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# The Role of Profitability and Liquidity Risk in Mediating the Effect of Credit Risk on Stability in Regional Development Banks in Indonesia

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## Abstract

This study aims to analyze the effect of Credit Risk on Bank Stability by considering the mediating role of Profitability and Liquidity Risk in Regional Development Banks (BPD) in Indonesia. The study uses a quantitative approach with a causal-comparative design and utilizes panel data that combines cross-section and time-series data on 27 BPDs registered with the Financial Services Authority during the observation period. The analysis was conducted using Partial Least Squares-based Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS software to test the direct and indirect relationships between variables. The results show that Credit Risk has a negative and significant effect on Bank Stability and Profitability, and a significant positive effect on Liquidity Risk. Furthermore, Profitability is proven to have a significant positive effect on Bank Stability, while Liquidity Risk has a significant negative effect on Bank Stability. The main findings of this study indicate that Profitability and Liquidity Risk act as partial mediators in the relationship between Credit Risk and Bank Stability, indicating that the impact of Credit Risk on Stability occurs not only directly, but also through pressure on bank profit performance and liquidity. Specifically in the context of Regional Development Banks, a funding structure dependent on third-party funds and a concentrated regional credit portfolio strengthen the transmission channel of Credit Risk through Liquidity Risk. This research provides theoretical contributions by enriching Financial Stability Theory and Financial Intermediation Theory, as well as practical implications for BPD management and regulators in designing integrated credit and liquidity risk management policies to maintain sustainable banking stability.

**Keywords:** *Credit Risk; Profitability; Liquidity Risk; Bank Stability; Regional Development Bank.*

## Introduction

Banking stability is the primary foundation for the sustainability of the national financial system, as banks act as intermediary institutions that collect funds, distribute credit, and support real economic activity. Disruptions in the banking sector can trigger systemic risk, resulting in credit contraction, slowing economic growth, and a loss of public confidence, even leading to a prolonged crisis and recession (Allen & Wood, 2006). The experiences of the 1997–1998 Indonesian monetary crisis, the 2008 global financial crisis, and the economic pressures during the Covid-19 pandemic confirm that weak risk management, particularly credit risk, can destabilize banking systems. Therefore, Bank Indonesia and the Financial Services Authority (OJK) prioritize banking stability in macroprudential policy through risk-based supervision (OJK, 2023). Banking stability is understood as the banking system's ability to effectively perform its intermediary function, maintain public trust, and withstand internal and external shocks (Cihak et al., 2012). This is reflected in the dimensions of solvency, liquidity, asset quality, and profitability, and is measured through indicators such as the Z-Score, CAR, NPL, and liquidity ratios (Laeven & Levine, 2009; Borio et al., 2021).

Theoretically, Financial Intermediation Theory asserts that bank stability determines the sustainability of the flow of funds between surplus and deficit parties (Diamond, 1984), while Financial Stability Theory emphasizes the importance of risk management, capital adequacy, and liquidity (Schinasi, 2004). Credit risk is a major threat to stability because information asymmetries between banks and borrowers can trigger adverse selection and moral hazard (Akerlof, 1970). From a risk-return trade-off perspective, high-risk credit does promise higher returns, but increases the potential for losses that can erode capital (Markowitz, 1952). Therefore, banks often restrict credit to control risk, even though it has the potential to reduce interest income (Stiglitz & Weiss, 1981). Uncontrolled credit risk is

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reflected in increasing non-performing loans (NPLs) and declining asset quality, which depress net interest income, increase impairment losses (CKPN), and weaken profitability and capital, thus threatening long-term solvency. Within the framework of the Financial Instability Hypothesis, increased exposure to risky credit can push banks from a hedge finance position to speculative or even Ponzi finance (Minsky, 1992), ultimately reducing intermediation capacity and increasing the risk of bank runs (Athanasoglou et al., 2008; Berger & Bouwman, 2013).

Empirically, the effect of credit risk on stability has yielded mixed results. Several studies have found a significant negative impact of credit risk on stability, such as in banking in Vietnam (Nguyen Quoc Anh et al., 2021), Pakistan (Zhengmeng Chai et al., 2022), Nigeria (Ayinuola, 2023), Jordan (Sawsan Ismail et al., 2023), and Indonesia (Ibnu Zakaria Dwinanda, 2021). However, conflicting findings have also emerged, with credit risk having a significant positive effect on stability (Sang Tang My et al., 2022) or an insignificant effect, depending on the stability proxy used (Zaghdoudi, 2019; Hafidz Nur Izza et al., 2024). To mitigate the impact of credit risk, profitability is seen as an important mechanism because profitable banks have a greater ability to absorb losses and maintain operations. The Buffer Theory of Capital explains that profits increase core capital as a buffer against unexpected losses (Berger et al., 1995), while the profitability-stability hypothesis emphasizes that profitability enables investment in risk management systems and quality human resources (Schaek & Cihak, 2014). Several studies support the positive role of profitability on stability (Yong Tan et al., 2016; Iqbal Musthofa et al., 2021; Lissa Febriani et al., 2025), although negative findings have also been reported (Khoirunisa et al., 2023; Annisa Nur Hasanah et al., 2024).

