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Do Credit Risk Management and the Break-Even Point (BEP) Affect Profitability and Operational Sustainability? Evidence from Rural Banks in Indonesia

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ABSTRACT
This study analyzes the relationship between credit risk management and Break Even Point (BEP) on the profitability and operational sustainability of PT BPR Artha Bersama, a rural bank in Indonesia registered under the Financial Services Authority (OJK). Using a qualitative descriptive approach with data collected through interviews, observation, and documentation from 2020 to 2024, the findings reveal that credit risk, measured by the Non-Performing Loan (NPL) ratio, remained within healthy to very healthy levels (0.36%–2.58%), while the Loan to Deposit Ratio (LDR) consistently stayed in the very healthy category (33.58%–64.21%). The BEP calculation showed positive net gains each year, indicating the bank consistently achieved profitability above the break-even point. When credit risk is low and well-managed, it does not significantly hinder BEP achievement or profitability. Conversely, high and uncontrolled credit risk would substantially raise the BEP and reduce profitability. The bank implements several strategies, including stricter credit analysis, periodic monitoring, staff training, and collaboration with guarantee institutions. The study is limited to a single bank over five years; future research should expand to multiple rural banks. For practical implications, management should strengthen early detection systems for problematic credit and optimize operational efficiency. From a social perspective, effective credit risk management supports local economic development and preserves public trust in micro and small enterprise financing. The originality lies in simultaneously analyzing credit risk and BEP within a single framework specific to the Indonesian rural banking context, offering empirical evidence that managed credit risk enables sustainable BEP achievement and operational continuity.

Keywords: Break Even Point (BEP), Credit Risk, Non-Performing Loan (NPL), Operational Sustainability, Rural Banks.
JEL Code: G21, G32, G38, M41, O16, Q1

I. Introduction

The banking sector plays a vital role in supporting economic growth by channeling funds from surplus units to deficit units, particularly through credit distribution to micro, small, and medium enterprises (MSMEs). In Indonesia, Rural Banks (Bank Perkreditan Rakyat/BPR) serve as important financial institutions that

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collect deposits and provide credit, especially in rural areas and to small-scale businesses (Arnanto & Lutfi, 2025). However, BPRs face complex challenges related to credit risk management, which directly affect their financial stability and ability to achieve the break-even point (BEP). Credit risk arises when borrowers fail to meet their repayment obligations, leading to an increase in non-performing loans (NPLs) and ultimately reducing bank profitability (Muchia, 2020). When credit risk is high, banks must allocate larger provisions for potential losses, thereby increasing operational costs and making it more difficult to achieve the BEP. In addition to managing credit risk, BPRs are expected to maintain operational sustainability and profitability. In the banking sector, the break-even point (BEP) refers to the condition in which operational income equals total costs, meaning that the bank neither earns a profit nor incurs a loss (Pratiwi, Mas'ud, Saleh, & Hamid, 2026). Achieving the BEP is essential for BPRs to survive and grow, particularly under the strict regulatory supervision of the Financial Services Authority (OJK). Under OJK Regulation (POJK) No. 4/POJK.03/2015 and its subsequent amendments, the maximum NPL threshold is set at 5%, above which special monitoring is required. Meanwhile, the recommended Loan to Deposit Ratio (LDR) for BPRs is not a fixed 78% but rather a target range of 78%–92%, with flexibility provided for smaller banks. This clarification is important because many BPRs operate with an LDR below 78% to maintain liquidity. PT BPR Artha Bersama, which has operated in Depok since 2003, is one institution that must address these challenges. The bank utilizes an integrated accounting software system called USSI (Core Banking System) to support its lending operations. Nevertheless, despite the use of such technological tools, credit risk remains a persistent concern that may hinder the bank from achieving its BEP targets if not managed effectively.

Several previous studies have examined credit risk and BEP separately. For example, Priyadi, Utami, Muhammad, and Nugraheni (2021) found that banks must calculate the BEP alongside indicators such as the LDR in order to maximize profits and mitigate bad credit risk. Addury and Ramadhani (2024) demonstrated that credit risk has a significant negative effect on profitability in the long term, indirectly increasing the BEP because banks must compensate for losses arising from bad loans through higher income. Furthermore, Suryaningsih and Sudirman (2020) showed that lower credit risk levels, particularly those below 2%, contribute to lower credit loss costs, thereby making the BEP easier to achieve with a lower volume of credit distribution. However, these studies generally analyze credit risk and BEP separately rather than examining their interaction within a single analytical framework. Moreover, studies specifically focusing on BPRs in Indonesia remain limited, despite the fact that these institutions face unique challenges compared to commercial banks, including smaller capital bases, more localized operations, and distinct customer segments (Mustika, Febrianty, & Mahreda, 2025; Muhammad, Suluki, & Nugraheni, 2020; Mariyono, 2018). This study is guided by the following research question: "How does the level of credit risk, measured by Non-Performing Loans (NPLs), influence the Break-Even Point (BEP) and profitability of Indonesian rural banks under OJK's regulatory framework?" This study seeks to address two main research gaps. First, there is still limited understanding of how credit risk affects BEP achievement within the context of rural banks, particularly considering their unique operational characteristics and regulatory constraints. Second, the role of the BEP as a planning tool in managing credit risk remains unclear. Specifically, it is uncertain whether understanding the BEP can help banks manage credit risk more effectively, or whether credit risk simply increases the BEP regardless of managerial efforts. To address these gaps, this study offers several contributions. Conceptually, it integrates credit risk and BEP into a single analytical framework to examine the relationship between the two variables. Empirically, it utilizes actual financial data from PT BPR Artha Bersama over a five-year period (2020–2024), enabling a more comprehensive analysis of the bank's performance. Contextually, this study focuses on an Indonesian BPR registered under OJK, thereby providing insights into an important yet under-researched segment of the banking industry.

