

From Risk Neutral to Risk Taker: A Case Study of Credit Risk Deterioration in Indonesian Regional Development Bank

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ABSTRACT

Regional development banks in Indonesia face increasing pressure to balance credit expansion and risk management. This study investigates the dynamics of credit risk deterioration and risk preference shifts at Bank BJB Bogor Branch during the 2020-2024 period. A qualitative descriptive approach with a case study strategy was employed, complemented by quantitative descriptive analysis. Data were collected through in-depth interviews with branch managers, credit analysts, and risk management officers, supported by internal financial reports, OJK publications, and relevant banking regulations. Risk preference was measured using the Risk Preference Index, Loan-to-Deposit Ratio, and Credit Expansion Rate, while credit risk was assessed through Non-Performing Loan ratios and Capital Adequacy Ratio. The results reveal three critical findings. First, the branch experienced a significant risk preference shift from the risk-neutral to the risk-taker category, driven by aggressive credit expansion alongside declining third-party funds. Second, the MSME credit segment suffered catastrophic quality deterioration, reaching an alarming non-performing level in the final observation year. Third, a structural funding vulnerability was identified as regional government deposits declined dramatically, forcing the Loan-to-Deposit Ratio to exceed the optimal threshold. The study concludes that high capital adequacy alone is insufficient to contain credit risk when aggressive expansion into high-risk segments is unsupported by proportional risk management capacity and disciplined post-disbursement monitoring.

Keywords: Credit Risk; Risk Preference; Non-Performing Loan; Capital Adequacy Ratio; Regional Development Bank



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INTRODUCTION

The banking sector serves as the backbone of national economic development through its intermediation function, with credit allocation representing both its primary revenue source and greatest risk exposure. In Indonesia, regional development banks (Bank Pembangunan Daerah/BPD) occupy a unique institutional position, carrying a dual mandate as profit-oriented commercial entities while simultaneously functioning as regional economic development agents. This duality creates inherent tensions in credit risk management that remain underexplored in the existing literature, particularly at the branch operational level.

Recent empirical evidence highlights the growing importance of capital adequacy and liquidity management in determining credit quality across banking institutions. Kjosevski and Petkovski (2021), in their study published in *Empirica*, confirmed that bank-specific variables including capital adequacy ratio and return on assets are significant determinants of non-performing loans in transition economies, providing a relevant comparative foundation for examining similar dynamics in Indonesian regional banks. More recently, Acheampong, Ibeji, and Danso (2024) showed that credit risk determinants vary substantially across countries and banking systems, underscoring that credit risk deterioration cannot be adequately understood through generic cross-country models and instead requires institution- and context-specific inquiry of the kind undertaken in this study. Radivojevic and Jovovic (2017), published in *Prague Economic Papers*, demonstrated that loan growth pace, capital adequacy, and macroeconomic conditions jointly explain non-performing loan formation across a sample of emerging market banks, establishing the multi-variable analytical basis adopted in this study. Within the Southeast Asian banking context, Tangngisalu, Hasanuddin, Hala, Nurlina, and Syahrul (2020), published in the *Journal of Asian Finance, Economics and Business*, confirmed that capital adequacy ratio exerts a significant negative influence on non-performing loans among Indonesian commercial banks, directly supporting the theoretical framework of this research.

At the institutional governance level, Bolarinwa, Akinyele, and Vo (2021), in their study published in *Managerial and Decision Economics*, demonstrated that management quality and risk governance structures significantly influence credit quality outcomes in developing economy banks, providing the governance-level analytical lens applied in examining BPD branch operations. This governance-quality perspective is corroborated by more recent evidence from Hossain, Rahman, Golder, and Kabir (2025), who found that the effectiveness of internal corporate governance mechanisms, including board oversight and risk-committee functioning, is a significant control on non-performing loan levels in emerging-economy banks, lending further support to this study's attention to branch-level risk governance practices rather than capital ratios alone. Furthermore, Radivojevic, Cvijanovic, Sekulic, Pavlovic, Jovic, and Maksimovic (2019), published in *Physica A: Statistical Mechanics and its Applications*, reinforced that bank profitability indicators and liquidity ratios are jointly significant in predicting non-performing loan trajectories, findings applicable to the Indonesian BPD context where liquidity dependency on government deposits creates structural vulnerability.

However, significant gaps persist in the existing literature. First, the overwhelming majority of prior studies operate at the corporate or national aggregate level, leaving branch-level credit risk dynamics largely unexamined despite the fact that credit decisions, customer targeting, and risk tolerance implementation occur primarily at this operational layer. Second, while the negative relationship between capital adequacy and non-performing loans has been empirically confirmed across multiple contexts, the paradox whereby strong corporate capital adequacy coexists with deteriorating branch-

level credit quality remains theoretically underdeveloped. Third, the structural funding dependency on regional government deposits as a captive source unique to Indonesian BPDs, and its role as a catalyst for risk preference transformation, has not been systematically investigated in prior literature. Fourth, existing risk preference measurement frameworks in banking lack a composite quantitative instrument integrating capital adequacy, liquidity utilization, and credit quality simultaneously at the sub-corporate operational level.

This study addresses these gaps through a longitudinal case study of Bank BJB Bogor Branch over a five-year observation period, combining internal financial data with primary qualitative evidence from key institutional informants. The study introduces the Risk Preference Index as a composite quantitative instrument for measuring branch-level risk appetite, capturing the dynamic interplay among capital adequacy, liquidity deployment, and credit quality within a single interpretable metric. This methodological contribution extends beyond the Indonesian BPD context and offers a replicable analytical tool for branch-level risk assessment in emerging market banking research. The principal findings reveal that Bank BJB Bogor Branch underwent a dramatic shift from risk neutral to risk taker positioning, culminating in severe credit quality deterioration within the MSME segment and structural funding vulnerability driven by the erosion of government deposit bases. Critically, the findings demonstrate that robust corporate capital adequacy, while necessary, proves insufficient to prevent branch-level credit risk accumulation when expansion strategies consistently outpace risk management capacity. These conclusions carry significant implications for regulatory design, BPD governance frameworks, and the broader literature on credit risk management in emerging market banking institutions.

LITERATURE REVIEW

Credit risk represents the probability of loss arising from a borrower's failure to repay a loan or meet contractual obligations, constituting the most significant risk exposure in commercial banking operations (Otoritas Jasa Keuangan, 2016). Non-Performing Loan (NPL) serves as the primary ex-post indicator of credit risk, measured as the ratio of substandard, doubtful, and loss category loans to total outstanding credit. Empirical evidence consistently demonstrates that NPL dynamics are shaped by both macroeconomic conditions and bank-specific management variables.

