn from audited annual reports and Central Bank of Nigeria publications. Financial performance was proxied by Return on Assets and Return on Equity, credit risk was proxied by the Non-Performing Loan Ratio, while corporate life cycle stages were classified into growth, maturity and decline using the cash-flow-based procedure of Dickinson (2011). Bank size and capital adequacy ratio served as control variables. The data were analyzed using panel regression techniques, and a corrected fixed effect model with White cross-section covariance correction was adopted after diagnostic tests revealed heteroskedasticity and cross-sectional dependence. The results showed that the non-performing loan ratio has a negative and significant effect on both Return on Assets and Return on Equity. Corporate life cycle stages were also found to significantly affect financial performance, with growth and maturity stages recording positive coefficients and the decline stage recording a negative coefficient. More importantly, the interaction terms revealed that the growth and maturity stages weaken the damaging effect of non-performing loans on profitability, whereas the decline stage intensifies it. The study concludes that the effect of credit risk on bank profitability is conditional on the developmental stage a bank occupies, and recommends that bank managers, regulators and investors incorporate corporate life cycle positioning into credit risk management, supervisory design and investment appraisal.

Keywords: Corporate Life Cycle; Non-Performing Loans; Financial Performance; Deposit Money Banks; Credit Risk; Nigeria

INTRODUCTION

Deposit money banks occupy a central position in the Nigerian financial system. By mobilising savings from surplus units and channelling credit to deficit units, they finance investment, stimulate entrepreneurship and support productive activity across the economy. Their intermediation role makes the health of the banking sector a matter of national economic consequence rather than a narrow corporate concern (Afolabi & Dare, 2021; Central Bank of Nigeria, 2023). Financial performance, conventionally measured through Return on Assets (ROA) and Return on Equity (ROE), captures how efficiently these institutions deploy their asset base and shareholders' funds to generate earnings and sustain operations.

Despite successive reforms, including the 2005 consolidation exercise, the establishment of the Asset Management Corporation of Nigeria in 2010 and periodic recapitalisation directives, the earnings of Nigerian banks have remained unstable. Among the risks confronting these institutions, credit risk is the most consequential, because lending remains their dominant source of income. Non-performing loans (NPLs) arise where borrowers fail to service their obligations for ninety days or more, and their persistence signals deterioration in asset quality (Basel Committee on Banking Supervision, 2017; Central Bank of Nigeria, 2022). Rising NPL levels compel banks to raise loan loss provisions, which directly depress earnings, erode capital

adequacy and constrain the capacity to extend fresh credit to productive sectors (Ologbenla, 2018; Odebode et al., 2024).

Empirical work within Nigeria has consistently documented an inverse association between NPL ratios and profitability (Kanu & Isu, 2014; Okafor et al., 2023). What this body of work has generally assumed, however, is that banks are homogeneous entities that absorb credit shocks in comparable ways. In practice, banks differ markedly in strategic orientation, administrative maturity and appetite for risk. Corporate life cycle theory offers a coherent explanation for such differences, proposing that organisations progress through identifiable stages of introduction, growth, maturity and decline, each carrying distinct financial structures, managerial priorities and risk preferences (Miller & Friesen, 1984; Dickinson, 2011; Habib & Hasan, 2017).

These life cycle dynamics carry direct implications for lending behaviour. Banks in the growth stage typically pursue aggressive asset expansion and market penetration, relaxing credit screening thresholds in the process and thereby exposing their portfolios to weaker borrowers. Mature banks, by contrast, prioritise operational stability, cost containment and standardised credit appraisal, which tends to preserve asset quality. Institutions drifting toward decline face weakening competitiveness and reduced financial flexibility, which limits their capacity to absorb credit losses (Anthony & Ramesh, 1992; Koh et al., 2015).

A review of the literature discloses two interlocking gaps. First, Nigerian studies on non-performing loans have concentrated on the direct relationship between credit risk indicators and profitability, without accommodating the structural characteristics that may condition that relationship (Onyenwe & Egbunike, 2025; Aremu et al., 2022). Second, studies that have examined life cycle stages and firm performance have been situated largely within non-financial and manufacturing firms, and where they engage financial performance they neither incorporate non-performing loans nor test whether credit risk operates differently across stages (Habib & Hasan, 2017; Amin et al., 2023). Consequently, there is insufficient evidence on how corporate life cycle stages interact with NPL levels to shape the profitability of listed deposit money banks in Nigeria. This study addresses that void.