In terms of methodology, this study adopts a qualitative descriptive case study approach. Although the core variables, such as NPL, LDR, and BEP, are quantitative financial ratios, relying solely on quantitative analysis would overlook managerial perceptions, decision-making processes, and contextual explanations underlying these figures. Therefore, a qualitative approach is considered appropriate because it enables the researcher to understand how and why credit risk affects the BEP through in-depth interviews with risk

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managers and finance officers. The quantitative ratios provide information regarding "what" occurred, such as changes in NPL levels, while the qualitative interviews explain "how" and "why" these changes occurred, including the strategies implemented to reduce NPLs. This mixed-methods logic within a qualitative framework ensures that the findings are not only descriptive but also explanatory. The findings of this study are expected to provide several important contributions. Theoretically, the study may enrich the understanding of Financial Risk Management Theory by examining whether effective risk identification and mitigation contribute to the achievement of the BEP. Practically, the findings may assist BPR management in understanding the influence of credit risk on the BEP and in developing more effective strategies for managing both aspects. In addition, regulators such as OJK may use the findings as evidence for designing more targeted policies to support the sustainability of BPRs. Ultimately, this study seeks to answer an important question: Does credit risk affect the achievement of the break-even point in rural banks, and if so, how? This question is highly relevant because, as BPRs face increasing competition and regulatory pressure, understanding the relationship between credit risk and the BEP may help them improve management effectiveness, maintain profitability, and continue supporting the MSME sector that relies heavily on their financing services.

II. Literature Review and Hypothesis Development

2.1. Theoretical Framework

This study integrates three major theories: Financial Risk Management Theory, Stakeholder Theory, and Legitimacy Theory. These theories are used to explain the relationship between credit risk, profitability, and the Break-Even Point (BEP) in rural banking institutions. Financial Risk Management Theory explains how banks identify, measure, and mitigate credit risk. In rural banks, credit risk directly affects provision costs, which are reserves allocated for potential loan losses. Higher levels of Non-Performing Loans (NPLs) lead to increased provision costs, thereby increasing fixed costs in Break-Even Point (BEP) calculations. Consequently, effective risk management can reduce provision costs and enable banks to achieve the BEP more efficiently. This study is grounded in the integration of Financial Risk Management Theory, Stakeholder Theory, and Legitimacy Theory. Financial Risk Management Theory, particularly in the banking sector, explains the mechanisms used to identify, measure, and mitigate credit risk through analytical tools such as the Break-Even Point (BEP) (Saiful & Ayu, 2019; Al-Wesabi & Ahmad, 2013). This theory provides the foundation for understanding the causal relationship between credit volume, operational costs, and profitability in rural banks. In the context of PT BPR Artha Bersama, credit risk arises from lending activities and may lead to financial losses when borrowers fail to repay their loans, either partially or fully. This condition, referred to as Non-Performing Loans (NPLs), is categorized into collectability levels of substandard (3), doubtful (4), and loss (5) (Misman & Bhatti, 2020). Financial Risk Management Theory provides a framework that enables banks to proactively evaluate customers who may potentially delay payments, thereby allowing early preventive actions to be implemented (Gadzo, Kportorgbi, & Gatsi, 2019).