However, profitability is dynamic and can be eroded by increased credit risk. Rising NPLs reduce net interest income, increase reserve requirements, and depress ROA, in line with the bad management hypothesis, which links weak management to increased non-performing loans and declining profits (Berger & DeYoung, 1997). Empirical evidence shows that credit risk negatively impacts profitability in Indonesia, Islamic banking, Kenya, and Bangladesh, although there are positive and insignificant findings in certain contexts (Rana-Al-Mosharrafa et al., 2021; Lora Fitria Sari et al., 2022; Helly Aroza Siregar, 2024; Nyangaresi et al., 2024; Julia Hartaty Damanik, 2025). In addition to profitability, liquidity risk also plays a crucial role in maintaining stability. A mismatch between asset and liability maturities can lead to difficulties in meeting short-term obligations. Liquidity Preference Theory emphasizes the importance of liquidity reserves as a hedge against uncertainty (Keynes, 1936), while the Diamond-Dybvig Model suggests that a crisis of confidence can trigger a bank run even in fundamentally sound banks (Diamond & Dybvig, 1983). Decreased liquidity is often an early indicator of instability before solvency issues emerge (Laeven & Levine, 2009), and empirically, liquidity risk has been shown to negatively impact stability in various countries, including Indonesia (Kaharuddin et al., 2022; Faaza Fakhrunnas, 2023; Saber Awed, 2024).

Credit risk and liquidity risk are closely intertwined as transmission channels leading to instability. Increasing non-performing loans reduce cash inflows, tighten liquidity, and force banks to seek expensive financing or sell assets through fire sales, as explained in the liquidity strain hypothesis (Vodova, 2011) and the Diamond-Dybvig Model (1983). Empirical evidence demonstrates a strong link between these two risks (Rouyu Cai et al., 2017; Lasty Agustuty et al., 2020; Jihen Bouslimi et al., 2024; Zariatun Nasyirah et al., 2025). In the context of Regional Development Banks (BPD), dependence on regional government Third Party Funds (TPF), which fluctuate with the regional budget cycle, increases liquidity vulnerability, particularly when credit quality deteriorates. Data from 2022–2024 show an increasing trend in NPLs, CKPN (Current Impairment Allowance), and LDR (Low Debt to Asset Debt Depreciation), a decrease in LATA (Low Debt to Asset Depreciation), and a decline in profit, ROA, and NIM, indicating declining stability. Referring to inconsistent empirical findings and existing research gaps, this study builds on the model of Zaidan Rahadian et al. (2025) by adding liquidity risk as a mediating variable, as suggested in future research. This study aims to comprehensively examine the role of profitability and liquidity risk in mediating the influence of credit risk on the stability of Regional Development Banks in Indonesia, with the hope of providing theoretical contributions and practical implications for risk management and regulatory policy.

## Literature Review

### Credit Risk

Credit risk is one of the main risks faced by banks in carrying out their intermediation function, arising from the possibility of debtors or counterparties failing to meet their obligations to pay principal, interest, or other obligations (Hull, 2018; Bank Indonesia, 2017). This risk is rooted in the information

imbalance between banks and debtors as explained in Asymmetric Information Theory, where adverse selection and moral hazard are the main sources of payment failure (Stiglitz & Weiss, 1981). Increased credit risk, which is generally reflected in high Non-Performing Loans (NPL) ratios, not only suppresses profitability through increased provisioning costs and reduced interest income, but also has the potential to disrupt the stability of the financial system as a whole, especially when credit exposure is concentrated in certain sectors or regions. From a risk-return trade-off perspective, credit risk represents a strategic choice between growth and stability, where failure to manage risk effectively can erode a bank's long-term value (Mishkin, 2012). Credit risk is characteristically asymmetric, highly dependent on the performance of third parties (debtors), non-linear and dynamic, and tends to be pro-cyclical following economic fluctuations (Laeven & Valencia, 2013). This risk is also susceptible to portfolio concentration, so that shocks in certain sectors or regions can trigger collective losses, and is closely linked to other risks such as liquidity risk and market risk. Furthermore, credit risk generally manifests over the medium to long term, so its accumulation is often not immediately apparent in the early stages but can develop into a crisis if not managed prudently. Therefore, credit risk is not merely an operational issue, but a strategic variable that determines the sustainability, performance, and resilience of a bank, thus requiring an integrated risk management approach within an enterprise risk management framework.

