RECAPITALISATION AND THE RISK–RETURN TRADE-OFF IN BANKS: EVIDENCE FROM AN EMERGING MARKET

Azeez Abiodun Ajibola
Baze University, Abuja – Nigeria
azeez.ajibola@bazeuniversity.edu.ng

Inuwa, Mohammed Bala ***(PhD)***
Baze University, Abuja – Nigeria
mohammed.inuwa@bazeuniversity.edu.ng,

***Corresponding Author:**
Azeez Abiodun Ajibola
Baze University, Abuja – Nigeria
azeez.ajibola@bazeuniversity.edu.ng

ABSTRACT

This study explores the impact of changes in capital structure resulting from recapitalization on the risk-return relationship and stability of banks in an emerging market setting. The analysis deviates from previous literature that examines capital adequacy ratios by breaking down the process of recapitalization into different financing mechanisms, including equity financing, debt financing, derivatives, and asset appreciation. The study uses panel data on Nigerian Deposit Money Banks during the period 2012-2024, using fixed-effects models with Driscoll-Kraay standard errors to account for cross-sectional dependence and macroeconomic shocks. It is observed that there is a clear trade-off between profitability and resilience. The research finds that recapitalization through equity and debt leads to an improvement in the balance sheets' ability to absorb shocks by improving liquidity and lowering non-performing loans. At the same time, recapitalization leads to a temporary decrease in the banks' profits and deposits due to adjustment costs. The use of derivative-based instruments is also shown to depress the profit margins. The results demonstrate that the effectiveness of recapitalisation is conditional on the structure of capital adjustment, thus, highlighting the importance of financing channels in shaping bank behaviour. The study adds empirical evidence to the current body of knowledge on banks and financial stability in that it sheds some light on the risk-reward balance with regard to capital regulation in developing countries.

Keywords: *Bank recapitalisation; Bank resilience; Profitability; Basel III; Emerging markets; Nigeria*

1. Introduction

The importance of bank capital has become very significant in discussions regarding financial stability and performance following the global financial crises and ensuing regulatory changes in the world. Thus, strengthening capital buffers through recapitalisation is widely regarded as a key macroprudential tool for enhancing the resilience of banking systems (Basel Committee on Banking Supervision [BCBS], 2019, 2023; Borio, 2020; IMF, 2021). That said, the recent literature on banking has long considered whether additional capital in itself increases stability at a cost to profitability and growth as it could be argued may well occur within environments that exhibit financial frictions endemic across economies or macroeconomic volatility.

Different theoretical approaches provide different forecasts on the implications of recapitalization. According to the buffer capital approach, higher levels of capital adequacy imply a greater ability to absorb any shock and, thus, lead to better liquidity buffers and asset quality (Milne & Whalley, 2001). But as noted both in agency theory and regulatory costs theoreticians, an increasing level of capitalization involves some adjustment costs (lower profits) or restricted risky investments leading to lower bank profitabilities (Berger & Di Patti, 2006; Gropp & Heider, 2010; Myers, 2001). The result is a paradox of risk-return relationship at its most fundamental level, as capital accretion strengthens the ratings but simultaneously limits performance.

Research to date offers somewhat mixed results on this trade-off empirically. Although capital adequacy improves stability, extensive literature has shown positive effects from bank robustness (Berger & Bouwman 2009; Demirgüç-Kunt and Huizinga 2010), but the evidence still focuses largely on aggregate capital ratios before examining mainly indicators of profitability. This approach obscures the underlying transmission mechanisms through which recapitalisation affects different dimensions of bank behaviour. In particular, limited attention has been given to how distinct recapitalisation channels such as equity financing, debt financing, derivative-based restructuring, and asset revaluation generate heterogeneous effects across profitability, liquidity, credit risk, and funding dynamics (Chiaramonte et al., 2021; Johnston & Chen, 2021; Choi et al., 2022). The disparities are even starker in emerging markets, where institutional frictions and shallow capital market may exaggerate the costs (or benefits) of adjustment at that scale.

These weaknesses shall be tackled by the current study through assessing how recapitalization policies affect bank robustness through various mechanisms. The proposed study plans to identify four distinct components of recapitalization: equity recapitalization, debt recapitalization, derivative recapitalization, and accounting recapitalization. The current study will then examine how each of these strategies impacts different aspects of bank performance, such as profitability, liquidity, NPLs, and deposits. By employing a multi-dimensional model of bank resilience, the current study will go beyond traditional single-measurement models of bank performance. Using panel data for Nigerian deposit money banks over the period 2012–2024, the analysis employs fixed-effects estimation with Driscoll–Kraay standard errors to account for cross-sectional dependence and macroeconomic volatility. The situation in Nigeria is particularly relevant due to its frequent occurrence of recapitalization exercises and consistent application of capital rules following international standards (CBN, 2024; Sanusi, 2012; Oteh, 2020). The combination of structural financial constraints, evolving regulatory frameworks, and exposure to macroeconomic shocks makes it an appropriate context for examining the trade-offs associated with capital strengthening in emerging banking systems (Adeola & Evans, 2020; Ugoani, 2021).