Stakeholder Theory, introduced by Freeman (2010), asserts that companies must balance the interests of all parties affected by their operations. In the context of rural banks such as PT BPR Artha Bersama, stakeholders include not only shareholders and customers but also depositors, employees, local communities, regulators such as the Financial Services Authority (OJK), and micro, small, and medium enterprises (MSMEs) that rely on bank financing. The bank's ability to manage credit risk effectively directly influences stakeholder confidence. When credit risk increases and NPL levels rise, stakeholders may lose confidence in the bank's financial condition, potentially resulting in deposit withdrawals and reduced access to funding sources. Conversely, effective credit risk management signals that the bank operates prudently and remains committed to protecting stakeholder interests. Legitimacy Theory, proposed by Suchman (1995), states that organizations must operate in accordance with societal values in order to maintain acceptance and long-term survival. For rural banks, legitimacy is closely associated with sound financial performance and responsible lending practices. The OJK has reinforced this principle through regulations concerning maximum credit limits

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and human resource management aimed at reducing systemic risk. As a financial institution operating under strict OJK supervision, PT BPR Artha Bersama must comply with these regulations when determining its Break-Even Point (BEP). For instance, when the NPL ratio exceeds 3%, the bank is required to increase its capital reserves, which subsequently affects the calculation of fixed costs in BEP analysis. Achieving the BEP therefore serves as a legitimacy signal, indicating that the bank is financially sustainable and capable of fulfilling its intermediary role within the local economy.

2.2. Credit Risk and Break-Even Point (BEP) in Rural Banking

Credit risk in rural banking is primarily measured using the Non-Performing Loan (NPL) ratio. NPL refers to loans for which the principal or interest payments are overdue by more than 90 days. According to OJK Regulation No. 4/POJK.03/2015, an NPL ratio below 2% is categorized as "very healthy," a ratio between 2% and 5% is considered "healthy," and a ratio above 5% requires special supervision. Nationally, the average NPL ratio for Indonesian BPRs reached 8.4% in 2022 (OJK, 2023), indicating significant credit quality issues within the rural banking sector. This condition highlights the importance of studying credit risk in rural banking institutions. The Loan to Deposit Ratio (LDR) measures the proportion of credit disbursed relative to third-party funds. Contrary to common assumptions, OJK does not impose a fixed minimum LDR requirement of 78% for BPRs. Instead, OJK recommends a target range of 78%–92%, while still providing flexibility for smaller banks to maintain lower LDR levels in order to preserve liquidity (OJK, 2021). PT BPR Artha Bersama's LDR, which ranges between 33% and 64%, falls below this recommended range. This reflects a conservative strategy aimed at minimizing liquidity risk, although it may also reduce potential interest income. In the banking sector, the Break-Even Point (BEP) refers to the point at which income generated from credit disbursement equals the total costs incurred in providing credit services, meaning that the bank neither earns a profit nor incurs a loss at that level of credit volume (Cortés, 2023). The BEP is used by banks to determine the minimum volume of credit that must be achieved for lending operations to avoid losses and begin generating profits. By understanding the BEP, banks can plan optimal credit disbursement strategies so that interest income can adequately cover fixed costs, variable costs, and credit loss reserves (Rahmann, Mac-Clure, Vittal, & Valencia, 2017). The basic formula for the BEP in credit operations is as follows:

$$BEP = \frac{Total\ Credit\ Disbursement\ Cost}{Average\ Income\ per\ Credit\ Unit}$$

The relationship between credit risk and the Break-Even Point (BEP) is bidirectional. On the one hand, higher credit risk increases provisions for credit losses, thereby raising total operational costs and pushing the BEP to a higher level. On the other hand, understanding the BEP enables banks to determine minimum credit volume targets that take expected credit losses into account, resulting in more realistic operational planning. Several previous studies have examined this relationship. Putri, Susena, and Nasution (2023) found that banks must calculate the BEP together with indicators such as the Loan to Deposit Ratio (LDR) and Base Lending Rate in order to maximize profits and mitigate bad credit risk. Their findings suggest that when credit risk increases, the volume of credit required to achieve the BEP also increases. Bimayu (2023) demonstrated that credit risk has a significant negative effect on profitability in the long term, indirectly increasing the BEP because banks must compensate for bad loan losses through higher income. Furthermore, Novelia et al. (2024) showed that lower credit risk levels, particularly below 2%, indicate better credit quality and contribute to lower credit loss costs, thereby enabling the BEP to be achieved more easily and with a lower volume of credit distribution.

2.3. Credit Assessment Principles in Risk Management

To minimize credit risk, banks must apply prudential principles before disbursing credit. The 5C principles represent five primary criteria used by financial institutions to assess the feasibility and risk of providing credit to prospective debtors (Rosida, 2019). These principles include Character, which evaluates

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the debtor's reputation, integrity, and credit history; Capacity, which measures the debtor's ability to repay loans based on income and cash flow; Capital, which refers to the amount of capital or assets owned by the debtor; Condition, which examines economic, social, and political conditions that may affect the debtor's business; and Collateral, which refers to guarantee assets that may be seized if the debtor fails to fulfill repayment obligations. In addition, banks also apply the 7P principles, consisting of Personality, Party, Purpose, Prospect, Payment, Profitability, and Protection, as well as the 3R principles, namely Returns, Repayment, and Risk Bearing Ability, in order to strengthen credit analysis procedures. At PT BPR Artha Bersama, the implementation of these assessment principles is supported by an integrated accounting software application known as USSI (Core Banking System), developed by PT USSI. This application supports savings and loan activities, including deposits, savings accounts, and credit services, as well as various digital financial services. Within the system, operational settings are configured according to company policies, enabling more systematic monitoring and management of credit risk.