**Bank Profitability Concept**

Profitability is a key indicator of a bank's financial performance, reflecting the institution's ability to generate profits from operational, investment, and financial intermediation activities. It also reflects managerial efficiency, the quality of risk management, and its ability to adapt to macroeconomic dynamics. Conceptually, profitability indicates the extent to which revenues exceed costs (Gitman & Zutter, 2012), as well as the effectiveness of management in allocating financial resources to achieve optimal results from intermediation activities (Rose & Hudgins, 2013). Research by Athanasoglou et al. (2008) and Dietrich & Wanzenried (2021) confirms that bank profitability is influenced by industry structure, bank size, and the ability to optimize assets and liabilities, ultimately impacting long-term stability and intermediation capacity. The IMF (2023) also emphasizes that banks that are able to maintain profitability in challenging economic conditions have greater room to build capital buffers, increase loss reserves, and maintain depositor and investor confidence, making profitability a crucial pillar of financial system resilience. Strategically, profitability serves not only as a measure of short-term performance but also as a key instrument in maintaining the operational sustainability and competitiveness of banks. Profitability reflects the soundness and effectiveness of management in managing revenues and costs, serves as a primary source of internal capital formation through retained earnings, which strengthens the capital adequacy ratio (Berger & Bouwman, 2013), and acts as a shock absorber in addressing credit, market, operational, and liquidity risks. Furthermore, strong profitability serves as a positive signal to the market and investors, lowering the cost of funds and increasing access to funding and interbank trust (Dimitropoulos et al., 2010; Dietrich & Wanzenried, 2014). Furthermore, sustainable profits provide internal financing for business expansion, product innovation, and digital transformation, enabling banks to implement growth strategies and increase competitiveness in an increasingly digitalized financial industry (Berger & Mester, 1997; Chen et al., 2016). Thus, profitability is a strategic prerequisite for banks to maintain stability, support innovation, and maintain long-term sustainability in an increasingly complex competitive environment.

**Liquidity Risk**

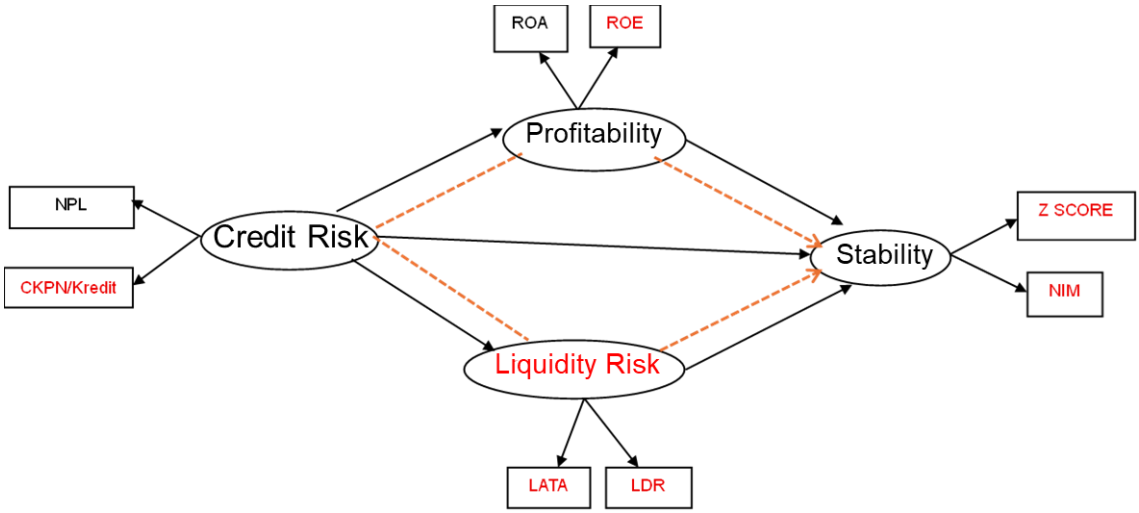
Liquidity risk is one of the main banking risks that arises when a bank is unable to meet its short-term obligations in a timely manner without incurring significant losses, either due to limited cash and liquid assets or limited access to funding (Basel Committee on Banking Supervision, 2008; OJK, 2016). In its maturity transformation function, banks collect short-term funds and channel them into long-term credit, so that the mismatch in asset and liability maturity makes banks vulnerable to liquidity pressures and potential bank runs when depositor confidence declines (Diamond & Dybvig, 1983). Liquidity risk is highly dynamic and systemic, because pressure on one bank can spread to other institutions through a contagion mechanism, as seen in the 2007–2009 global financial crisis. Therefore, liquidity risk is not only a daily operational threat, but also a key determinant of the going concern of banks, which requires proactive management through contingency funding planning, maintaining quality liquid assets, and monitoring dependence on short-term funding. Liquidity risk is characterized by rapid and non-linear development, is highly sensitive to market perception and confidence (confidence-sensitive risk), and is strongly linked to credit risk and market risk, which can reinforce each other through risk amplification and liquidity spirals (Brunnermeier & Pedersen, 2009; Adrian & Shin, 2010). This risk is

multidimensional, encompassing both funding and market liquidity risks, which interact with each other. It is difficult to measure directly due to its latent and endogenous nature, and has systemic impacts with the potential for widespread domino effects (Allen & Gale, 2004; Drehmann & Nikolaou, 2013). Given these characteristics, liquidity risk management must be carried out preventively and integrated within the enterprise risk management framework, through the provision of liquidity buffers, diversification of funding sources, stress testing based on extreme but plausible scenarios, and an early warning system, so that banks can maintain financial stability and resilience amidst rapidly changing market dynamics.