The study contributes to the banking and financial stability literature in three important ways. First, it provides novel evidence by disaggregating recapitalisation into distinct financing channels, thereby identifying heterogeneous transmission effects that are often masked in aggregate analyses. Second, it advances the measurement of bank resilience by jointly examining profitability, liquidity, asset quality, and deposit mobilisation within a unified empirical framework. Third, it offers new insights into the risk–return implications of capital regulation in emerging markets, highlighting how institutional and macroeconomic conditions shape the outcomes of recapitalisation policies (Onakoya et al., 2024; Nwosu, 2018).

Overall, the findings provide a deeper understanding of how capital structure adjustments influence bank behaviour, with implications for financial stability, regulatory design, and bank-level strategic decision-making.

1.2 Research Questions

1. To what extent have recapitalisation reforms influenced the profitability of Nigerian Deposit Money Banks?
2. What is the effect of recapitalisation reforms on banks' liquidity position?
3. How have recapitalisation reforms impacted the level of non-performing loans in Nigerian banks?
4. What relationship exists between recapitalisation reforms and deposit mobilisation capacity?

1.3 Research Objectives

1. To examine the impact of recapitalisation reforms on the profitability of Nigerian Deposit Money Banks.
2. To analyse the effect of recapitalisation reforms on liquidity management.
3. To evaluate the influence of recapitalisation reforms on non-performing loan ratios.
4. To investigate the relationship between recapitalisation reforms and deposit growth.

1.4 Research Hypotheses

H_{01}: Recapitalisation reforms have no significant effect on the profitability of Nigerian Deposit Money Banks.

H_{02}: Recapitalisation reforms have no significant effect on the liquidity position of Nigerian Deposit Money Banks.

H_{03}: Recapitalisation reforms have no significant effect on the level of non-performing loans.
H_{04}: Recapitalisation reforms have no significant effect on deposit mobilisation.

2. Literature Review

The literature on banking reforms highlights recapitalisation as a recurring strategy to strengthen financial institutions against systemic shocks. While global evidence suggests that higher capital buffers enhance bank stability, empirical findings in developing economies remain inconsistent. In Nigeria, where successive recapitalisation reforms have been implemented since the early 2000s, outcomes have been mixed profitability gains in some cases but persistent liquidity crises, rising non-performing loans (NPLs), and challenges in deposit mobilisation. This chapter reviews relevant concepts, theories, and empirical findings to position the current study within the scholarly and policy discourse.

2.1 Capitalisation and Bank Performance: The Risk–Return Debate

The link between capitalization and performance in banks continues to be a topic of extensive research and discussion in banking literature. Standard theory implies that higher capitalization increases financial stability due to its ability to absorb losses and minimize distress conditions (Berger &

Bouwman, 2009; Milne & Whalley, 2001). In this respect, one may suggest that the effect of capitalization is the increased financial resilience that enables banks to survive negative shocks while maintaining their basic intermediation function.

However, an alternative strand of literature emphasises the potential costs of capital expansion. According to agency theories and the arguments on capital structures, an increase in capital, especially through the means of external funding, may lead to losses in shareholders' benefits, as well as incur adjustments, which makes profits harder to achieve in the short term (Berger & Di Patti, 2006; Gropp & Heider, 2010; Myers, 2001). This idea is supported by empirical findings that indicate the existence of both positive correlation between the ratio and profitability/stability (Demirgüç-Kunt & Huizinga, 2010; Lee & Hsieh, 2013) and negative and insignificant correlations among the two variables, especially in emerging countries (Okafor & Wilson, 2020; Adegbite & Nakajima, 2011).

Such contrasting results indicate that the effects of recapitalization are heterogeneous depending on the environment. Specifically, the effect of increased capital on performance could be related to the level of institutions, macroeconomic environment, and financial market development. This once again confirms the significance of moving from an analysis of capital statistics to the mechanism of recapitalization.

2.2 Capitalisation and Bank Resilience: Liquidity, Asset Quality, and Stability

Apart from being profitable, an increasing number of studies have focused on capital as one of the ways of improving other aspects of banks' resilience such as liquidity, asset quality, and systemic stability. Buffer capital theory suggests that banks which are adequately capitalized will be in a position to withstand shocks, especially those related to loss absorption, liquidity management, and loaning (Berger & Bouwman, 2009; Kashyap et al., 2008).

In general, empirical studies confirm that capital plays a positive stabilising function in financial institutions. Specifically, recapitalisation can be seen as a means to enhance asset quality by reducing the number of non-performing assets, which is due to better risk management and loan allocation (Laeven & Valencia, 2018; Beck et al., 2011). In addition, the increased level of capital leads to greater liquidity resilience since well-capitalised banks are less prone to liquidity hoarding or fire sales.

However, evidence from emerging economies remains mixed. In the Nigerian context, recapitalisation reforms have improved capital adequacy and, in some cases, profitability, but persistent challenges in liquidity management and credit risk remain (Adeola & Evans, 2020; Ugoani, 2021). Findings from research conducted by scholars like Nwosu (2018) and Onoh (2020) indicate that although consolidation has contributed to the growth in balance sheets, it failed to address some of the key deficiencies in risk management and asset quality. This implies that simply bolstering one's capital is not enough for resilience.