Kjosevski and Petkovski (2021) analyzed determinants of non-performing loans in transition economies and confirmed that bank-specific variables including capital adequacy, profitability, and loan growth pace are significant predictors of NPL formation, with macroeconomic shocks amplifying bank-level vulnerabilities. This finding establishes the theoretical foundation that NPL is not merely an outcome of external conditions but reflects the quality of internal risk governance. Supporting this perspective, Radivojevic et al. (2019) demonstrated across a sample of emerging market banks that profitability indicators and liquidity ratios jointly predict NPL trajectories, reinforcing the multi-dimensional nature of credit risk determinants. Within the Indonesian banking context specifically, Tangngisalu, Hasanuddin, Hala, Nurlina, and Syahrul (2020) confirmed that capital adequacy ratio exerts a significant negative influence on NPL among Indonesian commercial banks, directly establishing the capital-credit quality nexus applicable to the BPD environment examined in this study.

For Indonesian regional development banks specifically, Herlina, Damayanti, and Ikhsan (2024), examining twenty-seven BPDs over a five-year period, found that Capital Adequacy Ratio bears a significant negative relationship with NPL, while Net Interest

Margin exerts a positive influence, suggesting that margin-driven expansion strategies may inadvertently elevate credit risk. These findings are particularly relevant given the dual mandate pressures BPDs face in balancing regional development objectives with commercial sustainability.

Based on the foregoing theoretical and empirical foundation, and consistent with the exploratory, qualitative case-study design of this research, the following research question is posed:

RQ1: How does Capital Adequacy Ratio relate to Non-Performing Loan levels in regional development banks?

Risk preference, or risk appetite, refers to the level of risk an institution consciously accepts in pursuit of its strategic and business objectives (Ikatan Bankir Indonesia, 2015). In banking, risk preference manifests operationally through credit expansion aggressiveness, collateral requirements stringency, and target market selection. Gallati (2003) in Risk Management and Capital Adequacy established that risk preference can be quantified through composite indicators integrating liquidity deployment, capital adequacy, and credit quality, providing the theoretical basis for the Risk Preference Index introduced in this study.

The Loan-to-Deposit Ratio (LDR) serves as the most widely applied proxy for bank risk appetite in the credit domain, reflecting the proportion of collected funds deployed as loans. Empirical evidence from Prayuningsih, Yudiaatmaja, and Suci (2024) demonstrated that LDR bears a significant positive relationship with NPL, confirming that higher liquidity deployment ratios are systematically associated with elevated credit risk. This finding supports the theoretical proposition that risk preference and credit quality outcomes are causally linked, with aggressive liquidity deployment representing a measurable manifestation of elevated risk appetite.

Bolarinwa, Akinyele, and Vo (2021) further demonstrated that management quality and institutional risk governance structures significantly moderate the relationship between risk appetite and credit outcomes in developing economy banks, suggesting that risk preference effects are not uniform but contingent upon the quality of internal control systems. This moderation effect is directly observable in the case examined in this study, where corporate-level governance strength failed to constrain branch-level risk appetite escalation.

Based on the foregoing evidence, the following research question is posed:

RQ2: How does risk preference, as measured through the Risk Preference Index, relate to Non-Performing Loan outcomes in regional development bank branches?

Capital Adequacy Ratio (CAR) measures a bank's capacity to absorb potential losses from its risk-weighted asset portfolio, calculated as the ratio of Tier 1 and Tier 2 capital to Risk-Weighted Assets (RWA). Regulatory frameworks globally, including Basel III as adopted by the Otoritas Jasa Keuangan (OJK) through POJK Number 11/POJK.03/2016, mandate a minimum CAR of eight percent, with a Sangat Sehat classification requiring CAR at or above twelve percent. Cross-country evidence on Basel III implementation, however, indicates that these capital requirements condition rather than guarantee prudent credit behavior: Sharma (2023) found that Basel III liquidity and capital rules improved financial stability in emerging economies but simultaneously constrained lending capacity in ways that vary by institutional context, while Addou, Boulanouar, Anwer, Bensghir, and Mohammad (2024) similarly showed that higher regulatory capital does not uniformly translate into reduced risk-taking behavior across banks, reinforcing the premise that capital adequacy alone is an insufficient safeguard against credit risk deterioration.

The theoretical relationship between CAR and credit risk operates through multiple transmission channels. First, the selectivity channel proposes that well-capitalized banks exercise greater borrower selectivity because they are not compelled to maximize interest income to meet capital requirements. Second, the monitoring capacity channel suggests that higher capital levels provide resources for investment in superior risk management systems. Third, the loss absorption channel indicates that adequate capital buffers allow banks to withstand credit losses without threatening solvency, reducing the pressure to evergreen problem loans. Kjosevski and Petkovski (2021) provided empirical confirmation of these mechanisms, finding that capital adequacy consistently predicts lower subsequent NPL formation across transition economy banking systems.

Critically, however, existing literature has not adequately addressed the paradox wherein strong corporate CAR coexists with deteriorating branch-level credit quality. This study contributes to resolving this paradox by demonstrating that CAR functions as a necessary but insufficient condition for credit quality maintenance when expansion strategies at the operational level are misaligned with risk management capacity.

Based on the theoretical and empirical evidence presented, the following research question is posed:

RQ3: In what ways does Capital Adequacy Ratio shape credit expansion capacity, and how must this capacity be aligned with branch-level risk management to prevent Non-Performing Loan deterioration?

The management of funding sources represents a critical dimension of credit risk that has received comparatively limited attention in the BPD-specific literature. Banks inherently perform maturity transformation, collecting short-term deposits and deploying them as medium-to-long-term loans, creating structural exposure to liquidity risk when funding composition shifts unexpectedly. The Net Stable Funding Ratio (NSFR) and Liquidity Coverage Ratio (LCR), introduced under Basel III and adopted in Indonesia through POJK Number 50/POJK.03/2017, provide regulatory instruments for monitoring this structural vulnerability.

For Indonesian BPDs specifically, the concentration of funding in regional government current accounts (*giro pemerintah daerah*) creates a distinctive structural dependency that differs fundamentally from privately-owned commercial banks. Radivojevic and Jovovic (2017) demonstrated that funding concentration and liquidity vulnerability are significant antecedents of NPL formation in emerging market banks, establishing the theoretical linkage between funding structure instability and credit quality deterioration examined in this study.