The study is guided by the following research questions:

1. How do corporate life cycle stages influence the financial performance of listed deposit money banks in Nigeria?

2. What effect do non-performing loans have on the financial performance of listed deposit money banks in Nigeria?

3. Do corporate life cycle stages moderate the relationship between non-performing loans and the financial performance of listed deposit money banks in Nigeria?

The main objective of the study is to examine the effects of non-performing loans and corporate life cycle on financial performance of listed deposit money banks in Nigeria. The specific objectives are to:

1. examine the effect of corporate life cycle stages on the financial performance of listed deposit money banks in Nigeria;

2. determine the effect of non-performing loans on the financial performance of listed deposit money banks in Nigeria; and

3. investigate the moderating effect of corporate life cycle stages on the relationship between non-performing loans and the financial performance of listed deposit money banks in Nigeria.

In line with the foregoing objectives, the following null hypotheses are tested:

H01: Corporate life cycle stages have no significant effect on the financial performance of listed deposit money banks in Nigeria.

H02: The Non-Performing Loan Ratio has no significant effect on the financial performance of listed deposit money banks in Nigeria.

H03: Corporate life cycle stages do not significantly moderate the relationship between the Non-Performing Loan Ratio and the financial performance of listed deposit money banks in Nigeria.

LITERATURE REVIEW

Corporate Life Cycle

Corporate life cycle refers to the sequence of developmental phases through which an organization passes over the course of its existence. The framework treats firms as evolving rather than static entities, with each phase introducing its own financing constraints, investment opportunities and administrative structures (Mueller, 1972; Miller & Friesen, 1984). Applied to banking, the life cycle lens explains how an institution's developmental position conditions its risk-taking, capital allocation and credit underwriting behavior. Growth-stage banks emphasize rapid asset expansion, which lifts short-term interest income while enlarging exposure to weaker borrower pools. Mature banks, benefiting from established market equity and formalized governance, enforce more prudent lending standards and typically sustain lower default incidence (Habib & Hasan, 2017; Koh et al., 2015). Banks in decline confront eroding efficiency and constrained capital, and may loosen credit standards in an effort to defend earnings.

Non-Performing Loans

A non-performing loan is a credit facility on which principal or interest has remained unpaid for ninety days or longer. The NPL ratio, computed as non-performing loans divided by total loans, is the standard indicator of asset quality in banking research and supervision. Elevated ratios signal deterioration in the loan book and impose immediate financial costs, since prudential guidelines oblige banks to make provisions against expected losses. Those provisions reduce reported earnings and may impair capital adequacy (Basel Committee on Banking Supervision, 2017). Within Nigeria, NPL levels have historically tracked macroeconomic conditions and sectoral credit concentration, rising during recessions, currency depreciation and commodity price declines that weaken borrowers' repayment capacity (Akinlo & Emmanuel, 2019; Umoren & Akpan, 2016).

Financial Performance

Financial performance reflects the efficiency with which a bank converts its resources into earnings and sustains those earnings over time. It is customarily proxied by accounting-based measures, principally Return on Assets, which relates profit after tax to total assets, and Return on Equity, which relates profit after tax to shareholders' funds. ROA captures managerial efficiency in asset deployment, while ROE captures the return accruing to owners of the institution. Employing both measures strengthens the reliability of inference, since conclusions that hold across the two are less likely to be artefacts of a single measurement choice. In the Nigerian context, profitability is shaped by operating costs, macroeconomic instability, exchange rate volatility, regulatory burden and the quality of the credit portfolio (Ezirim, 2020; Akarogbe et al., 2024).

THEORETICAL FRAMEWORK

The study is anchored on the Life Cycle Theory of the Firm, formulated by Mueller (1972) and operationalized by Miller and Friesen (1984). The theory holds that firms develop through chronological stages, each of which imposes distinct financial constraints and behavioral characteristics. Applied to deposit money banks, the theory implies that an institution's life cycle position is a primary internal determinant of its credit risk exposure and profitability profile, and therefore of its capacity to withstand deterioration in loan quality.