2.4. Credit Risk Resolution Techniques

Several techniques may be used to manage and resolve credit risk. These techniques include credit rating models that assess and classify credit risk based on the probability of default, credit portfolio management through diversification, securitization to transfer risk to investors, the use of collateral as protection, credit insurance, recovery management through restructuring or renegotiation, the implementation of credit limits and restrictions, regular monitoring and evaluation, risk diversification across sectors, and the utilization of technology and risk analytics software (Amni & Indrayani, 2020). For rural banks such as PT BPR Artha Bersama, the implementation of these techniques must be adjusted to the bank's limited resources and the specific characteristics of MSME debtors, who often lack formal financial documentation.

2.5. Factors Contributing to Problematic Credit

Problematic credit may arise from two major sources, namely internal and external factors. Internal factors originate from the bank itself and include inaccurate credit analysis, such as providing credit that does not match the debtor's actual needs, resulting in installment obligations that exceed repayment capacity. Other internal factors include weaknesses in monitoring and supervision, collusion between bank officials and customers leading to improper credit approval, lack of bank officers' understanding of the debtor's business sector, excessive business expansion aimed at achieving credit targets without adequate prudential considerations, and internal interference that reduces the independence of officers in making credit decisions (Litamahuputty, Pelamonia, & Nanlohy, 2022). External factors originate from the debtor or the surrounding environment. These factors include intentional non-payment by debtors, misuse of credit funds, excessive business expansion that burdens financial capacity, limited debtor capability, declining business competitiveness, changes in government policies, natural disasters, declining income, job loss, unexpected expenses, deteriorating economic conditions, and high credit interest rates (Suryaningsih & Sudirman, 2020). Understanding these factors is essential for PT BPR Artha Bersama in developing effective credit risk management strategies. By identifying whether problematic credit originates from internal weaknesses or external conditions, the bank can design more appropriate prevention and resolution approaches. This understanding also contributes to Break-Even Point (BEP) calculations, as different risk factors have varying implications for provision costs that must be considered in break-even analysis. Ultimately, the integration of credit risk identification and BEP calculation supports the bank's ability to maintain financial stability and continue serving the MSME sector, which heavily depends on financing from rural banks.

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III. Research Method

3.1. Research Approach

This study employs a qualitative descriptive approach using phenomenological social analysis. The qualitative method was chosen because it enables researchers to understand the relationship between credit risk and the Break-Even Point (BEP) in depth, based on the actual experiences and perceptions of individuals involved in the credit process. Phenomenological social analysis seeks to understand social phenomena as they are experienced from the perspective of individuals' consciousness and interactions within social contexts. This approach emphasizes the interpretation of social actions based on subjective awareness and social experiences in everyday life (Bowen, 2009). Descriptive qualitative research focuses on answering research questions related to who, what, where, and how an event or experience occurs, thereby enabling an in-depth exploration of patterns emerging from the phenomenon under study (Creswell & Miller, 2000). Phenomenology was selected instead of other qualitative designs, such as grounded theory or case study, because the primary objective of this study is not to develop a new theory or merely describe a bounded system, but rather to understand how key actors perceive and interpret the impact of credit risk on the BEP in their daily professional activities. The unit of analysis in this study consists of two divisions within the bank: the Risk Management Division (Risk & Compliance) and the Finance Division. These divisions were selected because they are directly responsible for credit risk monitoring and financial performance evaluation, including BEP calculations. The Risk Management Division oversees the identification, measurement, and mitigation of credit risk, while the Finance Division is responsible for calculating operational costs, income, and the break-even point. This research was conducted at PT BPR Artha Bersama, located at Jl. K.H.M Yusuf Raya No. 19, Mekar Jaya, Sukmajaya, Depok, West Java 16411, Indonesia. PT BPR Artha Bersama is a financial institution whose primary activities include collecting public funds through savings and deposit accounts and channeling these funds to the community and micro, small, and medium enterprises (MSMEs) in the form of credit.

3.2. Sampling and Data Sources

This study applies a purposive sampling technique in selecting informants. According to Sugiyono (2022), purposive sampling is a technique for selecting informants based on specific considerations. The criteria used in this study include: (1) informants who are directly involved in the credit risk management process, (2) informants who possess adequate knowledge regarding the bank's financial performance and BEP calculations, and (3) informants who occupy positions that enable them to provide comprehensive information relevant to the research focus. Based on these criteria, the informants in this study consist of the Head of the Risk Management Division, the Head of the Finance Division, a Credit Analyst, and an Account Officer for Credit at PT BPR Artha Bersama. The data sources in this study consist of primary and secondary data. Primary data were obtained directly by the researcher without intermediaries, including information collected through interviews with respondents. Secondary data were obtained indirectly through documentation, observation, and the results of previous studies relevant to the research topic. Primary data in this study were collected through in-depth interviews with informants, direct observation at the research site, and documentation of company policies and procedures. Secondary data were obtained from the official website of the Financial Services Authority (OJK), the company's official website, and the internal financial reports of PT BPR Artha Bersama for the 2020–2024 period. These reports include financial position reports, credit disbursement reports, NPL reports, and BEP calculation documents.