The Current Account and Savings Account ratio (CASA ratio) serves as a key indicator of funding cost efficiency, with higher CASA proportions associated with lower cost of funds. However, as demonstrated in the case examined here, CASA ratio improvement driven by absolute deposit base contraction rather than genuine growth does not translate into funding stability, creating a misleading signal about institutional liquidity health.

Based on the foregoing theoretical and empirical foundation, the following research question is posed:

RQ4: How does structural dependency on government deposits as a primary funding source create liquidity vulnerability, and how does this vulnerability relate to Loan-to-Deposit Ratio escalation and subsequent Non-Performing Loan deterioration in regional development bank branches?

This study is grounded in three complementary theoretical foundations. Signaling Theory, developed by Spence (1973) and extended to financial markets by Ross (1977),

posits that financial ratios including CAR and NPL function as signals communicating institutional risk management quality to external stakeholders, with signal deterioration reflecting underlying governance failures. Stakeholder Theory, as articulated by Freeman (1984), explains why BPD credit policies must simultaneously satisfy the competing interests of borrowers, depositors, regulators, and regional government shareholders, creating the dual mandate tensions that elevate risk preference under performance pressure. The COSO Enterprise Risk Management Framework (2017) provides the operational architecture through which credit risk governance, strategy alignment, performance monitoring, and information systems interact to determine credit quality outcomes. The integration of these three theoretical lenses provides a comprehensive explanatory framework for understanding how branch-level risk preference escalation and NPL deterioration emerge from the interaction of institutional pressures, governance structures, and funding vulnerabilities within the Indonesian BPD context.

RESEARCH METHOD

This study employs a qualitative descriptive approach with a case study strategy, complemented by quantitative descriptive analysis. The qualitative approach was selected because the research objectives require an in-depth understanding of credit policy dynamics, risk preference formation, and funding management decisions that cannot be fully captured through numerical data alone. Creswell (2014) argues that qualitative case study methodology is particularly appropriate when investigating contemporary phenomena within their real-life context, especially when the boundaries between phenomenon and context are not clearly evident. The quantitative descriptive component provides measurable evidence through financial ratio analysis, enabling triangulation between narrative findings and empirical indicators.

The study was conducted at PT Bank Pembangunan Daerah Jawa Barat dan Banten Tbk (Bank BJB) Bogor Branch, located in Bogor City, West Java Province, Indonesia. The selection of this research location was conducted purposively, considering that Bank BJB Bogor Branch represents a strategically significant operational unit with substantial credit volume within one of Indonesia's most economically dynamic regions adjacent to the capital city. The observation period spans five consecutive years from 2020 to 2024, capturing both the post-pandemic recovery phase and the subsequent credit expansion phase, enabling longitudinal analysis of risk preference trajectory and credit quality dynamics.

This study utilizes two categories of data. Primary data were collected through semi-structured in-depth interviews with five key informants selected purposively based on their positional relevance to the research objectives, as presented in Table 1. Each interview was conducted face-to-face at the Bank BJB Bogor Branch office, lasted between 45 and 75 minutes, and followed an interview guide organized around the five analytical dimensions of the study: credit procedure, risk preference, capital adequacy, funding management, and credit quality. With informant consent, all interviews were audio-recorded and subsequently transcribed verbatim; field notes documenting non-verbal context and researcher observations were maintained alongside each transcript. Interviews continued until data saturation was reached, operationalized as the point at which successive interviews with remaining informants no longer produced new themes or codes relevant to the five analytical dimensions; saturation was judged to have been achieved after the fourth interview, with the fifth interview conducted to confirm consistency of the emergent themes.

Table 1. Key Informants Profile

No	Informant	Position	Relevance
1	Informant 1	Branch Manager	Credit policy decision maker
2	Informant 2	Senior Credit Officer	Credit analysis and procedure
3	Informant 3	Risk Management Head	CAR, NPL, and risk preference
4	Informant 4	Treasury and Funding Head	Short and long-term funding
5	Informant 5	Credit Analyst	Field credit procedure implementation

Source: Own Compilation (2024)

Secondary data were obtained from Bank BJB internal financial reports for the 2020-2024 period, Bank BJB annual reports published at ir.bankbjb.co.id, OJK banking statistics and surveillance reports, relevant OJK and Bank Indonesia regulations, and prior empirical studies. Direct observation of credit procedures and documentation processes was also conducted to validate interview findings against actual operational practices.

Risk preference was measured quantitatively using three complementary instruments. First, the Loan-to-Deposit Ratio (LDR) was calculated as follows:

$$\text{LDR} = (\text{Total Loans} / \text{Total Third-Party Funds}) \times 100\%$$

Assessment criteria for LDR follow SE OJK Number 14/SEOJK.03/2017, where LDR below or equal to 75 percent indicates a risk averse position, LDR between 75 and 85 percent indicates a moderately risk averse position, LDR between 85 and 100 percent indicates a risk neutral position, LDR between 100 and 120 percent indicates a risk taker position, and LDR above 120 percent indicates a highly aggressive risk taker position.

Second, the Risk Preference Index (RPI) was developed as a composite instrument based on the conceptual framework of Gallati (2003), integrating capital adequacy, liquidity deployment, and credit quality simultaneously:

$$\text{RPI} = \text{LDR} / (\text{CAR} \times (1 - \text{NPL}))$$

Where LDR represents the Loan-to-Deposit Ratio in decimal form, CAR represents the Capital Adequacy Ratio in decimal form, and NPL represents the Non-Performing Loan ratio in decimal form. Interpretation of RPI values follows three categories: RPI below 3.0 indicates a risk-averse position characterized by conservative credit expansion and low NPL; RPI between 3.0 and 5.0 indicates a risk-neutral position balancing expansion and prudential management; and RPI at or above 5.0 indicates a risk-taker position with aggressive credit expansion and elevated NPL potential.

Third, the Credit Expansion Rate (CER) measures the annual pace of credit portfolio growth:

$$\text{CER} = ((\text{Total Loans } t - \text{Total Loans } t-1) / \text{Total Loans } t-1) \times 100\%$$

CER below five percent indicates very conservative expansion consistent with a risk-averse posture, CER between five and twelve percent indicates moderate expansion consistent with a risk-neutral posture, and CER at or above twelve percent indicates aggressive expansion consistent with a risk-taker posture.