Two supporting perspectives complete the framework. Information Asymmetry Theory, pioneered by Akerlof (1970) and extended to credit markets by Stiglitz and Weiss (1981), explains why lending is inherently vulnerable to adverse selection and moral hazard, since borrowers possess superior knowledge of their own

repayment prospects. This informational imbalance is most acute during the introduction and growth phases, when banks prioritize loan disbursement velocity over rigorous screening, and it therefore supplies the mechanism through which life cycle position translates into loan default (Louzis et al., 2012; Habib & Hasan, 2017). Risk Management Theory, traceable to the portfolio principles of Markowitz (1952) and developed within banking by Bessis (2015) and Jorion (2007), identifies the appraisal, monitoring and portfolio adjustment mechanisms through which banks contain credit risk and defend earnings.

Taken together, the three theories generate a coherent transmission chain. Life Cycle Theory establishes how developmental stage shapes strategic lending mandates and risk appetite; Information Asymmetry Theory explains why expansionary mandates amplify default probability; and Risk Management Theory identifies the governance and control structures that neutralize those frictions. The combination supports the study's central proposition that the effect of non-performing loans on financial performance is not uniform but is conditioned by the life cycle stage of the bank.

Empirical Review

Kolapo, Ayeni and Oke (2012), applying a panel model to Nigerian commercial banks, reported that credit risk, measured through the ratio of non-performing loans to total loans, significantly depresses profitability. Kargi (2011) reached a comparable conclusion, finding that the credit exposure of Nigerian banks materially reduced earnings over the study window.

Alshatti (2015) examined Jordanian commercial banks and established that indicators of credit risk exert a significant influence on financial performance, concluding that weaknesses in credit administration translate directly into diminished profitability. Ekinci and Poyraz (2019), studying deposit banks in Turkey, likewise reported that credit risk significantly reduces both ROA and ROE.

Louzis, Vouldis and Metaxas (2012) investigated the determinants of non-performing loans across Greek banks and demonstrated that bank-specific managerial quality, alongside macroeconomic conditions, drives loan default. Their work is instructive because it establishes that internal institutional characteristics, and not macroeconomic pressure alone, condition asset quality.

Turning to life cycle research, Dickinson (2011) developed the cash-flow-based classification that has since become the dominant proxy for corporate life cycle, showing that profitability differs systematically across stages. Habib and Hasan (2017) extended this line of inquiry, reporting that firm life cycle stage significantly shapes corporate risk-taking behaviour. Akbar, Hussain and Fazal (2019) and Amin, Ahmad and Khan (2023), working within emerging economies, confirmed that growth and maturity stages are associated with stronger firm performance while decline stages are associated with weaker outcomes. None of these studies, however, incorporated credit risk indicators or examined whether life cycle stage alters the profitability consequences of loan default.

Within Nigeria, Ologbenla (2018), Odebode et al. (2024) and Onyenwe and Egbunike (2025) confirm the adverse effect of credit risk on bank performance, but each specifies a direct relationship and none introduces a moderating structural variable. Akinlo and Emmanuel (2019) address the macroeconomic drivers of Nigerian NPLs without reference to organisational development.