2.3 Heterogeneity in Recapitalisation Channels: Beyond Aggregate Capital Measures

An important weakness of the extant research literature lies in the use of aggregate capital adequacy measures, which fail to capture heterogeneity across recapitalisation routes. Recent studies emphasise that recapitalisation is not a uniform process but a combination of distinct financing channels with varying implications for bank behaviour and stability (Chiaramonte et al., 2021; Johnston & Chen, 2021).

Equity-based recapitalisation is generally viewed as the most effective mechanism for enhancing resilience, as it increases loss-absorbing capacity and reduces leverage (Berger & Bouwman, 2013). In contrast, debt-based recapitalisation may provide short-term liquidity relief but can increase leverage and incentivise risk-taking, potentially undermining long-term stability (Johnston & Chen, 2021). Likewise, derivative-linked recapitalisation schemes, although effective in mitigating risks, carry transaction fees and may adversely affect profits (Purnanandam, 2007; Rampini et al., 2020).

The revaluation of assets constitutes another method of recapitalisation that can improve the capital ratio through accounting methods but not the actual cash flow capability of the company. Recent studies reveal that such an accounting technique can make the balance sheet appear better but fails to mitigate any financial crisis (Choi et al., 2022; IMF, 2021).

2.4 Evidence from Emerging Markets and Nigeria

Recapitalisation reforms are more effective in some institutional settings than in others. In advanced financial systems, where there are highly developed capital markets and robust regulations, the positive effects of capital build-up are strengthened. However, in emerging markets, where there are such structural limitations as undeveloped financial markets, higher cost of finance, and high levels of macroeconomic instability, the negative aspects of the process of recapitalisation might be intensified.

As for Nigeria, its central government has frequently used the measure of recapitalisation in an attempt to improve the country's banking sector. For example, according to Sanusi, the consolidation reform in 2005 was accompanied by a substantial increase in the minimum capital requirement and the reduction in the number of banks in the country. Post-crisis intervention and reforms of regulations, aimed at increasing the level of stability, were introduced afterwards (Oteh, 2020). At present, there is little evidence supporting the positive effects of the reform on Nigerian banks. Although some studies claim that recapitalisation led to increased efficiency and better profitability of banks (Adeola & Evans, 2020; Onakoya et al., 2024), others show that the banks' weaknesses, namely liquidity problems, high rates of non-performing loans, and poor management, persist (Ugoani, 2021; Nwosu, 2018).

2.5 Research Gap and Study Contribution

The foregoing review highlights three critical gaps in the literature. First, existing studies largely focus on profitability and aggregate capital adequacy, with limited attention to broader dimensions of bank resilience such as liquidity, asset quality, and deposit mobilisation. Secondly, previous studies do not pay sufficient attention to the variety of means used for recapitalization, not distinguishing between different ways of bank replenishment of its capital resources. Thirdly, no sufficient amount of empirical data has been collected regarding emerging countries and their peculiarities.

By considering the issues above and addressing existing research gaps, this study aims at providing a decomposition of the recapitalization process into various sources, their impact on different aspects of banking operation analyzed within a unifying theoretical framework. Through studying multiple dimensions of banks' activities in one empirical setting, this study can provide a more profound view of how the impact of capital structure on bank performance operates in emerging financial institutions.