**Stability Concept**

Bank stability is a fundamental condition that reflects the ability of banking institutions to carry out their intermediation, liquidity provision, and risk transformation functions efficiently, consistently, and sustainably, while maintaining public trust and the smooth circulation of funds in the economy. Stability is not only understood as the absence of crises, but also as the ability of banks to remain solvent and liquid in the face of internal and external pressures and to adapt to changing economic conditions, financial innovation, and regulations (Čihák & Schaeck, 2010; Schinasi, 2004). The macroprudential perspective emphasizes that bank stability is also collective and systemic, as the accumulation of pro-cyclical risks, interbank interconnections, and channels of trust and liquidity can trigger a domino effect that threatens the financial system as a whole (Borio & Drehmann, 2009). Therefore, bank stability is a dynamic condition that reflects both the internal resilience of banks and the banking system's ability to prevent the spread of crises. Bank stability is shaped by several interrelated key components, namely capitalization, liquidity, asset quality, profitability, governance and risk management, and systemic resilience. Capital serves as a primary buffer to absorb losses and maintain solvency. Liquidity ensures the ability to meet short-term obligations and prevent bank runs. Asset quality determines earnings sustainability and the risk of impairment. Profitability acts as a dynamic buffer that supports internal capital formation and resilience to shocks, while effective governance and risk management prevent excessive risk-taking and the accumulation of latent risks. All of these components lead to systemic resilience, namely the banking system's collective ability to absorb shocks and maintain its intermediation function without causing widespread dysfunction. Therefore, bank stability is the result of a multidimensional interaction between financial and non-financial factors that must be managed in an integrated manner to maintain the long-term sustainability and resilience of the financial system.

**Figure 1 Conceptual Framework**




**Research Hypothesis**

**H1.** Credit Risk has a negative and significant effect on Bank Stability

**H2.** Credit Risk has a negative and significant effect on Bank Profitability

**H3.** Credit Risk has a positive and significant effect on Bank Liquidity Risk

**H4.** Profitability has a positive and significant effect on Bank Stability

**H5.** Liquidity Risk has a negative and significant effect on Bank Stability

**H6.** Profitability plays a mediating role in the influence of credit risk on Bank stability.

**H7.** Liquidity Risk plays a mediating role in the influence of Credit Risk on Bank Stability.

## Research Methods

This study uses a quantitative approach with a causal-comparative design that aims to analyze the causal relationship between Credit Risk as an independent variable, Profitability and Liquidity Risk as mediating variables, and Stability as a dependent variable. The analysis was conducted using panel data that combines cross-section and time-series data, with a population of all Regional Development Banks (BPD) in Indonesia registered with the Financial Services Authority (OJK) totaling 27 banks. Sample selection was carried out purposively to ensure that the banks analyzed met the criteria for completeness of data and were relevant to the research objectives, including BPDs representing more than one province due to regional expansion, so that the research model could be tested validly and reliably. Data analysis was carried out in stages using the Partial Least Squares-based Structural Equation Modeling (PLS-SEM) approach with the assistance of SmartPLS software. This method was chosen because of its ability to estimate complex models, especially mediation models with several latent variables and indicators, its flexibility to a relatively limited sample size, and its lack of strict normal distribution assumptions. With these advantages, PLS-SEM is considered most appropriate for testing structural relationships and mediation mechanisms in the context of regional banking which has diverse data characteristics and risk structures.

Credit Risk (X): Credit risk is the risk resulting from the failure of another party (counterparty) to fulfill its obligations to the bank, which can result in losses for the bank, either directly (financial loss) or indirectly (reputational impairment, liquidity disruption, credit rating downgrade).

Profitability (Z1): Profitability is the bank's ability to generate profits from its assets or equity. Profitability reflects its financial performance and ability to create economic value.

Liquidity Risk (Z2): Liquidity risk is the risk resulting from the bank's inability to meet maturing obligations from cash flow funding sources and/or high-quality liquid assets without disrupting the bank's overall activities and financial condition.

Stability (Y): Bank stability is a fundamental condition that reflects a banking institution's ability to carry out its core functions, namely fund intermediation, liquidity provision, and risk transformation, efficiently, consistently, and sustainably. These three functions are not only operational but also systemic, as they significantly determine the smooth circulation of capital in the economy.

## Research Result

### Structural Model Evaluation

Multicollinearity testing through Inner VIF in SEM-PLS is very important to ensure that the model built can produce valid and well-interpretable parameter estimates.

**Table 1 Inner VIF Table**

| Hypothesis | VIF |
|---|---|
| Credit Risk -> Profitability | 1.000 |
| Credit Risk -> Liquidity Risk | 1.000 |
| Credit Risk -> Stability | 3.241 |
| Profitability -> Stability | 2.134 |
| Liquidity Risk -> Stability | 2.094 |

Source: Processed Primary Data, 2025

Based on the inner VIF table or multicollinearity examination between variables, it is known that all VIF values < 5 indicate low or negligible multicollinearity symptoms.