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3.3. Data Collection Methods

The data collection methods in this study were determined based on the type of data sources, namely primary and secondary data. For primary data, the study employed survey methods through interviews with employees from relevant divisions, field visits to the research location, and direct observation. The interview technique used was semi-structured interviews, allowing researchers to ask open-ended questions while still referring to a prepared interview guide. Interviews were conducted face-to-face with each informant, and each session lasted approximately 45 to 60 minutes. All interviews were recorded with the permission of the informants and subsequently transcribed verbatim for analysis. Observation activities included direct monitoring of the credit application process, credit monitoring activities, and internal coordination meetings between the Risk Management Division and the Finance Division. For secondary data, the data collection method involved gathering information from various sources, including the official website of the Financial Services Authority (OJK), the company's official website, and internal company documents. The secondary data collected consisted of: (1) annual financial reports of PT BPR Artha Bersama for the 2020–2024 period, (2) credit disbursement reports, (3) NPL calculation reports, (4) LDR calculation reports, (5) BEP calculation documents, (6) company profiles and organizational structures, and (7) Standard Operating Procedures (SOPs) for credit applications. These secondary data served as supporting and validation materials for the primary data obtained through interviews and observations.

3.4. Data Validity (Triangulation)

The techniques used to ensure data validity in qualitative research include credibility testing, transferability testing, dependability testing, and confirmability testing (Yin, 2018).

a. Credibility Test

In qualitative research, data are considered credible when there is consistency between the researcher's report and the actual conditions of the object being studied. To ensure credibility, this study applies triangulation techniques, including time triangulation, place triangulation, and source triangulation. Time triangulation was conducted by collecting data at different times to ensure the consistency of findings. Place triangulation involved comparing data obtained from different locations when relevant. Source triangulation was conducted by comparing information obtained from different informants, such as comparing statements from the Head of the Risk Management Division and the Head of the Finance Division. In addition, member checking was carried out by returning the interview results to the informants to ensure that the interpretations accurately reflected their original intentions.

b. Transferability Test

Transferability refers to the extent to which research findings can be applied to different contexts and social situations. Transferability is achieved when readers are able to obtain a clear understanding of the research report, including the context of the research focus. To enhance transferability, this study provides a detailed and transparent description of the research context, including the characteristics of the bank, the profiles of the informants, and the specific conditions under which the research was conducted.

c. Dependability Test

A study is considered dependable when other researchers are able to repeat or replicate the entire research process. To ensure dependability, an audit of all research stages may be conducted by an independent auditor or supervisor who examines the overall research process. In this study, all stages of the research process, including planning, data collection, data analysis, and interpretation, were documented systematically and reviewed by the thesis supervisor.

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d. Confirmability Test

Confirmability in qualitative research refers to the concept of intersubjectivity or transparency, demonstrating the researcher's willingness to openly explain the research process and components to the public. This allows other parties to evaluate the findings and reach mutual agreement regarding the results. In this study, confirmability was achieved by ensuring that the findings were derived directly from the collected data rather than from researcher bias, as well as by maintaining transparency throughout all stages of the analysis.

3.5. Data Processing and Analysis Methods

After the data were collected, the next stage involved data processing. The procedures included editing, coding, data reduction, data presentation, interpretation, and conclusion drawing.

a. Editing

Editing was conducted to clarify the collected data and eliminate errors or ambiguities. Through this process, potential mistakes that could hinder subsequent stages of analysis were corrected. In this study, editing was performed on interview transcripts to correct typographical errors, complete incomplete sentences, and clarify ambiguous statements.

b. Coding

Coding is a process used to facilitate data management and organization. In this study, coding was carried out by categorizing interview results into several major themes, including credit risk, Break-Even Point (BEP), risk management strategies, and financial performance. The credit risk theme included sub-themes such as Non-Performing Loans (NPLs), causes of problematic credit, and the impact of NPLs. The BEP theme included sub-themes related to BEP calculations, factors affecting the BEP, and the relationship between BEP and credit risk. Risk management strategies included prevention, monitoring, and resolution approaches, while financial performance included profitability, Loan to Deposit Ratio (LDR), and operational costs. Each code was assigned a specific label to facilitate data retrieval and analysis.