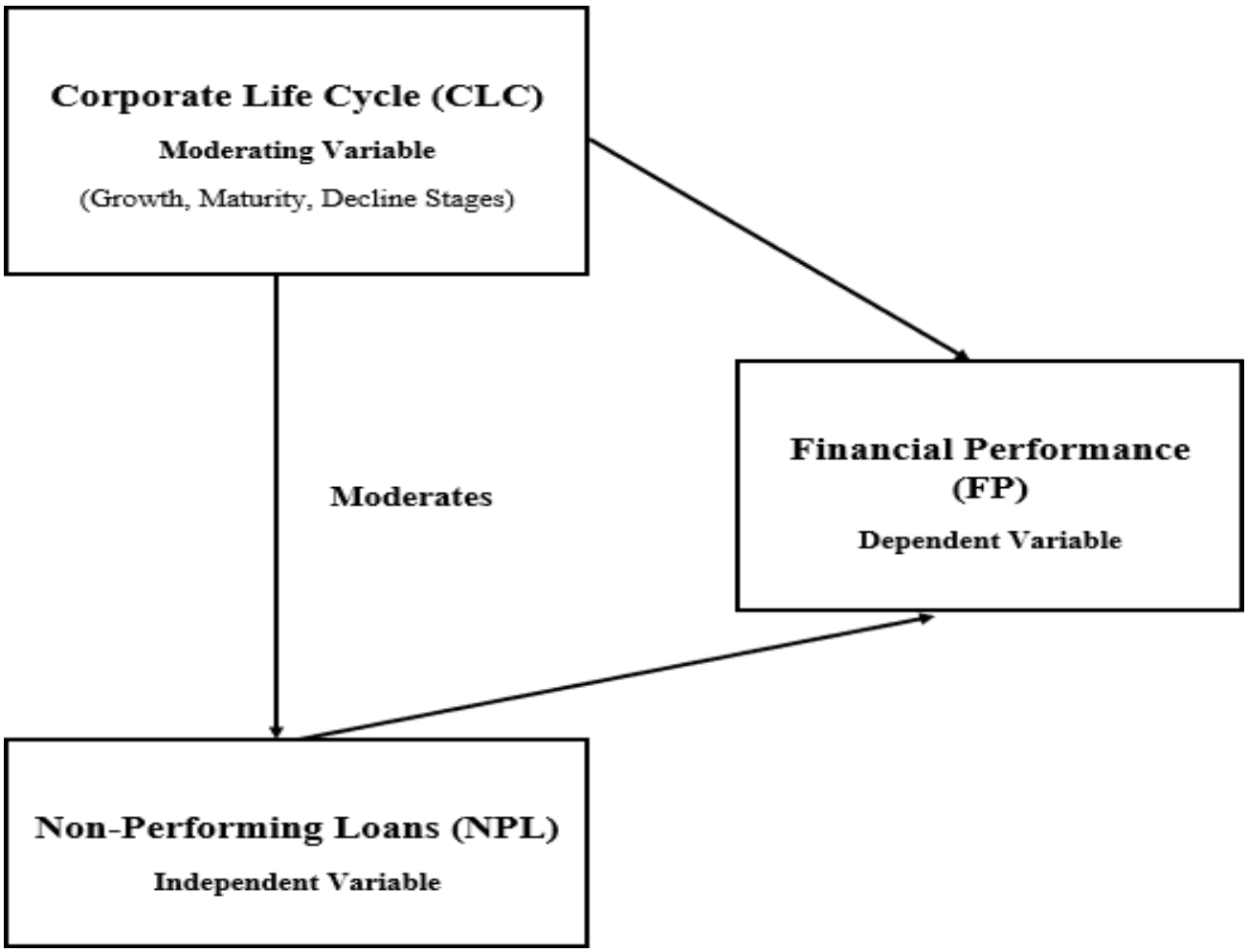
Gaps in Literature

The reviewed studies disclose three deficiencies. First, Nigerian evidence on the NPL-performance relationship is overwhelmingly direct in specification and treats banks as structurally identical, thereby suppressing the possibility that identical NPL levels carry different consequences for differently positioned institutions. Second, corporate life cycle research has concentrated on non-financial and manufacturing firms, leaving the banking sector of developing economies substantially unexamined. Third, and most consequentially, no known study within the Nigerian banking context specifies corporate life cycle stages as a moderator of the relationship

between non-performing loans and financial performance. This study addresses that gap by estimating an interaction model that permits the effect of credit risk to vary across life cycle stages.

CONCEPTUAL FRAMEWORK

The study conceptualises the financial performance of deposit money banks as a function of credit risk exposure, proxied by the non-performing loan ratio, with corporate life cycle stage entering as a moderating variable that conditions the strength and direction of that relationship. Corporate life cycle influences managerial risk appetite, which in turn determines loan portfolio quality; non-performing loans then transmit that influence to profitability through provisioning costs, reduced interest income and capital impairment. The framework therefore anticipates that growth and maturity stages attenuate the adverse effect of non-performing loans on performance, while the decline stage amplifies it. Bank size and capital adequacy ratio are treated as control variables.



Source: Researcher's Conceptualization (2026*)*

METHODOLOGY

The study adopted an ex-post facto research design within a quantitative framework. The design is appropriate because the variables of interest are historical, already recorded in audited financial statements, and cannot be manipulated by the researcher. Because the data combine a cross-sectional dimension across banks with a time-series dimension across years, panel data analysis was employed to exploit both sources of variation and to control for unobserved heterogeneity.