Credit risk assessment was conducted through three quantitative instruments. The Non-Performing Loan ratio was calculated as:

$$\text{NPL} = (\text{Substandard Loans} + \text{Doubtful Loans} + \text{Loss Loans}) / \text{Total Loans} \times 100\%$$

NPL assessment follows SE OJK Number 14/SEOJK.03/2017 classification, where NPL below two percent is categorized as very healthy, NPL between two and five percent as healthy, NPL between five and eight percent as sufficiently healthy, NPL between eight and twelve percent as unhealthy, and NPL at or above twelve percent as critically unhealthy.

The Capital Adequacy Ratio was calculated as:

$$\text{CAR} = (\text{Tier 1 Capital} + \text{Tier 2 Capital}) / \text{Risk-Weighted Assets} \times 100\%$$

The CKPN Coverage Ratio was calculated as:

$$\text{Coverage Ratio} = \text{Allowance for Impairment Losses} / \text{Total NPL} \times 100\%$$

A coverage ratio at or above 100 percent indicates that the bank has formed sufficient reserves to fully absorb all non-performing loan exposures, while a coverage ratio below 100 percent signals increasing unprotected credit risk exposure.

The funding management structure was analyzed through three instruments. The composition of Third-Party Funds (DPK) was assessed by calculating the proportional contribution of current accounts, savings deposits, and time deposits to total DPK. The Cost of Fund (CoF) was measured as:

$$\text{CoF} = \text{Total Interest Expenses on Funds} / \text{Average Total Funds Collected} \times 100\%$$

The Maturity Mismatch Ratio was calculated as:

$$\text{Mismatch Ratio} = \text{Long-Term Loans (tenor above one year)} / \text{Long-Term Funds (tenor above one year)} \times 100\%$$

A mismatch ratio at or below 100 percent indicates adequate long-term funding coverage, a ratio between 100 and 120 percent indicates a cautionary zone of emerging maturity mismatch, and a ratio above 120 percent indicates significant liquidity risk from structural maturity mismatch.

Data validity was ensured through four techniques following Sugiyono (2022). Credibility was established through source triangulation by comparing interview findings across multiple informants occupying different functional positions (branch management, credit analysis, risk management, treasury, and field credit implementation) and method triangulation by cross-validating interview data against financial report documentation, Bank BJB annual reports, and OJK regulatory publications; where interview accounts and documentary evidence diverged, the discrepancy was itself treated as an analytic finding and traced back to informants for clarification. Transferability was achieved through thick description of the research context enabling readers to assess applicability to comparable institutional settings. Dependability was maintained through systematic documentation of all research stages, including interview transcripts, the codebook, and the audit trail linking codes to conclusions, subject to supervisor audit. Confirmability was ensured through member checking, whereby a summary of key findings and interpretations was returned to the principal informants for review, and their feedback was incorporated prior to finalizing the analytical conclusions to ensure accuracy and to guard against researcher bias.

Data analysis followed the interactive model of Miles, Huberman, and Saldana (2014), comprising four sequential stages. The data collection stage involved systematic gathering and documentation of all interview transcripts, financial reports, regulatory documents, and observation records. The data reduction stage involved selective focusing and simplification of collected data aligned with the research questions, eliminating irrelevant information while preserving analytically significant evidence; operationally, this stage was carried out through a two-phase coding procedure. Open coding was first applied line-by-line to each interview transcript to generate descriptive codes grounded in informants' own language (e.g., "target pressure," "government fund withdrawal," "collateral revaluation delay"). Axial coding then grouped these descriptive codes into analytic categories aligned with the five research dimensions, and iterative constant comparison across informants and against the financial-ratio data was used to refine

category boundaries until the codebook stabilized. The data display stage involved structured presentation of reduced data through descriptive narratives, direct informant quotations illustrating key categories, financial ratio comparison tables, and cross-variable analysis matrices organized according to the five analytical dimensions of credit procedure, risk preference, capital adequacy, NPL, and funding management. The conclusion drawing and verification stage involved pattern identification from displayed data, followed by iterative verification against original data sources and member checking to ensure analytical validity before final conclusions were drawn.

RESEARCH RESULTS

Based on field observation and in-depth interviews conducted with key informants, the credit procedure at Bank BJB Bogor Branch follows the standard operating procedures established in the Bank Credit Policy (Kebijakan Perkreditan Bank/KPB) and Standard Operational Procedures (SPO) issued by Bank BJB headquarters. The procedure encompasses eight sequential stages: credit application submission, document completeness verification, creditworthiness analysis using 5C and 7P principles, collateral assessment, credit recommendation and approval decision according to authority limits, credit agreement signing, credit facility disbursement, and post-disbursement monitoring.

The 5C analysis framework covers Character assessment through SLIK OJK credit history verification and behavioral observation, Capacity evaluation through cash flow and income analysis, Capital assessment through borrower equity examination, Collateral valuation through physical asset inspection and legal verification, and Condition of Economy analysis through sectoral and macroeconomic review. The 7P framework extends this analysis through Personality, Party classification, Purpose verification, Prospect assessment, Payment source identification, Profitability projection, and Protection through insurance and collateral coverage.

Interview findings revealed that while formal procedures are consistently followed in documentation, two critical implementation weaknesses were identified. First, Character assessment remains predominantly subjective, relying heavily on officer judgment rather than standardized behavioral scoring instruments. Second, Collateral valuation periodicity is insufficient, with revaluation intervals that do not adequately capture market value fluctuations, particularly for commercial property assets serving as loan collateral in the Bogor market. These findings are consistent with Mattoasi, Taruh, and Monoarfa (2023) who identified Character and Collateral as the two most problematic dimensions of 5C implementation in Bank BJB branch operations.

A third implementation challenge identified through interviews concerns the tension between credit volume targets and analytical rigor. Informant 2 indicated that monthly disbursement targets, particularly during the 2022-2023 expansion phase, created implicit pressure to accelerate approval timelines in ways that compressed the depth of pre-disbursement analysis, especially within the MSME segment where financial documentation quality is inherently more variable. As Informant 2 described it: *"When the monthly target is close, and the numbers are not yet met, there is pressure to speed up approval. We still check the documents, but the time to dig deeper into a prospective MSME borrower's actual cash flow is much shorter than it should be."* Post-disbursement monitoring was similarly affected, with monitoring frequency declining as portfolio volume expanded beyond the capacity of available credit officer resources.

Table 2 presents the longitudinal financial performance indicators of Bank BJB Bogor Branch across the five-year observation period.