### R-square

R-square measures the extent to which the variance of an endogenous variable is explained by the exogenous/endogenous variables. R-square is typically reported for each endogenous variable in a model. This helps evaluate the overall explanatory quality of the model and informs researchers about which variables require further model development.

**Table 2 R-square Calculation**

| Variables | R-square | R-square adjusted |
|---|---|---|
| Profitability | 0.531 | 0.530 |
| Liquidity Risk | 0.522 | 0.521 |
| Stability | 0.674 | 0.672 |

Source: Processed Primary Data, 2025

Based on Table 2, the R-square value for Profitability of 0.531 indicates that Credit Risk can explain 53.1% of the variation in Profitability, while the remaining 46.9% is influenced by other factors outside the model. The R-square value for Liquidity Risk of 0.522 indicates that 52.2% of the variation in bank liquidity pressure can be explained by Credit Risk. Furthermore, the R-square value for Stability of 0.674 indicates that Credit Risk, Profitability, and Liquidity Risk together can explain 67.4% of the variation in Bank Stability, meaning that almost two-thirds of the bank stability conditions in this study can be explained by the constructed structural model. Referring to Hair et al. (2021), this R-square value is in the moderate category, indicating that the model has quite strong explanatory power and is acceptable considering the complexity of the banking stability phenomenon and the presence of other external factors not included in the model.

**Hypothesis Testing**

Hypothesis testing is done by testing the relationship between latent constructs formulated in the model. In this study, a mediation test path coefficient test will be conducted to prove the hypothesis that has been formulated in the research model. The first test is the path coefficient test on the main parameters to determine the direction and strength of the relationship as well as t-statistics and p-values to assess the statistical significance of the relationship. The relationship is considered significant if the t-statistic > 1.96 and p-value ≤ 0.05.

**Table 3 Hypothesis Testing**

| Direct influence between research variables | | Path Coefficient | P Value | Results |
|---|---|---|---|---|
| H1 | Credit risk -> Stability | -0.262 | 0.000 | Accepted |
| H2 | Credit risk -> Probability | -0.729 | 0.000 | Accepted |
| H3 | Credit risk -> Liquidity risk | 0.723 | 0.000 | Accepted |
| H4 | Probability -> Stability | 0.296 | 0.000 | Accepted |
| H5 | Liquidity risk -> Stability | 0.-380 | 0.008 | Accepted |
| H6 | Credit risk -> Probability -> Stability | -0.216 | 0.000 | Accepted |
| H7 | Credit risk -> Liquidity risk -> Stability | -0.275 | 0.000 | Accepted |

Source: Processed Primary Data, 2025

**Discussion**

**The Impact of Credit Risk on Stability**

The results of the study indicate that Credit Risk has a negative and significant impact on Bank Stability, meaning that increased credit risk directly reduces the level of bank stability, thus placing credit risk as a fundamental factor determining stability, not merely an operational consequence of lending activities. Increased credit risk, reflected in rising Non-Performing Loans (NPLs) and the large formation of Allowance for Impairment Losses (CKPN), suppresses interest income, reduces asset quality, and increases the provision burden, which cumulatively weakens financial performance and reduces the bank's ability to absorb losses. This condition causes income instability, increased performance volatility, and eroded capital resilience, thereby reducing bank stability as a sustainable ability to withstand internal and external shocks. This finding is reinforced by the condition of Regional Development Banks with an average NPL of 2.47% and a coverage ratio of 2.46%, indicating that although non-performing loans are still in the healthy category, the ability to absorb potential losses is relatively limited. In terms of construct measurement, Credit Risk is strongly represented by NPL and CKPN with outer loading values of 0.912 and 0.917, respectively, indicating that credit risk pressures predominantly originate from expected risk rather than realized risk. These results are consistent with banking risk management theory and Financial Stability Theory (Schinasi, 2004), which emphasizes that failure to control credit risk will increase pressure on income and capital, thereby reducing bank

stability. They are also in line with the empirical findings of Nguyen Quoc Anh et al. (2021) and Sawsan Ismail et al. (2023). Thus, the stability of Regional Development Banks is highly sensitive to changes in credit quality. Therefore, strengthening credit risk management through improving the quality of credit distribution, an effective monitoring system, and an adequate reserve policy are key prerequisites for maintaining the stability and sustainability of bank intermediation functions.