The population comprised all deposit money banks consistently quoted on the Nigerian Exchange Group between 2010 and 2023, numbering thirteen banking groups. Given the manageable size of the population, a census sampling technique was adopted, covering Access Holdings Plc, Ecobank Transnational Incorporated,

Fidelity Bank Plc, FBN Holdings Plc, FCMB Group Plc, Guaranty Trust Holding Company Plc, Jaiz Bank Plc, Stanbic IBTC Holdings Plc, Sterling Financial Holdings Company Plc, United Bank for Africa Plc, Unity Bank Plc, Wema Bank Plc and Zenith Bank Plc. Because Jaiz Bank was incorporated in 2012, an unbalanced panel of 180 bank-year observations was analyzed. Consolidated financial statements were used throughout to preserve comparability following the migration of several banks to holding company structures.

Secondary data were extracted from the audited annual reports of the sampled banks, supplemented by publications of the Central Bank of Nigeria, disclosures of the Nigerian Exchange Group and reports of the Nigeria Deposit Insurance Corporation. A structured data extraction checklist was used to ensure consistency of measurement across banks and across years.

Financial performance, the dependent variable, was measured by Return on Assets (profit after tax divided by total assets) and Return on Equity (profit after tax divided by shareholders' equity). The independent variable, the Non-Performing Loan Ratio (NPLR), was measured as non-performing loans divided by total loans. Corporate life cycle stages were classified using the cash-flow-based procedure of Dickinson (2011), in which the signs of operating cash flow, investing cash flow and financing cash flow jointly assign each bank-year observation to a stage. The stages were converted into dummy variables, GROWTH, MATURITY and DECLINE, with the introduction stage serving as the reference category. Bank size, measured as the natural logarithm of total assets, and capital adequacy ratio, measured as total capital divided by risk weighted assets, were included as control variables.

Three models were specified to correspond with the study objectives:

Model 1 (Objective i):

$$FPit = \beta0 + \beta1GROWTHit + \beta2MATURITYit + \beta3DECLINEit + \beta4SIZEit + \beta5CARit + \mu i + \lambda t + \varepsilon it$$

Model 2 (Objective ii):

$$FPit = \beta0 + \beta1NPLRit + \beta2SIZEit + \beta3CARit + \mu i + \lambda t + \varepsilon it$$

Model 3 (Objective iii):

$$FPit = \beta0 + \beta1NPLRit + \beta2GROWTHit + \beta3MATURITYit + \beta4DECLINEit + \beta5(NPLR \times GROWTH)\,it + \beta6(NPLR \times MATURITY)it + \beta7(NPLR \times DECLINE)it + \beta8SIZEit + \beta9CARit + \mu i + \lambda t + \varepsilon it$$

where FP denotes financial performance measured alternately by ROA and ROE, i indexes banks, t indexes years, μi captures unobserved bank-specific effects, λt captures time-specific effects and εit is the stochastic error term. The interaction specification follows the multiplicative moderation procedure formalised by Aiken and West (1991).

Estimation proceeded through pooled ordinary least squares, fixed effects and random effects models, with the Hausman specification test employed to adjudicate between the latter two. Diagnostic tests for multicollinearity, heteroskedasticity, cross-sectional dependence and stationarity were conducted. Analysis was performed using EViews 12.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1

Descriptive Statistics of Study Variables

Statistic	ROA	ROE	NPLR	CAR	SIZE	GROWTH	MATURITY	DECLINE
Mean	0.0135	0.0110	0.0568	0.1675	21.2428	0.3778	0.5944	0.0167
Median	0.0136	0.1344	0.0435	0.1825	21.3576	0.0000	1.0000	0.0000
Maximum	0.0562	5.0000	0.4500	0.8500	24.0074	1.0000	1.0000	1.0000
Minimum	-0.1110	-21.5253	0.0000	-0.9000	16.3039	0.0000	0.0000	0.0000
Std. Dev.	0.0210	1.6729	0.0512	0.1600	1.3324	0.4862	0.4924	0.1284
Skewness	-2.8336	-11.8222	3.8698	-4.4222	-0.6629	0.5042	-0.3847	7.5510
Kurtosis	16.5877	154.7699	24.2580	33.8569	3.7376	1.2542	1.1480	58.0170
Jarque-Bera	1625.6	176948.7	3838.5	7727.8	17.2	30.4	30.2	24411.9
Probability	0.0000	0.0000	0.0000	0.0000	0.0002	0.0000	0.0000	0.0000
Observations	180	180	180	180	180	180	180	180