Table 2. Financial Performance of Bank BJB Bogor Branch 2020-2024

Year	Total Assets (IDR Million)	Outstanding Loans (IDR Million)	Net Profit (IDR Million)	NPL Gross	LDR	BOPO	ROA
2020	2,482,638	1,246,333	78,935	0.51%	63.25%	73.61%	3.18%
2021	2,547,603	1,284,426	87,487	0.74%	61.57%	69.31%	3.43%
2022	2,295,720	1,367,473	98,415	0.31%	76.38%	62.38%	4.29%
2023	2,145,447	1,592,251	80,196	0.35%	101.85%	68.79%	3.74%
2024	2,114,539	1,691,276	47,711	5.09%	108.35%	82.61%	2.26%

Source: Internal Financial Reports Bank BJB Bogor Branch, processed by the researcher (2024)

The data reveal two distinct performance phases. The consolidation phase spanning 2020 to 2022 was characterized by controlled LDR below 80 percent, declining NPL reaching its lowest point, improving operational efficiency with BOPO at 62.38 percent in 2022, and peak profitability with ROA at 4.29 percent. The expansion phase spanning 2023 to 2024 was characterized by LDR exceeding 100 percent, NPL surging from 0.35 percent to 5.09 percent, operational efficiency deteriorating with BOPO reaching 82.61 percent, and profitability declining sharply with ROA falling to 2.26 percent and net profit contracting from IDR 98.415 billion to IDR 47.711 billion.

Table 3 presents the longitudinal LDR measurement and corresponding risk preference classification for Bank BJB Bogor Branch.

Table 3. LDR Analysis and Risk Preference Classification 2020-2024

Year	Total Loans (IDR Million)	Total DPK (IDR Million)	LDR	Risk Preference Category
2020	1,246,333	1,970,613	63.25%	Risk Averse - Moderate
2021	1,284,426	2,086,243	61.57%	Risk Averse - Moderate
2022	1,367,473	1,790,450	76.38%	Risk Neutral
2023	1,592,251	1,563,371	101.85%	Risk Taker
2024	1,691,276	1,560,907	108.35%	Risk Taker

Source: Internal Financial Reports Bank BJB Bogor Branch, processed by the researcher (2024)

The LDR trajectory reveals a dramatic risk preference transformation. During 2020-2021, LDR remained within the 61-63 percent range, reflecting a risk-averse to moderately risk-averse positioning, consistent with the cautionary stance adopted during the pandemic period. A transitional shift occurred in 2022 as LDR moved to 76.38 percent, entering the risk-neutral zone. The most significant transformation occurred in 2023 when LDR surpassed 100 percent, entering the risk taker zone, and further escalated to 108.35 percent in 2024. This trajectory indicates that loan growth substantially outpaced deposit mobilization, creating a funding gap that necessitated reliance on non-deposit funding sources to sustain credit expansion.

Table 4 presents the composite Risk Preference Index calculations incorporating LDR, corporate CAR, and branch NPL data.

Table 4. Risk Preference Index Calculation 2020-2024

Year	LDR	CAR	NPL	RPI	Category
2020	0.6325	0.1830	0.0051	3.46	Risk Neutral
2021	0.6157	0.1850	0.0074	3.34	Risk Neutral
2022	0.7638	0.1920	0.0031	3.98	Risk Neutral
2023	1.0185	0.2010	0.0035	5.08	Risk Taker
2024	1.0835	0.1940	0.0509	5.28	Risk Taker

Source: processed by researcher (2024)

The RPI calculations confirm and extend the LDR-based findings. During 2020-2022, RPI values ranging from 3.34 to 3.98 consistently placed the branch within the risk neutral zone, indicating a balanced approach between credit expansion and prudential management. The crossing of the risk taker threshold occurred in 2023 with RPI reaching 5.08, driven primarily by LDR exceeding unity. The further escalation to 5.28 in 2024 reflects the compounding effect of simultaneously elevated LDR and dramatically increased NPL, indicating that risk materialization reinforced rather than moderated the risk taker positioning.

Table 5 presents the annual Credit Expansion Rate measuring the pace of portfolio growth.

Table 5. Credit Expansion Rate 2020-2024

Year	Outstanding Loans (IDR Million)	CER	Expansion Category
2020	1,246,333	-	-
2021	1,284,426	3.06%	Very Conservative
2022	1,367,473	6.46%	Moderate
2023	1,592,251	16.44%	Aggressive
2024	1,691,276	6.22%	Moderate

Source: processed by researcher (2024)

The CER data reveal that the most critical expansion occurred in 2023 with a growth rate of 16.44 percent, substantially exceeding the 12 percent threshold distinguishing moderate from aggressive expansion. This aggressive expansion coincided precisely with the LDR breach of 100 percent and preceded the NPL surge in 2024, establishing a temporal sequence consistent with the expectation, developed from the research questions guiding this study, that excessive expansion pace creates lagged credit quality deterioration.

Table 6 presents the CAR assessment for Bank BJB at the corporate level, which constitutes the capital management reference for Bogor Branch operations.

Table 6. CAR Assessment Bank BJB Corporate Level 2020-2024

Year	CAR	OJK Classification	Credit Expansion Capacity
2020	18.30%	Very Healthy - Grade 1	Very Large
2021	18.50%	Very Healthy - Grade 1	Very Large
2022	19.20%	Very Healthy - Grade 1	Very Large
2023	20.10%	Very Healthy - Grade 1	Very Large
2024	19.40%	Very Healthy - Grade 1	Very Large

Source: Bank BJB Annual Reports 2020-2024, processed by researcher (2024)

Corporate CAR consistently remained within the Very Healthy classification throughout the observation period, ranging from 18.30 percent to 20.10 percent and substantially exceeding the 12 percent minimum threshold for Grade 1 classification. This robust capital position provided substantial theoretical capacity for credit expansion across all observation years.

The critical finding emerging from the juxtaposition of Tables 2 and 6 is that strong corporate CAR did not prevent branch-level credit quality deterioration. Despite CAR remaining stable at above 18 percent throughout 2023 and 2024, NPL at the branch level surged from 0.35 percent to 5.09 percent during the same period. This observation supports the theoretical proposition that CAR functions as a necessary but insufficient condition for credit quality maintenance, requiring complementary enforcement of underwriting standards and post-disbursement monitoring discipline at the operational level.

Table 7 presents the NPL decomposition by credit segment, revealing the heterogeneous quality dynamics concealed within the aggregate NPL figure.