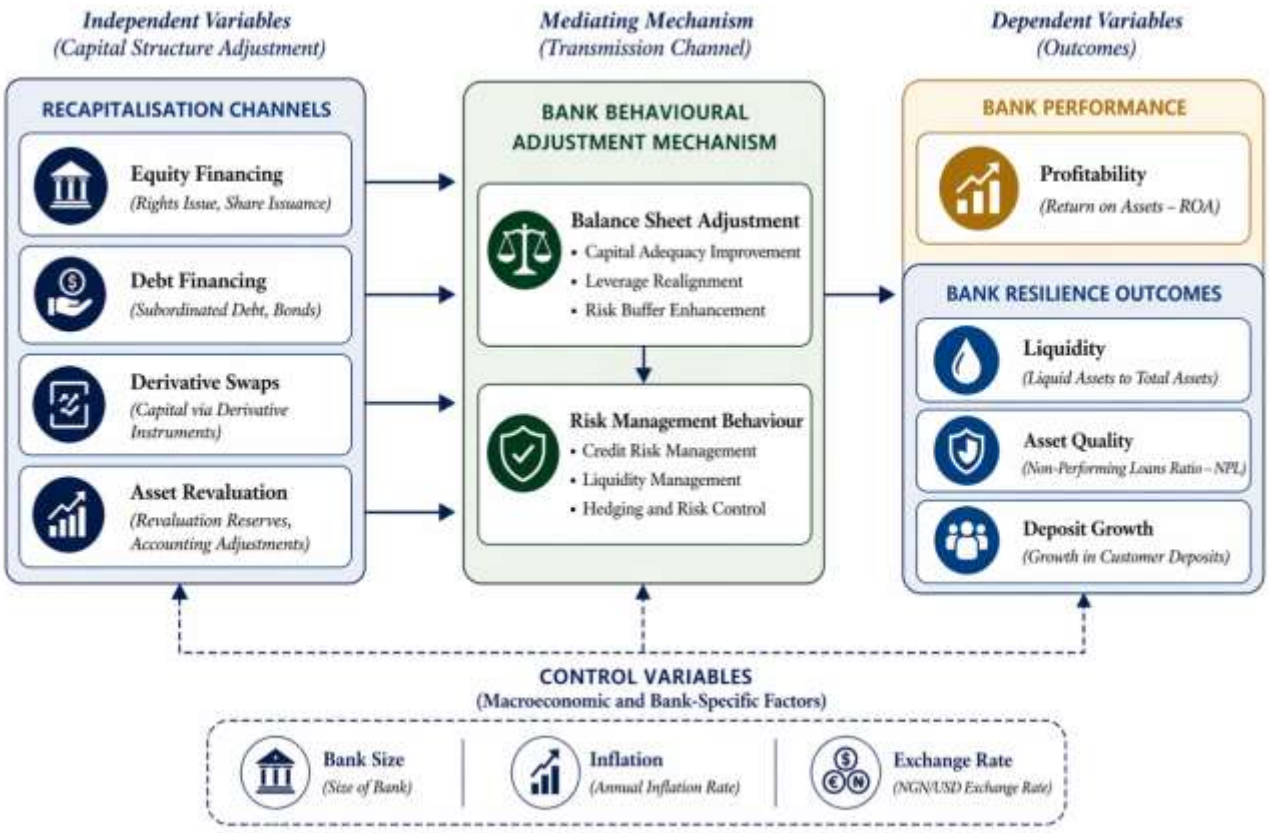

Figure 1: Conceptual Framework of Recapitalisation and Bank Outcomes

Figure 1 presents the conceptual framework of the study. It illustrates how recapitalisation, through distinct capital structure channels, influences bank behavioural adjustments, which in turn determine performance and resilience outcomes. Macroeconomic and bank-specific variables are included as control factors affecting these relationships.

3. Methodology

3.1 Research Design and Data

The current study applies the ex post facto panel approach to analyze the effect of recapitalization on bank performance and sustainability. This study design is suitable because the study uses historical financial data without manipulating the explanatory variables, hence identifying relationships in a real-world context (Baltagi, 2021; Hsiao, 2014).

The research will center on DMBs from Nigeria that are publicly listed at the Nigerian Exchange Group. The reason for choosing listed companies is their high level of transparency and the accessibility of consistent financial statements. There will be 12 banks with full data from 2012 to 2024, making the number of observations 156.

Data are obtained from audited annual reports of individual banks and supplemented with macroeconomic indicators from the Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Corporation (NDIC), and Nigerian Exchange (NGX) Factbook. The study period captures post-

consolidation dynamics following the 2005 banking reforms, post-AMCON restructuring, and the evolving macroeconomic environment preceding the recent recapitalisation cycle.

3.2 Model Specification

To examine the effect of recapitalisation on bank resilience, the study specifies a panel regression model in which recapitalisation is decomposed into distinct financing channels. The baseline model is expressed as:

$$Yit=\alpha+\beta1EquityFinit+\beta2DebtFinit+\beta3Derivit+\beta4AssetRevalit+\gamma Zit+\mu i+\lambda t+\varepsilon it$$

where:

Yit represents alternative measures of bank performance and resilience for bank *i* in year *t*, including profitability (ROA), liquidity, non-performing loans (NPL), and deposit growth, EquityFin, DebtFin, Deriv, and AssetReval capture distinct recapitalisation channels, Zit is a vector of control variables, including bank size, inflation, and exchange rate, μi denotes unobserved bank-specific effects, λt captures time-specific effects, and εit is the idiosyncratic error term.

Separate regressions are estimated for each dependent variable to reflect the multidimensional nature of bank resilience (Allen & Carletti, 2019; IMF, 2021).

3.3 Estimation Technique

The empirical analysis proceeds in a structured sequence. First, pooled ordinary least squares (OLS) is estimated as a benchmark model. Nevertheless, there is no control for heterogeneous unobservables for different banks in Pooled OLS regression, thus leading to biased coefficient estimation. In order to remedy this problem, estimations are done through FE and RE regressions. To select the preferred estimator, Hausman specification test is applied in consideration of the correlation between individual effects and explanatory variables (Baltagi, 2021). Following theoretical predictions for banking panel data, FE estimator turns out to be chosen as the preferred estimator.

Heteroskedasticity, autocorrelation, and cross-sectional dependence are considered as issues in estimating bank panel data. Driscoll-Kraay estimator is used to correct for both cross-sectional dependence and serial correlation without restrictive error assumptions given the relatively small dimension of cross-section and medium number of time periods in bank data. Although dynamic panel estimators such as the Generalised Method of Moments (GMM) are often used to address endogeneity (Arellano & Bond, 1991), their application in small-N panels is problematic due to instrument proliferation and weak identification. Given the sample size (N = 12), the study prioritises estimation efficiency and robustness by relying on fixed effects with Driscoll–Kraay corrections rather than dynamic GMM.