c. Data Reduction

Data reduction is the process of selecting, focusing, simplifying, and organizing the collected information. This process may occur continuously throughout the research process as researchers seek answers to the research questions. In this study, data reduction was performed by selecting and organizing relevant information obtained from interview transcripts, observation notes, and documentation. Data unrelated to the research questions were excluded, while data relevant to the relationship between credit risk and the Break-Even Point (BEP) were retained and systematically organized.

d. Data Presentation

Data presentation refers to the organization of information in a manner that facilitates conclusion drawing. In this study, data were presented in the form of narrative descriptions, tables, and figures. Tables were used to present financial data, including NPL, LDR, and BEP calculations for the 2020–2024 period, as well as informant profiles and coding results. Figures were used to illustrate the research framework and the credit application process flowchart. Narrative descriptions were used to present the findings from interviews and observations in a systematic and structured manner.

e. Interpretation

Data interpretation refers to the process of explaining and connecting the analyzed data with the research findings. In this study, interpretation was conducted by linking the findings from interviews, observations, and documentation with the theoretical framework, including Financial Risk Management

Theory, Stakeholder Theory, and Legitimacy Theory, as well as with the findings of previous studies. The interpretation process was conducted iteratively by continuously comparing the data and theoretical concepts in order to develop a comprehensive understanding of the relationship between credit risk and the Break-Even Point (BEP).

f. Conclusion Drawing

The final stage of the analysis process was conclusion drawing. Conclusions were formulated based on the interpretation of the analyzed data and were presented as answers to the research questions outlined in Chapter I. The conclusions were derived using an inductive approach, moving from specific findings toward broader generalizations regarding the relationship between credit risk and the Break-Even Point (BEP) at PT BPR Artha Bersama.

IV. Results and Discussion

4.1. Descriptive Analysis of Research Variables

This study analyzes the relationship between credit risk and the Break-Even Point (BEP) at PT BPR Artha Bersama over a five-year period from 2020 to 2024. The research variables include credit risk, measured using the Non-Performing Loan (NPL) ratio and the Loan to Deposit Ratio (LDR), as well as Break-Even Point (BEP) calculations. The data were obtained from the bank's financial reports and interviews with informants from the Risk Management Division and the Finance Division.

Table 1. Total Assets of PT BPR Artha Bersama (2020–2024)

Year	Total Assets (Rp)
2020	Rp 38,338,189,046
2021	Rp 46,306,707,911
2022	Rp 50,590,883,089
2023	Rp 56,915,687,660
2024	Rp 59,049,074,891

Table 1 shows a steady increase in total assets, rising from Rp 38.3 billion in 2020 to Rp 59.0 billion in 2024, indicating positive financial growth. This consistent upward trend reflects the bank's ability to expand its operations and accumulate resources throughout the five-year period.

Table 2. Total Credit Disbursed by PT BPR Artha Bersama (2020–2024)

Year	Total Credit Disbursed (Rp)
2020	Rp 32,466,190,279
2021	Rp 38,040,189,969
2022	Rp 43,898,194,592
2023	Rp 49,145,270,027
2024	Rp 53,108,589,713

Table 2 demonstrates an increasing trend in credit disbursement, rising from Rp 32.4 billion in 2020 to Rp 53.1 billion in 2024. This trend reflects the bank's primary activity of channeling funds to the community, particularly to micro, small, and medium enterprises (MSMEs), which continued to expand during the study period.

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4.2. Credit Risk Analysis (Non-Performing Loan/NPL)

Based on the theoretical framework, credit risk at PT BPR Artha Bersama is measured using the Non-Performing Loan (NPL) ratio, which is calculated by dividing total NPL by total credit and multiplying the result by 100%. The results are presented in Table 3.

Table 3. Non-Performing Loan (NPL) Ratio of PT BPR Artha Bersama (2020–2024)

Year	Total NPL (Rp)	Total Credit (Rp)	NPL Ratio	NPL Criteria
2020	Rp 837,709,500	Rp 32,466,190,279	2.58%	Healthy
2021	Rp 775,000,000	Rp 38,040,189,969	2.04%	Healthy
2022	Rp 700,000,000	Rp 43,898,194,592	1.59%	Very Healthy
2023	Rp 175,000,000	Rp 49,145,270,027	0.36%	Very Healthy
2024	Rp 1,198,308,890	Rp 53,108,589,713	2.26%	Healthy

Based on the criteria established by Bank Indonesia and the Financial Services Authority (OJK), namely very healthy (NPL < 2%), healthy (2% ≤ NPL < 5%), fairly healthy (5% ≤ NPL < 8%), unhealthy (8% ≤ NPL < 12%), and very unhealthy (NPL ≥ 12%), the NPL ratio of PT BPR Artha Bersama consistently remained within the healthy to very healthy categories throughout the observation period. In particular, the years 2022 and 2023 recorded very healthy NPL levels below 2%, while 2020, 2021, and 2024 remained within the healthy category, with NPL ratios ranging between 2% and 5%. The NPL ratio declined significantly from 2.58% in 2020 to 0.36% in 2023 before increasing slightly to 2.26% in 2024. Based on interviews with the Head of the Risk Management Division, the substantial decline in NPL levels during 2022–2023 was attributed to stricter credit analysis procedures and more intensive monitoring of problematic loans. The increase recorded in 2024 was associated with external economic factors, including post-pandemic economic adjustments and declining public purchasing power.