Table 7. NPL by Credit Segment Bank BJB Bogor Branch 2020-2024

Year	NPL Gross	Consumer	Retail	Commercial	Mortgage	MSME
2020	0.51%	0.15%	-	0.00%	3.54%	0.00%
2021	0.74%	0.11%	0.48%	1.08%	3.86%	2.91%
2022	0.31%	0.00%	0.32%	0.00%	1.64%	0.00%
2023	0.35%	0.06%	0.16%	0.00%	1.59%	0.79%
2024	5.09%	0.03%	0.63%	0.00%	3.68%	64.34%

Source: Internal Financial Reports Bank BJB Bogor Branch, processed by the researcher (2024)

The segment-level decomposition reveals the most critical finding of this study. The aggregate NPL surge in 2024 was overwhelmingly driven by a catastrophic credit quality collapse in the MSME segment, where NPL reached 64.34 percent. The consumer segment, predominantly comprising civil servant borrowers with payroll deduction repayment mechanisms, maintained exceptional quality throughout the observation period with NPL never exceeding 0.15 percent, confirming the structural credit risk advantage of captive payroll-based lending. The commercial segment demonstrated consistently zero NPL throughout the observation period, reflecting highly selective lending practices in that segment. Mortgage NPL showed moderate deterioration from 1.59 percent in 2023 to 3.68 percent in 2024, contributing to but not driving the aggregate NPL surge.

Table 8 presents the nominal NPL values alongside CKPN formation and resulting coverage ratios.

Table 8. NPL Nominal Value and Coverage Ratio 2020-2024

Year	NPL Nominal (IDR Million)	CKPN (IDR Million)	Coverage Ratio	Assessment
2020	6,387	21,343	334%	Very Healthy
2021	10,022	18,341	183%	Very Healthy
2022	3,970	6,337	160%	Very Healthy
2023	5,533	3,700	67%	Requires Attention
2024	86,143	38,009	44%	Critical

Source: Internal Financial Reports, Bank BJB Bogor Branch, processed by the researcher (2024)

The coverage ratio trajectory reveals a progressive and ultimately critical deterioration in loss reserve adequacy. During 2020-2022, coverage ratios ranging from 160 to 334 percent indicated that loan loss reserves substantially exceeded total non-performing exposures, providing robust protection against credit losses. The coverage ratio fell below 100 percent in 2023, indicating that reserves no longer fully covered non-performing exposures. By 2024, the coverage ratio collapsed to 44 percent as NPL nominal value surged to IDR 86.143 billion while CKPN formation of IDR 38.009 billion, though substantial, proved inadequate to restore full coverage. This coverage deficit directly contributed to the dramatic profit contraction observed in 2024.

Table 9 presents the historical credit write-off data reflecting the ultimate resolution of irrecoverable non-performing loans.

Table 9. Credit Write-Off History Bank BJB Bogor Branch 2020-2024

Year	Write-Off Value (IDR Million)	Number of Debtors
2020	227	14
2021	2,088	14
2022	9,910	23

2023	1,953	63
2024	1,613	9

Source: Internal Financial Reports Bank BJB Bogor Branch, processed by the researcher (2024)

The 2022 write-off peak of IDR 9.910 billion represents post-pandemic resolution of accumulated problem loans from 2020-2021, while the 2023 pattern of lower value but higher debtor count indicates widespread small-scale credit problems consistent with MSME segment stress. The relatively low 2024 write-off despite very high NPL nominal values suggests that many MSME problem loans identified in 2024 were still in early resolution stages at the time of data collection.

Table 10 presents the compositional evolution of Third-Party Funds (DPK) across the observation period.

Table 10. DPK Composition Bank BJB Bogor Branch 2020-2024 (IDR Million)

Year	Current Account	Savings	Time Deposit	Total DPK	CASA Ratio
2020	552,560 (28%)	566,877 (29%)	851,176 (43%)	1,970,613	56.8%
2021	625,943 (30%)	637,598 (31%)	822,702 (39%)	2,086,243	60.6%
2022	447,055 (25%)	701,917 (39%)	641,478 (36%)	1,790,450	64.2%
2023	349,710 (22%)	800,123 (51%)	413,538 (26%)	1,563,371	73.6%
2024	334,490 (21%)	790,095 (51%)	436,322 (28%)	1,560,907	72.0%

Source: Internal Financial Reports Bank BJB Bogor Branch, processed by the researcher (2024)

Total DPK contracted significantly from IDR 1.971 trillion in 2020 to IDR 1.561 trillion in 2024, representing an absolute reduction of IDR 410 billion over the observation period. This contraction was driven by declining current accounts and time deposits, while savings deposits increased substantially. The resulting CASA ratio improvement from 56.8 percent to 72.0 percent would theoretically indicate improving funding cost efficiency; however, this improvement was driven by absolute deposit base contraction rather than genuine low-cost deposit growth, masking the underlying funding vulnerability.

Table 11 presents the decomposition of current account balances between regional government and general public sources, revealing the structural funding dependency unique to BPD institutional characteristics.

Table 11. Current Account Composition: Government vs General Public 2020-2024 (IDR Million)

Year	Government Current Account	Public Current Account	Total Current Account
2020	391,121 (71%)	161,439 (29%)	552,560
2021	299,556 (48%)	326,387 (52%)	625,943
2022	130,603 (29%)	316,452 (71%)	447,055
2023	33,769 (10%)	315,941 (90%)	349,710
2024	79,652 (24%)	254,838 (76%)	334,490

Source: Internal Financial Reports, Bank BJB Bogor Branch, processed by the researcher (2024)

The government deposit data reveals the most structurally significant finding within the funding analysis. Regional government current account balances declined dramatically from IDR 391.121 billion, representing 71 percent of total current accounts in 2020, to IDR 33.769 billion, representing merely 10 percent in 2023, before partially recovering to IDR 79.652 billion or 24 percent in 2024. This represents an absolute reduction of IDR 311 billion in government deposit balances over the observation period. Interview findings with Informant 4 indicated that this decline was primarily attributable to changes in regional government cash management policies, including the centralization of government fund placement at the provincial treasury level and increased competition

from state-owned banks for government account management mandates. Informant 4 explained the shift directly: *"Regional government funds that used to sit with us are now pooled centrally at the provincial treasury, and for what remains, the state-owned banks are much more aggressive in bidding for the mandate. We felt the balance shrinking every quarter, but the loan book kept growing, so the gap had to be filled from somewhere else."* This account is consistent with the Loan-to-Deposit Ratio escalation documented in Table 5, which shows third-party funding increasingly unable to keep pace with credit expansion.