3.4 Diagnostic Tests and Model Validity

In order to make sure that the estimated model is reliable, a number of diagnosis tests are done. The existence of multicollinearity is checked with the help of VIF test, where low values are an indication that there is no presence of any significant collinearity problem. For serial correlation, the Wooldridge-type test is employed, and for cross-sectional dependency, the proper panel test is used. Panel unit root

tests are also applied to make sure that the series is stationary, which prevents the occurrence of spurious regression results.

3.5 Variable Measurement and Expected Signs

To enhance transparency and replicability, Table 1 presents the measurement of variables and their expected relationships based on theoretical and empirical literature.

Table 1: Variable Definition and Expected Signs

Variable	Type	Measurement	Expected Sign	Supporting Literature
ROA	Dependent	Net income / Total assets	±	Berger & Bouwman (2013)
Liquidity	Dependent	Liquid assets / Total assets	+	Kashyap et al. (2008)
NPL Ratio	Dependent	Non-performing loans / Total loans	−	Laeven & Valencia (2018)
Deposit Growth	Dependent	Annual % change in deposits	±	Martínez-Miera & Repullo (2010)
EquityFin	Independent	Equity-based capital increase proxy	− (ROA), + (Resilience)	Berger & Bouwman (2009)
DebtFin	Independent	Debt financing ratio	− (ROA), +/− (Risk)	Johnston & Chen (2021)
Derivative	Independent	Derivative exposure proxy	−	Purnanandam (2007)
AssetReval	Independent	Asset revaluation proxy	Weak/ambiguous	Choi et al. (2022)
Bank Size	Control	Log of total assets	+	Demirgüç-Kunt & Huizinga (2010)
Inflation	Control	Annual inflation rate	−	IMF (2021)
Exchange Rate	Control	Annual average rate	−	IMF (2021)

3.6 Ethical Considerations

The study uses only secondary data available from publicly audited accounting documents. It, therefore, does not use any human subjects or sensitive information. The ethical issues associated with the research are only those that relate to the accuracy and correct citing of all sources used.

4. Results and Discussion

4.1 Descriptive Evidence

Table 2: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
ROA	0.0176	0.0175	−0.1000	0.07
Liquidity	1.8585	2.197	0.72	28.17
NPL Ratio	−0.0526	0.3949	−4.9400	0.02
Deposit Growth	0.2064	0.3028	−0.6000	2.3
Equity Financing	1.1106	0.1352	0.39	1.31
Debt Financing	0.9256	0.2167	0.76	2.55
Derivative Swap	8.5607	14.9816	−2.9800	190.21
Bank Size	9.3603	0.4867	8.2	10.6
Inflation	15.5744	6.544	8	32.8
Exchange Rate	317.01	122.51	157.3	523.6

Author's Computation 2025

Notes: Variables are defined as in the text. The sample consists of 156 bank-year observations.

Table 2 provides the descriptive statistics of the variables under analysis. As shown by the findings, there is moderate profitability of the banks (ROA = 1.76%) with high variability from one period to another and among banks, implying different reactions by banks during the periods of recapitalization.

It can be observed that there is heterogeneity in terms of liquidity and derivatives positions. It is important to state that the variance in macroeconomic indicators, specifically in inflation and exchange rates, reflects the characteristics of macro-financial instability which prevail in developing countries like Nigeria (IMF, 2021).

4.2 Correlation Structure and Diagnostics

Table 3. Correlation Matrix (Selected Variables)

Variable	ROA	Liquidity	NPL Ratio	Deposit Growth
ROA	1			
Liquidity	−0.490***	1		
NPL Ratio	0.551***	−0.965***	1	
Deposit Growth	0.081	0.006	0.066	1

Author's Computation 2025

Notes: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

The correlation matrix (Table 3) shows a significant negative correlation between liquidity and non-performing loans, which means that banks having more liquidity show less credit risk. Such a correlation confirms the expectations of liquidity buffers being helpful in managing risks and lowering credit risk (Kashyap et al., 2008).

The positive correlation between non-performing loans and profitability may be considered unusual; however, it can be explained through the concept of risk-taking, in which case high risk of lending can result in high profits in the short run followed by credit loss in the long term. The results of multicollinearity checks indicate the independence of variables used in the research.

4.3 Baseline Fixed-Effects Results: Profitability (ROA)

Table 4. Recapitalisation Instruments and Bank Profitability (Dependent Variable: ROA)

Variable	FE (Clustered SEs)	FE (Driscoll–Kraay SEs)
Equity Financing	−0.116*** (0.025)	−0.116** (0.052)
Debt Financing	−0.095*** (0.015)	−0.095** (0.038)
Derivative Swap	−0.00022*** (0.00006)	−0.00022*** (0.00003)
Bank Size	+	+
Inflation	–	–
Exchange Rate	–	–
Constant	0.237***	0.237**
Observations	156	156
Banks	12	12
Within R^2	0.291	0.291

Author's Computation 2025

Notes: Robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels. Bank and year fixed effects are included.