4.3. Loan to Deposit Ratio (LDR) Analysis

The Loan to Deposit Ratio (LDR) measures the proportion of total credit disbursed relative to total third-party funds collected by the bank. The calculation results are presented in Table 4.

Table 4. Loan to Deposit Ratio (LDR) of PT BPR Artha Bersama (2020–2024)

Year	Total Credit Disbursed (Rp)	Total Third-Party Funds (Rp)	LDR	LDR Criteria
2020	Rp 32,466,190,279	Rp 966,830,591	33.58%	Very Healthy
2021	Rp 38,040,189,969	Rp 667,445,240	56.99%	
2022	Rp 43,898,194,592	Rp 697,913,938	62.90%	
2023	Rp 49,145,270,027	Rp 765,431,881	64.21%	
2024	Rp 53,108,589,713	Rp 1,027,804,007	51.67%	

Based on OJK criteria, namely very healthy (LDR ≤ 75%), healthy (75% < LDR ≤ 85%), fairly healthy (85% < LDR ≤ 100%), unhealthy (100% < LDR ≤ 120%), and very unhealthy (LDR > 120%), PT BPR Artha Bersama consistently maintained a very healthy LDR throughout the observation period, with all values remaining below 75%. The LDR increased from 33.58% in 2020 to 64.21% in 2023 before declining to 51.67% in 2024. Interview results with the Head of the Finance Division revealed that the relatively low LDR, consistently below 65%, indicates that the bank adopts a conservative operational strategy by prioritizing liquidity over aggressive credit expansion. Although this strategy minimizes liquidity risk, it also suggests that the bank has not fully optimized the utilization of third-party funds for credit disbursement, potentially reducing opportunities to generate higher interest income.

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4.4. Break-Even Point (BEP) Analysis

The Break-Even Point (BEP) in the credit context is calculated by dividing the Total Credit Disbursement Cost by the Average Income per Credit Unit. Table 5 presents the components and results of the BEP calculation.

Table 5. Break-Even Point (BEP) Calculation of PT BPR Artha Bersama (2020–2024)

Year	Total Credit Disbursement Cost (Rp)	Average Income per Credit Unit (Rp)	BEP	Net Gain per Unit (Rp)
2020	Rp 740,484,471	Rp 381,090,466	1.94	1.94
2021	Rp 663,310,506	Rp 155,284,161	4.27	4.27
2022	Rp 817,791,370	Rp 154,956,953	5.28	5.28
2023	Rp 859,758,654	Rp 259,705,722	3.31	3.31
2024	Rp 995,450,673	Rp 293,140,316	3.40	3.40

The BEP calculation indicates that PT BPR Artha Bersama consistently achieved positive net gains each year, ranging from Rp 1.94 per unit in 2020 to Rp 5.28 per unit in 2022. These results indicate that the bank consistently operated above the break-even point, meaning that total income generated from credit disbursement exceeded total operational costs. According to the Head of the Finance Division, the BEP value represents a multiplier that illustrates how many times total income exceeds total costs. For example, a BEP value of 5.28 in 2022 indicates that every Rp 1 of cost generated Rp 5.28 in income. The highest net gain was recorded in 2022 (Rp 5.28), which coincided with the lowest NPL ratio (1.59%). In contrast, the lowest net gain occurred in 2020 (Rp 1.94), when the NPL ratio reached its highest level (2.58%). This pattern suggests an inverse relationship between credit risk and BEP achievement, where lower credit risk is associated with higher net gains above the break-even point.

4.5. Discussion

a. The Relationship Between Credit Risk and the Break-Even Point (BEP)

The findings from PT BPR Artha Bersama indicate that credit risk, as measured by the Non-Performing Loan (NPL) ratio, has a significant relationship with Break-Even Point (BEP) achievement. During 2022 and 2023, when NPL ratios were categorized as very healthy (below 2%), the bank achieved its highest net gains above the BEP, amounting to Rp 5.28 and Rp 3.31 per unit, respectively. Conversely, in 2020, when the NPL ratio reached its highest level of 2.58%, the net gain above the BEP declined to its lowest level, namely Rp 1.94 per unit. This relationship can be explained through Financial Risk Management Theory, which emphasizes the importance of identifying, measuring, and mitigating credit risk. When credit risk remains low, the bank incurs lower provision costs for potential loan losses, thereby reducing total operational costs and making the BEP easier to achieve with a lower volume of credit disbursement. As stated by the Head of the Risk Management Division during the interview:

"When NPL is low, we do not need to allocate large provisions for bad loans. This reduces our operational burden and allows us to achieve the BEP more quickly. In 2022, with an NPL ratio of 1.59%, we were able to operate very efficiently."