The direct consequence of this structural funding erosion was the progressive LDR escalation documented in Table 3, as loan growth continued while the deposit base contracted, ultimately driving LDR beyond the 100 percent threshold and establishing the liquidity pressure conditions that characterized the risk taker phase of the observation period.

The longitudinal data presented across the preceding sections reveal a coherent causal narrative connecting the four analytical dimensions. Figure 1 illustrates the interconnection pattern identified through cross-variable analysis.

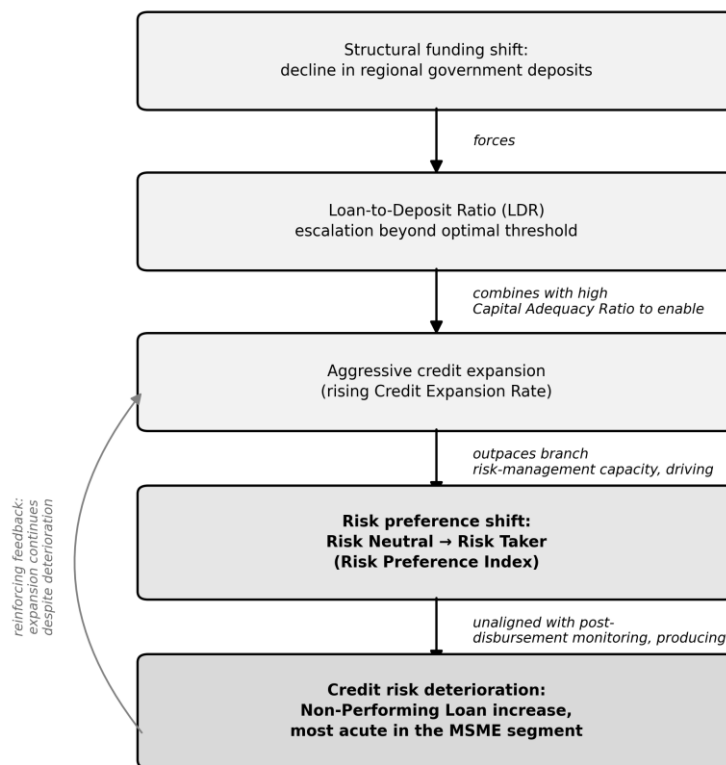


Figure 1. Conceptual model of the risk-preference and credit-risk deterioration pathway at the Bank BJB Bogor Branch, 2020-2024

Source: authors' analysis of interview and financial-ratio data

The causal chain can be described through three sequential mechanisms. The first mechanism, operating primarily during 2020-2022, involved post-pandemic deposit contraction driven by regional government cash management policy changes, reducing total DPK and creating initial LDR pressure despite conservative loan growth. The second mechanism, operating during 2022-2023, involved aggressive credit expansion targeting the MSME segment as a growth strategy response to competitive and performance pressures, with CER reaching 16.44 percent in 2023 while LDR crossed the 100 percent threshold. The high corporate CAR during this period provided institutional confidence

that expansion capacity existed, without adequate consideration of branch-level risk management capacity constraints. The third mechanism, materializing in 2024, involved the lagged credit quality consequences of the 2022-2023 expansion phase becoming apparent as MSME borrowers, many of whom had been approved under compressed analytical timelines and insufficient post-disbursement monitoring, began defaulting at catastrophic rates, producing the 64.34 percent MSME NPL and the 5.09 percent aggregate NPL that characterized the terminal year of the observation period.

This causal sequence demonstrates that the shift from risk neutral to risk taker positioning was not a deliberate strategic choice but rather an emergent outcome of the interaction between structural funding vulnerability, performance pressure-driven expansion, and inadequate risk management capacity scaling at the branch level. The findings collectively answer all four research questions posed in the literature review, confirming that capital adequacy, risk preference, funding structure, and credit quality are systemically interdependent variables whose misalignment produces credit risk deterioration outcomes that aggregate-level analysis cannot adequately capture.

DISCUSSION

The risk preference transformation at Bank BJB Bogor Branch was not a deliberate strategic decision but an emergent outcome of compounding structural pressures. The RPI trajectory from 3.34 in 2021 to 5.28 in 2024 confirms the theoretical proposition of Gallati (2003) that institutional risk appetite responds dynamically to capital capacity, liquidity conditions, and performance incentives. Critically, this shift occurred independently of corporate-level governance signals, a dynamic not previously documented with longitudinal empirical evidence in the existing literature.

The LDR exceeding 100 percent in 2023-2024 is consistent with Imbierowicz and Rauch (2014), who established that liquidity risk and credit risk are interconnected: deploying more credit than deposits mobilized transfers liquidity risk to the asset side, creating a compounding vulnerability where NPL deterioration simultaneously worsens the funding gap. The Stakeholder Theory lens (Freeman, 1984) further explains why this shift occurred despite available governance mechanisms. BPD dual mandate pressures—growth expectations from government shareholders, NPL thresholds from regulators, and volume targets from corporate management—could not be simultaneously satisfied when the funding base contracted, leading branch management to prioritize volume over quality, consistent with Jensen and Meckling's (1976) agency conflict framework.

The most theoretically significant finding is that corporate CAR consistently above 18 percent proved insufficient to prevent catastrophic branch-level credit deterioration—the CAR Paradox. While the negative CAR-NPL relationship documented by Herlina, Damayanti, and Ikhsan (2024) and Kjosevski and Petkovski (2021) holds at the aggregate level, this study reveals an important boundary condition: capital adequacy is protective only when accompanied by commensurate underwriting discipline and monitoring capacity at the operational level. Through Signaling Theory (Spence, 1973; Ross, 1977), high corporate CAR reassures external stakeholders but may simultaneously create internal moral hazard, with branch management interpreting the capital buffer as an expansion license rather than downside protection. The COSO ERM Framework (2017) similarly failed at the branch level during 2022-2023: expansion targets were set without adequate consideration of local risk management capacity, and early warning indicators of MSME stress did not trigger timely escalation responses, demonstrating that corporate-level framework adoption does not guarantee branch-level implementation.

The 64.34 percent MSME NPL in 2024 reflects systematic failure at multiple stages of credit risk management. Rapid portfolio expansion from IDR 25 billion to IDR 120 billion between 2020 and 2023 created concentration risk that branch infrastructure could not absorb, as individual loan risks became correlated through shared sectoral exposures in Bogor's trading, food and beverage, and service sectors—all highly sensitive to post-pandemic demand normalization. Two procedural weaknesses amplified this risk: subjective Character assessment, which created adverse selection as described by Stiglitz and Weiss (1981), and insufficient Collateral revaluation frequency, which systematically underestimated coverage deterioration. Post-disbursement monitoring was further compromised by a mismatch between portfolio volume growth and monitoring resources, consistent with Sucipto and Santoso (2023), allowing MSME credit stress to reach catastrophic levels before triggering intervention.