**The Impact of Credit Risk on Profitability**

The research results confirm that Credit Risk has a negative and significant effect on Bank Profitability, meaning that increasing credit risk systematically reduces banks' ability to generate profits, thus placing asset quality as the primary determinant of the financial performance of Regional Development Banks during the 2020–2024 period. The increase in credit risk, reflected in the deteriorating credit quality, causes non-performing loans to no longer generate interest income, while at the same time banks must increase the formation of Allowance for Impairment Losses (CKPN), thus creating double pressure on profits through decreased interest income and increased provision expenses, while simultaneously limiting the scope for future credit expansion. This condition is reinforced by descriptive data showing variations in profitability between Regional Development Banks (BPDs), where banks with higher credit risk tend to have lower ROA and ROE, as well as by the characteristics of BPDs' relatively highly leveraged capital structure, so that the decline in profits due to credit risk has a greater impact on ROE than ROA. In terms of construct measurement, profitability is strongly represented by ROA and ROE with outer loading values of 0.962 and 0.964, respectively, indicating that credit risk pressure is more dominant in eroding capital-based profitability. This finding aligns with the risk-return trade-off theory, which asserts that ineffectively managed risk does not generate higher returns but rather lowers profitability (Reilly & Brown, 2012). It is also supported by the empirical findings of Lora Fitria et al. (2022), Helly Aroza Siregar (2024), and Richard Bisera Nyangaresi et al. (2024). Therefore, increasing BPD profitability is inextricably linked to strengthening credit risk management through improving the quality of credit distribution, an effective monitoring system, and adequate reserve policies. Without robust credit risk management, profitability, as reflected in ROA and ROE, will become increasingly vulnerable and difficult to sustain.

**The Effect of Credit Risk on Liquidity Risk**

The research results confirm that Credit Risk has a positive and significant effect on Liquidity Risk, meaning that a systematic increase in credit risk will increase bank liquidity pressure, thus placing credit quality as the main source of liquidity disruption in intermediation activities. The increase in credit risk reflected in the increase in Non-Performing Loans (NPLs) causes a decrease in cash inflows from principal and interest payments, while at the same time banks must increase the formation of Allowance for Impairment Losses (CKPN) which absorbs liquid internal funds, so that liquidity pressure occurs simultaneously through reduced cash flow and narrowing liquid reserves. This condition is reinforced by the characteristics of Regional Development Banks with an average Loan to Deposit Ratio (LDR) of 87.37% and Liquid Assets to Total Assets (LATA) of 17.03%, which indicates that although aggregate liquidity is still relatively healthy, deteriorating credit quality has the potential to increase the portion of illiquid assets and increase short-term funding needs. In terms of construct measurement, Liquidity Risk is strongly represented by the LDR and LATA with outer loading values of 0.963 and 0.957, respectively. The dominance of the LDR indicates that BPD liquidity pressures are more sensitive to imbalances between credit distribution and third-party fund collection. This finding aligns with the views of Brunnermeier & Pedersen (2009) and the Diamond–Dybvig Model (1983), which emphasize that increased credit risk reduces the flexibility of converting assets to cash and increases vulnerability to liquidity pressures. This is also supported by empirical evidence from Ruoyu Cai et al. (2017) and Magwedere et al. (2022). Therefore, the liquidity resilience of banks, particularly BPDs, is highly dependent on the effectiveness of Credit Risk management. Without prudent credit control and adequate reserve policies, increased credit risk will rapidly increase liquidity pressures and threaten the sustainability of bank operations.

**The Effect of Profitability on Stability**

The research results confirm that Profitability has a positive and significant effect on Bank Stability, indicating that a bank's ability to generate profits is a key factor in strengthening medium- and long-term financial resilience. Data from Regional Development Banks (BPD) with an average ROA of 2.45%, ROE of 15.93%, Z-Score of 4.61, and NIM of 6.46% indicates that more profitable banks have a greater loss-absorbing capacity, lower income volatility, and better maintained operational sustainability. In terms of measurement, Profitability represented by ROA and ROE (outer loadings of 0.962 and 0.964)

and Bank Stability formed by Z-Score and NIM (outer loadings of 0.954 and 0.950) show excellent convergent validity, so the positive relationship found reflects a strong structural linkage. Mechanistically, high profits strengthen capital through the accumulation of retained earnings, increase the ability to absorb credit and liquidity risks, reflect the efficiency of asset and capital management, and strengthen the trust of depositors and stakeholders. In the context of Regional Development Banks (BPD), although profitability plays a key role in supporting stability, its effectiveness will be optimal if supported by prudent credit and liquidity risk management, given BPD's dependence on interest income and third-party funds. This finding aligns with Financial Stability Theory (Schinasi, 2004) and is supported by empirical evidence from Lissa Febriana et al. (2025) and M. Yusril Hafidz Nur Izza et al. (2024), which confirms that sustainable profitability serves as an important internal buffer in maintaining the stability and sustainability of Regional Development Bank operations.