Based on the estimates of the fixed-effects regressions in Table 4, it is clear that both equity and debt financing have a significantly negative influence on the bank profitability. In other words, the data confirm the presence of a short-run cost of recapitalisation based on the risk-return trade-off theory. From the perspective of the theory, the negative relation between equity financing and ROA supports the notion of capital dilution whereby higher equity financing leads to reduced return on assets since the earnings remain unchanged (Berger & Bouwman, 2013). Moreover, the negative relation between debt financing and ROA means that increasing debt capital entails higher costs of capital due to rising financing costs and reducing net profits (Berger & Di Patti, 2006; Myers, 2001). Finally, the negative coefficient in case of derivative swaps shows that despite the fact that such strategies lead to smoothing the income flows, they entail additional transaction and operations expenses that decrease profitability (Purnanandam, 2007; Rampini et al., 2020). The robustness of results using the Driscoll–Kraay standard errors proves that serial correlations and cross-sectional dependencies do not affect the outcome. Overall, the data show that recapitalisation implies the occurrence of capital adjustment costs in the short run.

4.4 Bank Resilience Channels

Table 5. Recapitalisation and Bank Resilience

Variable	Liquidity (FE-DK)	NPL Ratio (FE-DK)	Deposit Growth (FE-DK)
Equity Financing	+34.11***	−6.45***	−2.46***
Debt Financing	+28.49***	−5.16***	−1.32***
Derivative Swap	n.s.	n.s.	−0.00074*
Bank Size	+	−	+
Inflation	−	+	−
Exchange Rate	−	+	−
Observations	156	156	156
Banks	12	12	12

Author's Computation 2025

Notes: FE-DK denotes fixed effects with Driscoll–Kraay standard errors. Signs indicate coefficient direction; n.s. denotes not statistically significant. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Table 5 presents the effects of recapitalisation on broader dimensions of bank resilience. In contrary to profitability outcomes, the duo of equity and debt financing exhibit strong positive effects on liquidity and significant reductions in non-performing loan ratios. These results provide robust empirical support for the buffer capital theory, which predicts that stronger capital positions enhance banks' ability to absorb shocks and manage credit risk (Berger & Bouwman, 2009; Milne & Whalley, 2001).

The lower non-performing loan ratio supports that after recapitalisation, banks become less risky and more selective when approving loans. The result corroborates those provided by Laeven and Valencia (2018), and demonstrates that capital replenishment not only increases solvency but asset quality as well.

In addition, the model reveals a statistically significant negative effect of recapitalisation on deposits growth, which shows that the focus during the recapitalisation period is mainly on the restructuring of balance sheets rather than on their extension. The evidence is associated with conservative intermediation, when banks avoid aggressive raising of funds in order to comply with regulatory requirements on capital adequacy. The results support the financial fragility hypothesis according to which capital regulation can adversely affect funding in the short term (Repullo & Suarez, 2013; Angelini et al., 2014).

Nevertheless, the use of derivative products for the purpose of recapitalisation does not influence liquidity and asset quality but has a weak negative impact on deposit growth. Thus, these tools seem to have no effect on the improvement of resilience indicators in the context of emerging economies.

4.5 Synthesis: The Risk–Return Trade-Off in Recapitalisation

Overall, the findings clearly present substantial proof that there was a deliberate trade-off made regarding the two aspects of banking. Although recapitalization increases liquidity and decreases credit

risk, it also constricts the profitability and deposit growth of banks in the short term. Thus, the results reconcile conflicting evidence in existing literature through an empirical demonstration of the dependence of recapitalization's effects on the performance dimension in consideration.

Additionally, the study reveals the significance of the composition of capital structures. Both equity and debt-based recapitalization measures have considerable impacts on the performance and resilience of banks. On the other hand, the effect of derivative and accounting-based capital adjustments is relatively insignificant and inconsistent. The study thus confirms the inadequacy of using aggregate capital indicators in the analysis of recapitalization. Moreover, it demonstrates the importance of different transmission mechanisms of recapitalization (Chiaramonte et al., 2021; Johnston & Chen, 2021).

Moreover, the inconsistency between findings in emerging and developed countries (Demirgüç-Kunt & Huizinga, 2010; Lee & Hsieh, 2013) indicates the relevance of institutional differences in the success of recapitalization policies.

4.6 Implications for Financial Stability and Bank Behaviour

The results have significant theoretical and practical implications. Theoretically, the evidence is consistent with the hypothesis that recapitalization works via the risk/return allocation approach, whereby capital fortification enhances resilience while incurring performance losses. In terms of policy implications, the results indicate the importance of implementing measures aimed at addressing profitability considerations and facilitating credit intermediation in times of transition. In terms of strategy for banks, the findings point to the importance of combining capital accumulation approaches with operational efficiency and income diversification.