The decline of regional government current account deposits from 71 percent of total current accounts in 2020 to 10 percent in 2023 represents a structural funding shock of unprecedented magnitude in the BPD literature. Drawing on the Asset Liability Management framework, this concentrated institutional relationship created structural liquidity risk when government cash management policy shifted, causing a deposit contraction that retail growth could not offset while credit expansion continued. This extends Radivojevic and Jovovic (2017) by identifying an institutional dimension specific to BPDs: funding concentration risk is embedded in their structural design, making diversification more difficult as it requires competing directly with better-resourced national commercial banks. This structural constraint is consistent with Doerr (2024), who found that banks with less geographically diversified funding bases are more exposed to funding-stability shocks than institutions able to draw deposits across broader, less correlated regional markets, a vulnerability that is amplified for a single-branch BPD office dependent on a concentrated local government client base. The accompanying CASA ratio improvement from 56.8 to 72.0 percent illustrates a misleading signal—driven by absolute deposit contraction rather than genuine low-cost deposit growth—underscoring the need for multi-dimensional funding analysis frameworks that assess both compositional ratios and absolute volume trends simultaneously.

These findings carry governance implications at three levels. At the regulatory level, OJK's aggregate-level supervision masked segment-specific deterioration; enhanced branch-level reporting requirements for BPDs with government deposit dependency would enable earlier supervisory intervention. At the internal governance level, the Three Lines of Defense requires explicit adaptation: branch credit units need standardized Character assessment tools and volume-calibrated monitoring protocols; corporate risk management units need real-time visibility into branch RPI indicators; and internal audit requires sufficiently frequent branch-level credit quality reviews. At the strategic level, expansion targets must be calibrated to risk management capacity rather than capital headroom alone, with explicit branch-level capacity assessment integrated into performance target-setting.

The Risk Preference Index represents a key methodological contribution, integrating liquidity deployment (LDR), capital absorption capacity (CAR), and credit quality (NPL) into a single composite metric that overcomes the limitations of single-proxy measures. The RPI correctly classified the branch as risk neutral during 2020-2022 and as a risk taker during 2023-2024, with classification consistency validated against both qualitative interview evidence and individual quantitative metrics. Its applicability extends beyond BPDs to any branch-network bank where capital is managed centrally, but credit decisions are made locally. Future research should validate RPI thresholds across multiple BPD branches and institutional contexts.

CONCLUSIONS

This study examined credit risk deterioration and risk preference transformation at Bank BJB Bogor Branch over the 2020–2024 period through a qualitative descriptive case study complemented by quantitative financial ratio analysis. The central finding is that the branch underwent a structural shift from risk-neutral to risk-taker positioning, culminating in catastrophic MSME credit quality collapse, driven by the compounding interaction of government deposit erosion, aggressive credit expansion, and inadequate risk management capacity scaling. This conclusion addresses the core research objective and carries important implications for theory, practice, and future inquiry.

The core scientific contribution of this study is threefold. First, the study introduces the Risk Preference Index (RPI) as a novel composite instrument integrating capital adequacy, liquidity deployment, and credit quality into a single operational metric for measuring branch-level risk appetite. Unlike single-proxy approaches that rely solely on LDR, the RPI captures the multi-dimensional nature of institutional risk preference and demonstrated strong discriminatory validity across the observation period. Second, the study identifies and empirically documents the “CAR Paradox” – the phenomenon in which strong corporate capital adequacy coexists with, and inadvertently facilitates, branch-level credit quality deterioration by creating institutional confidence for expansion that exceeds operational risk management capacity. This finding introduces an important boundary condition for the theoretically established negative CAR–NPL relationship: capital adequacy is necessary but insufficient when underwriting discipline and monitoring capacity are not proportionally scaled. Third, this study provides the first longitudinal empirical documentation of regional government deposit erosion as a structural antecedent of LDR escalation and risk appetite transformation in Indonesian regional development banks, advancing understanding of the BPD’s distinctive institutional vulnerability profile relative to private commercial banks.

The practical implications of these findings extend to three levels of stakeholders. For branch and corporate management, the study demonstrates that credit expansion targets must be calibrated to risk management capacity rather than to capital headroom alone. The RPI offers a real-time monitoring instrument enabling proactive governance intervention before risk preference escalation reaches the risk taker threshold. Immediate remediation priorities should include MSME portfolio restructuring, standardization of Character assessment through behavioral scoring instruments, mandatory periodic Collateral revaluation, and a strategic initiative to diversify the deposit base away from government deposit concentration. For OJK as the regulatory authority, the segment-level NPL decomposition approach applied in this study reveals that aggregate-level supervisory indicators can mask catastrophic sub-segment deterioration; enhanced branch-level reporting requirements for BPDs with significant government deposit dependency would enable earlier supervisory intervention. For future researchers, the RPI requires cross-institutional validation across multiple BPD branches and market contexts to establish robust threshold calibrations. Comparative longitudinal studies of government deposit dynamics across Indonesian BPDs and quantitative panel data studies incorporating the RPI as a constructed variable represent the most productive directions for extending this research.

This study acknowledges four limitations that bound the generalizability of its conclusions. First, CAR data used in RPI calculations reflect corporate-level figures, as capital adequacy is managed centrally at Bank BJB headquarters, preventing construction of branch-specific CAR measures that would more precisely capture local capital dynamics. Second, the single-case design enables analytical depth but limits generalizability to other BPD branches and institutions, necessitating comparative

replication studies. Third, the RPI is a novel instrument developed from Gallati's (2003) conceptual framework and has not yet been independently validated in comparable institutional contexts. Fourth, the qualitative component carries inherent informant response bias that triangulation protocols can mitigate but not fully eliminate, particularly for sensitive findings regarding the relationship between performance pressure and analytical rigor during the expansion phase. These limitations define the scope of present conclusions and simultaneously constitute the research agenda for future inquiry.

Second, the study identifies and empirically documents the CAR Paradox, wherein strong corporate capital adequacy coexists with and inadvertently facilitates branch-level credit quality deterioration by providing institutional confidence for expansion that exceeds operational risk management capacity. This finding introduces an important boundary condition for the theoretically established negative CAR-NPL relationship, establishing that capital adequacy is a necessary but insufficient condition for credit risk containment at the operational level.

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