**The Impact of Liquidity Risk on Stability**

The research results confirm that Liquidity Risk has a negative and significant impact on Bank Stability, indicating that the greater the liquidity pressure faced by a bank, the lower the level of financial stability that can be maintained, so that liquidity becomes a crucial foundation for the sustainability of banking stability. Liquidity risk reflects the limitations of banks in meeting short-term obligations without causing operational disruptions or significant losses, where low liquid reserves, high disbursement of funds to credit, and limited cash flow flexibility will increase the bank's vulnerability to shocks. This condition is reflected in Regional Development Banks with an average Loan to Deposit Ratio (LDR) of 87.37% and Liquid Assets to Total Assets (LATA) of 17.03%, which although relatively healthy in aggregate, indicates liquidity pressure in BPDs with high LDR and low liquid assets, so that liquidity space becomes narrow and the ability to maintain operational continuity decreases. In terms of measurement, Liquidity Risk represented by LDR and LATA (outer loading 0.963 and 0.957) and Bank Stability formed by Z-Score and Net Interest Margin (NIM) (outer loading 0.954 and 0.950) have excellent convergent validity, and the dominance of LDR indicates that the imbalance between third-party fund collection and credit distribution is the main source of BPD liquidity pressure. Mechanistically, a high LDR and low LATA limit the bank's ability to meet sudden withdrawals and operational obligations, increase income volatility, lower the Z-Score, and ultimately weaken stability. This finding is particularly relevant for BPDs with high dependence on third-party funds, strong links to regional fiscal dynamics, credit concentration, and limited access to alternative funding, making them more sensitive to liquidity pressures than large banks. Theoretically, this condition aligns with the Diamond–Dybvig Model, which explains that the intermediation structure between short-term deposits and long-term credit makes banks vulnerable to bank runs when liquidity reserves are low and public confidence declines, making liquidity risk a major source of systemic instability. The results of this study are also consistent with previous empirical findings showing a negative, non-linear, and asymmetric relationship between liquidity risk and financial stability (Faaza Fakhrunnas, 2023) and a significant negative effect of liquidity risk on bank stability (Dessi Ratna Sari et al., 2025). Therefore, maintaining bank stability, particularly for Regional Development Banks, requires prudent, anticipatory liquidity management integrated with credit risk management and profitability strategies. Without adequate liquidity, bank stability will be increasingly vulnerable to dynamic economic pressures and shocks.

**The role of profitability in mediating the influence of credit risk on stability.**

The results of the study indicate that Credit Risk affects Bank Stability not only directly, but also indirectly through Profitability, confirming the existence of a partial mediation mechanism where credit risk first depresses profit performance before ultimately impacting financial stability. Increased Credit Risk reflected in the deteriorating quality of the credit portfolio causes unrealized interest income and increased loss provision requirements, thereby eroding bank profits and limiting the capacity to build internal reserves, strengthen capital, and provide financial buffers. This decline in Profitability then increases the bank's vulnerability to shocks, but the partial mediation nature indicates that Credit Risk still has a direct impact on Stability that cannot be completely neutralized by profits. This condition is reflected in Regional Development Banks with an average ROA of 2.45% and ROE of 15.93% which are still relatively good, but banks with higher Credit Risk—indicated by an average NPL of 2.47% and a coverage ratio of 2.46%—tend to have weaker Profitability and Stability indicators. In the context of regional banks (BPDs) that are highly dependent on interest income and have limited diversification, profitability acts as a crucial internal buffer, where BPDs with strong profits still have room to maintain stability through retained earnings and capital strengthening, while BPDs with weak profitability will experience a decline in stability more quickly when credit quality deteriorates. This finding is in line with the view that profitability functions as an internal buffer in absorbing the negative impact of increased

credit risk (Lee & Hsieh, 2013) and the Financial Stability Theory which emphasizes that declining profits weaken a bank's ability to absorb shocks (Schinasi, 2004), and is clarified by the Risk Return Trade-Off Theory that ineffectively managed credit risk actually reduces returns and increases vulnerability (Reilly & Brown, 2012). The consistency of this finding is also supported by Sang Tang My et al. (2022) who found that the mediation relationship between profitability is partial. Thus, maintaining Bank Stability, especially BPD, requires an integrated approach in which Credit Risk control remains a top priority, while strengthening Profitability serves as an internal mechanism capable of reducing, although not completely eliminating, the negative impact of Credit Risk on long-term financial Stability.