In summary, the paper demonstrates the effectiveness of bank recapitalisation as an instrument of prudence, which should nevertheless be implemented carefully to avoid distortions in banking operations.

5. Conclusion and Policy Implications

5.1 Conclusion

This research focuses on the impact of recapitalization on bank performance and stability under the conditions of an emerging market by taking into account the structure of capital as a key component of recapitalization. Through the analysis of specific channels used for capital strengthening and their impact on various performance aspects, this research gives deeper insight into how banks react to recapitalization.

From the results obtained, it can be concluded that recapitalization takes place through a reallocation process between profit creation and risk absorption. On the one hand, capital strengthening leads to better liquidity conditions and asset quality as well as improves the stability of banks, whereas, on the other hand, it causes negative short-term consequences for profits and deposits.

Importantly, the results demonstrate that the effects of recapitalisation are not uniform across financing channels. The impact of equity and debt restructuring is substantial and systematic on performance and resilience, whereas derivatives and accounting measures have only a marginal impact.This conclusion emphasizes the role played by capital structure in influencing the success of recapitalization policies.

In a more general sense, the paper adds value to the discussions surrounding the risk-return dilemma in the banking sector. It shows that despite the increased risks involved in recapitalization, it helps improve stability in the financial system; however, the costs incurred during the process should not be considered as a sign of inefficiency.

5.2 Policy Implications

Implications of the findings from this research are quite significant for regulation, policy-making, and bank management.

First, the importance of recapitalization in improving the resilience of the banking sector cannot be overlooked. It is crucial that regulations should allow for transition costs associated with changes in profitability and funding, and implement appropriate strategies to manage those challenges.

Second, it is vital to understand that the effect of recapitalization is dependent on the process of capital adjustments. Attention should be paid to equity-based capital adjustments, as they improve loss-absorption capacities. Too much reliance on the use of financial leverage should be prevented to reduce financial risk.

Thirdly, the decrease in deposits during the recapitalisation process indicates the importance of increasing confidence levels among depositors. Effective communication channels, credible supervisory systems, and problem-solving frameworks may play a role in maintaining confidence within the banking system during restructuring phases.

Fourth, from a management point of view, banks should be able to incorporate their recapitalization policies into their performance targets in order to become more efficient, improve risk management and revenue diversification. This will enable them to offset the effects that may result from efforts aimed at recapitalization.

5.3 Limitations and Directions for Future Research

Although this study makes some valuable contributions, there are also some limitations involved. One limitation is that the sample size for banks used in the study is not large enough, thus making it difficult to use dynamic estimation methods.

Further research can build upon this paper by looking at the effect of institutions and financial development on the success of recapitalization programs by using an international sample of banks. In addition, further studies may explore the interaction between recapitalisation, corporate governance, and bank risk-taking behaviour, as well as the long-term performance implications of capital reforms beyond the adjustment phase.

References

Adegbite, E., & Nakajima, C. (2011). Corporate governance and responsibility in Nigeria. *International Journal of Disclosure and Governance, 8*(3), 252–271. https://doi.org/10.1057/jdg.2011.2

Adeola, O., & Evans, O. (2020). Banking sector reforms and financial stability in Nigeria: Evidence from recapitalisation. *Journal of African Business, 21*(3), 357–374. https://doi.org/10.1080/15228916.2020.1716894

Allayannis, G., & Weston, J. P. (2001). The use of foreign currency derivatives and firm market value. *The Review of Financial Studies, 14*(1), 243–276. https://doi.org/10.1093/rfs/14.1.243

Allen, F., & Carletti, E. (2019). The roles of banks in financial systems. *Oxford Review of Economic Policy, 35*(4), 627–653. https://doi.org/10.1093/oxrep/grz024

Allen, F., & Santomero, A. M. (2001). What do financial intermediaries do? *Journal of Banking & Finance, 25*(2), 271–294. https://doi.org/10.1016/S0378-4266(99)00129-6

Angelini, P., Neri, S., & Panetta, F. (2014). The interaction between capital requirements and monetary policy. *Journal of Money, Credit and Banking, 46*(6), 1073–1112. https://doi.org/10.1111/jmcb.12134

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Journal of Econometrics, 58*(1–2), 277–297. https://doi.org/10.1016/0304-4076(91)90081-B

Basel Committee on Banking Supervision. (2019). *Basel III: Finalising post-crisis reforms*. Bank for International Settlements. https://www.bis.org/bcbs/publ/d424.htm

Basel Committee on Banking Supervision. (2023). *Global liquidity: Structural changes and implications for financial stability*. Bank for International Settlements. https://www.bis.org/bcbs/publ/d545.htm

Beck, T., Maimbo, S. M., Faye, I., & Triki, T. (2011). Financing Africa: Through the crisis and beyond. *World Bank Publications*. https://doi.org/10.1596/978-0-8213-8795-0

Berger, A. N., & Bouwman, C. H. S. (2009). Bank capital, survival, and performance around financial crises. *Journal of Financial Economics, 92*(3), 377–401. https://doi.org/10.1016/j.jfineco.2008.08.009

Berger, A. N., & Bouwman, C. H. S. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics, 109*(1), 146–176. https://doi.org/10.1016/j.jfineco.2013.02.008

Berger, A. N., & Di Patti, E. B. (2006). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking & Finance, 30*(4), 1065–1102. https://doi.org/10.1016/j.jbankfin.2005.05.015

Calomiris, C. W., & Gorton, G. (1991). The origins of banking panics: Models, facts, and bank regulation. In R. G. Hubbard (Ed.), *Financial markets and financial crises* (pp. 109–174). University of Chicago Press.