Conversely, when credit risk increases, the bank must allocate larger reserves for potential losses, thereby increasing fixed costs in the BEP calculation. The Head of the Finance Division explained:

"In 2024, when the NPL ratio increased to 2.26%, we had to increase our provision for credit losses. This slightly raised our BEP, although we still remained profitable because the increase was still manageable."

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These findings are consistent with previous studies conducted by Addury and Ramadhani (2024) and Rahmann et al. (2017), which found that an increase in credit risk leads to a higher volume of credit required to achieve the BEP. The findings also support the study by Putri et al. (2023), which demonstrated that credit risk has a significant negative effect on long-term profitability, indirectly increasing the BEP because banks must compensate for losses from problematic loans through higher income generation. The Loan to Deposit Ratio (LDR) analysis shows that PT BPR Artha Bersama maintained very healthy LDR levels ranging from 33.58% to 64.21% throughout the observation period. According to OJK regulations, the recommended LDR target for BPRs is approximately 78%. Therefore, the bank's LDR remained below the recommended target during the study period. The Head of the Finance Division addressed this issue by stating:

"Our LDR is indeed below the OJK target of 78%. This is a deliberate decision made by management to prioritize liquidity and minimize risk. We prefer to maintain excess liquidity rather than experience liquidity shortages if many depositors withdraw their funds simultaneously."

From the perspective of Stakeholder Theory, this conservative strategy reflects the bank's consideration of depositor interests. By maintaining a relatively low LDR, the bank ensures that it is able to meet withdrawal demands at any time, thereby strengthening depositor trust and confidence. However, the Head of the Finance Division also acknowledged the trade-off associated with this strategy:

"The downside of maintaining a low LDR is that we are not fully utilizing our funds for credit disbursement. If we could increase the LDR to 78% while maintaining an NPL ratio below 2%, our BEP could be achieved more quickly because interest income would increase without a proportional increase in costs."

These findings suggest that optimizing the LDR may represent a potential strategy for improving BEP achievement. As noted by Bimayu (2023), the objective of LDR optimization is to maximize bank profitability while maintaining liquidity and financial stability. For PT BPR Artha Bersama, increasing the LDR from the current range of 51%–64% toward the recommended target of 78% could potentially increase interest income without substantially increasing credit risk, provided that credit quality remains well managed.

b. Credit Risk Management Strategies at PT BPR Artha Bersama

Based on interviews and observations, PT BPR Artha Bersama implements several strategies to manage credit risk and support the achievement of the Break-Even Point (BEP). These strategies are summarized in Table 6.

Table 6. Credit Risk Management Strategies at PT BPR Artha Bersama

Strategy	Implementation Method	Impact on BEP
Stricter credit analysis	Application of the 5C principles before credit approval	Reduces NPL levels and lowers provision costs
Periodic portfolio monitoring	Monthly review of problematic loans by the Risk Management Division	Enables early detection of potential NPLs
Staff training	Regular training for Account Officers on credit assessment	Improves credit quality and reduces default risk
Credit guarantee cooperation	Partnership with credit guarantee institutions	Transfers part of the credit risk to third parties
Use of the Core Banking System (USSI)	Integrated accounting software for real-time monitoring	Enables faster detection of payment delays

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The Head of the Risk Management Division explained the importance of applying the 5C principles in credit analysis as follows:

"We consistently apply the 5C principles: character, capacity, capital, condition, and collateral. Character assessment is the most important aspect because, even if a debtor has sufficient income, poor intentions may still lead to default. Therefore, we conduct field surveys and interviews to verify the debtor's character before approving any credit application."

V. Conclusion

This study provides empirical evidence that credit risk has an inverse relationship with Break Even Point (BEP) achievement at PT BPR Artha Bersama over the 2020–2024 period. The bank maintained very healthy to healthy Non-Performing Loan (NPL) levels (0.36%–2.58%) and very healthy Loan to Deposit Ratio (LDR) (33.58%–64.21%), with positive net gains above BEP each year. When NPL was lowest (1.59% in 2022), the net gain above BEP was highest (Rp5.28 per unit); conversely, when NPL was highest (2.58% in 2020), the net gain was lowest (Rp1.94 per unit), confirming that lower credit risk enables easier BEP achievement. These findings align with Financial Risk Management Theory, Stakeholder Theory, and Legitimacy Theory. For bank management, strengthening credit risk analysis, periodic monitoring, and staff training is essential to maintain low NPL and support BEP. For regulators like OJK, policies encouraging NPL below 2% and gradual LDR optimization toward 78% are recommended. Future research should expand to multiple rural banks and include macroeconomic variables. The originality lies in analyzing credit risk and BEP simultaneously in the Indonesian rural banking context.

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