**The Role of Liquidity Risk in Mediating the Effect of Credit Risk on Stability**

The results of the study indicate that Credit Risk affects Bank Stability through two interrelated channels, namely directly and indirectly through Liquidity Risk, thus confirming that the Credit Risk-Stability relationship operates through a complex transmission mechanism with Liquidity Risk as a partial mediator. Operationally, the increase in Credit Risk reflected in the increase in NPL and the addition of CKPN directly reduces cash inflows from principal and interest payments, absorbs liquid internal funds, and narrows the bank's capacity to meet short-term obligations, thus triggering liquidity pressures; in this condition, banks have the potential to conduct asset fire sales or seek high-cost external funding, which erodes profitability, weakens capital, increases performance volatility, and ultimately lowers the Z-Score and bank stability. The role of Liquidity Risk as a transmission channel explains that disruptions in cash flow and funding structure will immediately be reflected in the bank's ability to maintain its intermediation function, so that the negative impact of Credit Risk is magnified when liquidity pressures increase. This finding is consistent with data from Regional Development Banks (BPD) which show an average LDR of 87.37% and LATA of 17.03%; Despite their relatively healthy aggregates, regional banks with higher credit risk tend to have higher LDRs and tighter liquidity space, so that credit stress quickly translates into liquidity pressure that directly impacts stability. The relevance of these findings is even stronger in the context of regional banks that are highly dependent on third-party funding and have credit concentration in the regional economic sector, so that limited access to alternative funding makes liquidity pressure emerge more quickly when credit quality deteriorates. The practical implication is that controlling credit risk alone is insufficient because most of its impact is manifested through liquidity; banks need to integrate credit risk and liquidity risk management within a coherent CRMS/ERM framework, including integrated credit-liquidity stress testing. Theoretically, this finding aligns with the concept of liquidity spirals, which explains how liquidity pressures stemming from credit risk exacerbate balance sheet deterioration and asset prices (Brunnermeier & Pedersen, 2009), as well as Financial Intermediation Theory, which emphasizes the role of maturity mismatch and default in increasing liquidity risk (Freixas & Rochet, 2008), and Financial Stability Theory, which emphasizes that stability depends on the ability to absorb risk and maintain the intermediation function (Schinasi, 2004). Empirical support is also shown by the finding that liquidity plays a partial mediator in the relationship between risk and performance (Ni Luh Putu Budi Agustini et al., 2017). Therefore, maintaining bank stability—particularly in regional development banks—requires an integrated risk management approach that simultaneously and sustainably manages Credit Risk and Liquidity Risk.

**Research Contribution**

This research makes important theoretical and practical contributions. Theoretically, the results strengthen the Theory of Financial Intermediation by demonstrating that bank stability is an outcome of effective risk allocation, liquidity management, and intermediation efficiency. Credit risk is shown to influence stability not only directly but also through profitability and liquidity risk, thus confirming the non-linear and interconnected nature of the relationship between banking variables. This research also adds empirical evidence to the Financial Stability Theory that credit risk is a primary source of instability, while bank resilience is largely determined by the ability to absorb shocks through profitability and capital strengthening. Furthermore, the findings in the context of Regional Development Banks (BPD) broaden the scope of the Risk-Return Trade-Off Theory, as the characteristics of the funding structure and business model of Regional Development Banks (BPD) make the impact of credit risk on profitability and liquidity stronger than that of national commercial banks.

Practically, this research provides strategic implications for Regional Development Banks (BPD) in managing risk, increasing profitability, and maintaining bank stability. BPDs need to strengthen credit risk management by improving the quality of credit monitoring, particularly productive loans, and developing early warning systems based on data and digital technology. Profitability needs to be positioned as a stability buffer by optimizing risk-based portfolios, rather than solely pursuing credit

volume, and developing non-interest income sources to reduce sensitivity to rising NPLs. Furthermore, strengthening liquidity management is crucial through diversifying third-party funds to reduce over-reliance on local government current accounts, while maintaining liquidity ratios such as LDR, LATA, cash ratio, LCR, and NSFR within optimal limits as required by regulators. These findings also emphasize the importance of implementing integrated risk management guidelines for Regional Development Banks that explicitly consider regional fiscal characteristics and fluctuations in regional budget funding, so that bank stability can be maintained sustainably.

**Conclusion and Suggestions**

The results of the study indicate that credit risk has a negative and significant effect on the stability and profitability of Regional Development Banks (BPDs), as reflected in the increase in NPLs and the need for allowances for impairment losses (CKPN), which suppress interest income, narrow capital space, and weaken the bank's capacity to absorb shocks and maintain its intermediation function, especially in volatile regional economic conditions. Credit risk also has a positive and significant effect on liquidity risk, as disrupted cash inflows due to non-performing loans increase liquidity pressures, which in the context of BPDs are further exacerbated by their high dependence on seasonal regional government funds. On the other hand, profitability has been shown to significantly influence stability and acts as an important buffer through strengthening capital, building reserves, and maintaining depositor confidence. However, profitability becomes fragile when liquidity pressures increase. These findings confirm that profitability and liquidity risk both significantly mediate the effect of credit risk on stability, where credit risk not only weakens asset quality but also reduces profits and creates liquidity pressures that ultimately disrupt the overall stability of the bank. Based on these results, regional banks (BPD) are advised to strengthen credit risk management through improved analysis and modern credit scoring, credit diversification into productive sectors, and early warning systems. They are also advised to increase profitability through digitalization, cost efficiency, and the development of non-interest income. They are also advised to strengthen liquidity risk management by reducing dependence on regional government funds, expanding long-term funding sources, strengthening ALMA management, and conducting liquidity stress tests. Regulators should also consider specific liquidity buffers for BPDs, while further research is recommended to incorporate regional macroeconomic and fiscal variables, governance as moderators or mediators, and more comprehensive stability indicators such as CoVaR, SRISK, LCR, and NSFR to obtain a more comprehensive picture of banking stability.

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