CBN. (2024). *Revised minimum capital requirements for banks*. Central Bank of Nigeria Circular, March 28. https://www.cbn.gov.ng

Chiaramonte, L., Croci, E., & Poli, F. (2021). Capital structure dynamics in banking: New evidence from European banks. *Journal of Banking & Finance, 133,* 106270. https://doi.org/10.1016/j.jbankfin.2021.106270

Choi, S., Kim, H., & Park, J. (2022). Asset revaluation and financial performance: Evidence from Asian banks. *Emerging Markets Finance and Trade, 58*(12), 3452–3471. https://doi.org/10.1080/1540496X.2021.2005552

Demirgüç-Kunt, A., & Huizinga, H. (2010). Bank activity and funding strategies: The impact on risk and returns. *Journal of Financial Economics, 98*(3), 626–650. https://doi.org/10.1016/j.jfineco.2010.06.004

Gropp, R., & Heider, F. (2010). The determinants of bank capital structure. *Review of Finance, 14*(4), 587–622. https://doi.org/10.1093/rof/rfp030

Inside Business. (2024, June 10). Implications of the proposed recapitalisation of Nigerian banks. *Inside Business*. https://insidebusiness.ng/215007/implications-of-the-proposed-recapitalisation-of-nigerian-banks/

Johnston, D., & Chen, H. (2021). Debt financing and bank performance: Evidence from emerging markets. *Journal of International Financial Markets, Institutions & Money, 74,* 101404. https://doi.org/10.1016/j.intfin.2021.101404

Kashyap, A. K., Rajan, R. G., & Stein, J. C. (2008). Rethinking capital regulation. In *Maintaining stability in a changing financial system* (pp. 431–471). Federal Reserve Bank of Kansas City.

Laeven, L., & Valencia, F. (2018). Systemic banking crises revisited. *IMF Working Papers*, WP/18/206. https://doi.org/10.5089/9781484378344.001

Lee, C. C., & Hsieh, M. F. (2013). The impact of bank capital on profitability and risk in Asian banking. *Journal of International Money and Finance, 32*, 251–281. https://doi.org/10.1016/j.jimonfin.2012.04.013

Martínez-Miera, D., & Repullo, R. (2010). Does competition reduce the risk of bank failure? *Review of Financial Studies, 23*(10), 3638–3664. https://doi.org/10.1093/rfs/hhq057

Milne, A., & Whalley, A. E. (2001). *Bank capital regulation and incentives for risk-taking* (Working Paper). Cass Business School.

Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives, 15*(2), 81–102. https://doi.org/10.1257/jep.15.2.81

Nwosu, C. (2018). Consolidation reforms and the performance of Nigerian banks: A post-recapitalisation analysis. *Nigerian Journal of Economic and Social Studies, 60*(2), 223–242.

Okafor, C., & Wilson, J. O. S. (2020). Capital regulation and bank performance in emerging markets. *International Review of Financial Analysis, 71*, 101531. https://doi.org/10.1016/j.irfa.2020.101531

Oteh, A. (2020). Banking reforms in Nigeria: Policy lessons and implications. *Central Bank of Nigeria Economic Review, 58*(1), 1–22.

Purnanandam, A. (2007). Interest rate derivatives at commercial banks: An empirical investigation. *Journal of Monetary Economics, 54*(6), 1769–1808. https://doi.org/10.1016/j.jmoneco.2006.08.006

Rampini, A. A., Viswanathan, S., & Vuillemey, G. (2020). Risk management in financial institutions. *The Journal of Finance, 75*(2), 591–637. https://doi.org/10.1111/jofi.12836

Repullo, R., & Suarez, J. (2013). The procyclical effects of bank capital regulation. *Review of Financial Studies, 26*(2), 452–490. https://doi.org/10.1093/rfs/hhs118

Reuters. (2024, March 28). Nigeria's central bank sets minimum capital base for banks. *Reuters*. https://www.reuters.com/world/africa/nigerias-central-bank-sets-minimum-capital-base-banks-2024-03-28/

Sanusi, L. S. (2012). Banking reform and its impact on the Nigerian economy. *CBN Journal of Applied Statistics, 2*(2), 115–122.

Uche, C. U. (2018). Banking sector reforms and economic development in Nigeria. *African Development Review, 30*(1), 1–14. https://doi.org/10.1111/1467-8268.12300

Ugoani, J. N. (2021). Recapitalisation and financial performance of Nigerian banks: A critical review. *International Journal of Economics and Business Research, 21*(4), 515–533. https://doi.org/10.1504/IJEBR.2021.10037642