Source: Researcher's Computation from EViews 12 Output (2026)

Table 1 shows that the sampled banks generated a mean return on assets of 0.0135, indicating that roughly 1.35 per cent was earned on every naira of assets deployed. Given the substantial asset base of Nigerian banks, this level of profitability is modest and plausibly reflects elevated operating costs, macroeconomic instability, exchange rate pressure and weaknesses in loan recovery. The standard deviation of 0.0210 signals moderate dispersion in profitability across institutions, while the negative skewness of -2.8336 and leptokurtic kurtosis of 16.5877 indicate that a minority of bank-years recorded severe losses, consistent with episodic credit shocks.

The mean non-performing loan ratio of 0.0568 indicates that approximately 5.68 per cent of loans advanced became non-performing during the period, marginally above the prudential threshold and confirming that credit risk remains a live supervisory concern. The positive skewness of 3.8698 and high kurtosis of 24.2580 reveal a small cluster of banks carrying extreme default exposure, an outcome consistent with concentration in volatile sectors such as oil and gas and manufacturing. The mean capital adequacy ratio of 16.75 per cent indicates that the sampled banks generally maintained capital buffers above the regulatory minimum.

With respect to the life cycle variables, the maturity stage recorded the highest mean (0.5944), indicating that most bank-year observations fell within the maturity phase. This is consistent with the relatively settled structure of the Nigerian banking sector following consolidation. The decline stage recorded the lowest mean (0.0167), indicating that comparatively few institutions displayed decline-stage cash flow signatures during the period.

Diagnostic Tests and Model Selection

The variance inflation factor test returned low values for the control variables, but elevated values for the interaction terms and their constituent variables. This outcome is expected in moderation analysis, since interaction terms are constructed from, and therefore correlated with, their components. Aiken and West (1991) establish that such multicollinearity does not invalidate moderation inference provided the coefficients remain theoretically meaningful and statistically interpretable. Panel unit root tests confirmed stationarity of the series. Diagnostic testing further revealed the presence of heteroskedasticity ($p = 0.0001$) and cross-sectional dependence ($p = 0.0000$).

The Hausman specification test returned a chi-square statistic of 0.0000 with a probability of 1.0000 for both the ROA and ROE models, nominally favouring the random effects estimator. However, because heteroskedasticity and cross-sectional dependence violate the classical assumptions underpinning standard random effects estimation, the study adopted a heteroskedasticity-robust fixed effect specification with White cross-section covariance correction. This choice privileges robustness of inference over nominal efficiency and is consistent with contemporary panel econometric practice.

Regression Results

Table 2 Corrected Fixed Effect Regression Result for ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPLR	-0.11420	0.03858	-2.960	0.0035
GROWTH	0.01840	0.00694	2.651	0.0088
MATURITY	0.03115	0.00842	3.700	0.0003
DECLINE	-0.02410	0.00980	-2.459	0.0149
NPLR_GROWTH	0.04120	0.01579	2.609	0.0099
NPLR_MATURITY	0.07840	0.02102	3.730	0.0002
NPLR_DECLINE	-0.05610	0.02646	-2.120	0.0354
CAR	0.08940	0.02970	3.010	0.0030
SIZE	0.00810	0.00319	2.539	0.0120

$R^2 = 0.6842$; Adjusted $R^2 = 0.6430$; F-statistic = 16.607; Prob(F-statistic) = 0.0000

Source: Researcher's Computation from EViews 12 Output (2026)

Table 3 Corrected Fixed Effect Regression Result for ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.38400	0.18113	-2.120	0.0354
NPLR	-0.29150	0.09881	-2.950	0.0036
GROWTH	0.04510	0.01919	2.350	0.0200
MATURITY	0.09460	0.02536	3.730	0.0002
DECLINE	-0.07120	0.03056	-2.330	0.0210
NPLR_GROWTH	0.11200	0.04956	2.260	0.0251
NPLR_MATURITY	0.21840	0.06017	3.630	0.0004
NPLR_DECLINE	-0.14900	0.07340	-2.030	0.0439
CAR	0.16450	0.07651	2.150	0.0330
SIZE	0.02140	0.00951	2.250	0.0257

$R^2 = 0.6125$; Adjusted $R^2 = 0.5619$; F-statistic = 12.103; Prob(F-statistic) = 0.0000

Source: Researcher's Computation from EViews 12 Output (2026)

The results in Tables 2 and 3 are consistent across both performance measures. The non-performing loan ratio exerts a negative and statistically significant effect on ROA ($\beta = -0.1142$, $p = 0.0035$) and on ROE ($\beta = -0.2915$, $p = 0.0036$), confirming that deterioration in loan quality suppresses both asset efficiency and shareholder returns. The growth and maturity dummies carry positive and significant coefficients in both models, while the decline dummy carries a negative and significant coefficient, indicating that developmental position independently shapes profitability.

The interaction terms furnish the study's central result. NPLR × GROWTH and NPLR × MATURITY are positive and significant in both models, indicating that the adverse effect of non-performing loans is attenuated

for banks operating within growth and maturity stages. NPLR × DECLINE is negative and significant in both models, indicating that the decline stage intensifies the damage inflicted by poor loan quality. Capital adequacy ratio and bank size are positively and significantly associated with performance throughout, indicating that well-capitalised and larger institutions are more resilient. The models explain 68.42 per cent of the variation in ROA and 61.25 per cent of the variation in ROE.

Test of Hypotheses

Table 4 Summary of Hypothesis Testing

Hypothesis	Variable(s)	p-value (ROA; ROE)	Decision (α = 0.05)
H01	GROWTH	0.0088; 0.0200	Reject H01
	MATURITY	0.0003; 0.0002	
	DECLINE	0.0149; 0.0210	
H02	NPLR	0.0035; 0.0036	Reject H02
H03	NPLR_GROWTH	0.0099; 0.0251	Reject H03
	NPLR_MATURITY	0.0002; 0.0004	
	NPLR_DECLINE	0.0354; 0.0439	

Source: Researcher's Computation from EViews 12 Output (2026)

All three null hypotheses are rejected at the five per cent level. Corporate life cycle stages significantly affect financial performance; the non-performing loan ratio significantly reduces financial performance; and corporate life cycle stages significantly moderate the relationship between non-performing loans and financial performance.

DISCUSSION OF FINDINGS

The finding that non-performing loans significantly depress the profitability of Nigerian deposit money banks supports credit risk theory, which holds that deteriorating loan quality erodes earnings through elevated loan loss provisions, declining interest income and impaired capital. The result aligns with Kargi (2011), Kolapo et al. (2012), Alshatti (2015) and Ekinci and Poyraz (2019), each of whom documented a significant inverse relationship between credit risk and bank performance. Where the present result diverges from studies reporting insignificant relationships, the divergence is plausibly attributable to differences in estimation technique, sample composition, institutional environment and macroeconomic setting.

The evidence that growth and maturity stages attenuate the adverse effect of non-performing loans is consistent with Dickinson (2011), Habib and Hasan (2017) and Akbar et al. (2019), who argue that firms in these stages possess stronger governance structures, superior earnings capacity and more effective operational systems. Translated into banking, growth-stage and mature institutions appear to hold more robust risk management systems, more disciplined loan monitoring mechanisms and stronger competitive positioning, each of which limits the profitability damage inflicted by a given level of loan default.

Conversely, the finding that the decline stage amplifies the negative effect of non-performing loans indicates that institutions in this phase are structurally exposed to credit shocks. Declining operational efficiency, weakening market position and reduced financial flexibility leave such banks with little capacity to absorb losses, so that identical NPL levels translate into disproportionately severe earnings deterioration. The positive coefficients on capital adequacy ratio and bank size reinforce this reading, suggesting that capital buffers and scale operate as shock absorbers within the Nigerian banking system.

Taken as a whole, the evidence establishes that the consequences of credit risk are conditional rather than uniform. Two banks carrying identical non-performing loan ratios will not experience identical profitability outcomes if they occupy different positions within the corporate life cycle. This conditionality is the study's principal empirical contribution.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This study examined the moderating effect of corporate life cycle on the relationship between non-performing loans and the financial performance of thirteen listed deposit money banks in Nigeria over the period 2010 to 2023. Adopting an ex-post facto design and panel regression techniques, the study proxied financial performance by Return on Assets and Return on Equity, credit risk by the Non-Performing Loan Ratio, and corporate life cycle by growth, maturity and decline dummies constructed from the cash flow classification of Dickinson (2011). A corrected fixed effect model with White cross-section covariance correction was adopted following the detection of heteroskedasticity and cross-sectional dependence.

The findings established, first, that the non-performing loan ratio exerts a negative and statistically significant effect on both ROA ($\beta = -0.1142$, $p = 0.0035$) and ROE ($\beta = -0.2915$, $p = 0.0036$). Second, corporate life cycle stages significantly affect financial performance, with growth ($\beta = 0.0184$, $p = 0.0088$ for ROA) and maturity ($\beta = 0.0312$, $p = 0.0003$ for ROA) recording positive coefficients and decline ($\beta = -0.0241$, $p = 0.0149$ for ROA) recording a negative coefficient. Third, corporate life cycle stages significantly moderate the NPL-performance relationship: the interaction of NPLR with growth ($\beta = 0.0412$, $p = 0.0099$ for ROA) and with maturity ($\beta = 0.0784$, $p = 0.0002$ for ROA) is positive and significant, whereas the interaction with decline ($\beta = -0.0561$, $p = 0.0354$ for ROA) is negative and significant. The ROE model reproduces this pattern throughout.

Conclusion

The study concludes that non-performing loans remain a substantial threat to the operational efficiency, shareholder returns and long-term stability of Nigerian deposit money banks, and that this threat is not distributed evenly across the sector. Banks positioned within the growth and maturity stages possess institutional structures, governance systems and earnings stability sufficient to blunt the damage occasioned by deteriorating loan quality, while banks drifting into decline are rendered progressively more vulnerable to the same exposure. Corporate life cycle therefore constitutes an important organisational determinant of how credit risk translates into financial performance. Sustaining profitability within the Nigerian banking sector accordingly requires not merely effective credit risk management, but life-cycle-sensitive strategic management, sound governance and deliberate organisational positioning.

Recommendations

Arising from the findings, the following recommendations are offered:

1. Deposit money banks should strengthen credit appraisal procedures, loan monitoring systems and debt recovery mechanisms in order to reduce the incidence of non-performing loans and protect profitability.

2. Bank management should incorporate corporate life cycle positioning into lending, investment and operational decisions, recognising that developmental stage significantly conditions both profitability and resilience to credit shocks.

3. Banks in the growth stage should ensure that aggressive expansion is accompanied by robust internal controls and disciplined credit screening, so that market share is not purchased at the cost of future asset quality.

4. Banks in the decline stage should adopt restructuring strategies directed at improving operational efficiency, reducing risk exposure and restoring asset quality before credit shocks become unmanageable.

5. Regulatory authorities, notably the Central Bank of Nigeria and the Nigeria Deposit Insurance Corporation, should develop early warning systems capable of identifying banks exhibiting decline-stage characteristics, and should calibrate supervisory intensity to institutional maturity rather than applying uniform thresholds.

6. Investors and shareholders should incorporate both corporate life cycle position and credit risk indicators into investment appraisal, given the demonstrably stronger resilience of growth-stage and mature institutions.

Contribution to Knowledge

Theoretically, the study extends credit risk theory and corporate life cycle theory by demonstrating that the relationship between non-performing loans and financial performance is conditional upon organisational developmental stage, a proposition not previously tested within the Nigerian banking sector. Methodologically, it contributes by employing a corrected fixed effect estimator with White cross-section covariance correction to obtain robust inference under heteroskedasticity and cross-sectional dependence, and by operationalising corporate life cycle through a cash-flow-based classification rather than firm age or size. Empirically, it supplies evidence that growth and maturity stages weaken, while the decline stage strengthens, the adverse effect of credit risk on bank profitability. For policy, the study furnishes regulators, bank managers and investors with a defensible basis for integrating corporate life cycle considerations into credit risk supervision, strategic financial decision-making and investment appraisal within the Nigerian banking sector.

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