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***Research paper***

# Analysis of The Causes and Consequences of Microfinance Crisis in Peru: A Proposed Strategic Approach

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**Abstract**

The microfinance industry is made up of a group of microfinance institutions (MFIs) whose mission is to offer financial products and services to sectors underserved by traditional banking. These institutions currently face various financial challenges. In this context, the study focused on analyzing the causes and consequences of the microfinance crisis in Peru. The methodology employed is descriptive and explanatory, using documentary analysis. The population and sample consisted of 12 municipal financial institutions. The results showed that, as of April 30, 2024, CMAC Sullana stood out with the largest decline in ROE (-44.83%) and ROA (-5.38%), reflecting a severe crisis. Other microfinance institutions also showed significant losses. It is concluded that the microfinance crisis in Peru is due to poor risk management, high delinquency rates, and limited product diversification, which increase the sector's vulnerability. This has reduced access to credit for vulnerable populations, affecting local development and exacerbating financial exclusion. A comprehensive solution based on financial restructuring, product innovation, digital transformation, and strengthening risk management is proposed to achieve a more sustainable and resilient system.

***Keywords***: *Crisis; Delinquency; Profitability and Loss.*

## 1. Introduction

### 1.1. Definition of the study approach

This study is of great importance because it provides a deeper understanding of the microfinance crisis in Peru, a sector fundamental to financial inclusion and economic development. Understanding the causes and impacts of this crisis will not only help identify areas for improvement and potential solutions to stabilize and strengthen these institutions but will also offer valuable lessons for preventing future crises. In this sense, microfinance institutions play a fundamental role in the Peruvian economy by expanding the supply of financial credit to middle-income and poor segments of the national population, such as microenterprises and households, thereby enabling them to take advantage of business opportunities, grow, and improve their living standards.

In the international context, in line with global trends, the Organization for Economic Cooperation and Development (OECD, 2024) emphasizes that structural problems—persistent informal employment, gender gaps, and unequal distribution of access to financial services—can amplify vulnerabilities in microfinance. According to Rubio and Leon (2025), both access to the financial system and its effective use help reduce poverty and inequality. This implies that microfinance, when not limited to credit but to its comprehensive use, has a broader role. According to Requejo (2023), the 2008 financial crisis was one of the worst financial crises in modern history, which began with the collapse of the US mortgage market. The collapse of the mortgage market was triggered by several factors, including subprime lending practices, mortgage securitization, and a lack of adequate regulation and supervision. Subprime lending refers to the practice of lending money to borrowers who do not meet standard credit criteria. The crisis led to a sharp decline in economic activity, with job losses, reduced consumer spending, and a decline in GDP.

In Spain, Alonso (2020)Banco Popular, one of Spain's leading banks, experienced a liquidity crisis stemming from certain solvency problems, leading to default on its debt obligations and other liabilities. In May 2016, it announced a loss projection of €2 billion, suspension of dividend payments, and provisions worth €4.7 billion. In the first quarter of 2017, losses of €137 million were observed due to real estate

write-downs. This situation affected more than 300,000 people, not only investors but also employees who worked for the financial institution itself. This situation ultimately led to its bankruptcy in June 2017, which led to its intervention and sale to Banco Santander for a symbolic price of one euro.

In Ecuador, Muñoz-Upegui and Acosta-González (2020) report that the banking crises at the end of the 1990s evidenced economic deterioration both at the aggregate level (loss of output, deterioration of the terms of trade, among others) and at the microeconomic level (bankruptcy of financial institutions).

In Costa Rica, Barboza-Navarro et al. (2022) point out that microcredits placed with a microfinance institution averaged US$1,747, with a 36-month term and an interest rate of 26%. Most of these loans are allocated to male, married clients without children. Of the total loans granted, 71% had a maximum delinquency of less than 30 days, 19% had a delinquency of between 31 and 180 days, and 10% exceeded 180 days. This last group of loans, which represents the greatest risk for balance recovery, primarily finances commercial activities.

In Chile, the Association of Banks and Financial Institutions (ABIF, 2023) points out that Chile is currently experiencing unprecedented difficulties since the return to democracy in 1990, stating that the economy has been stagnant for at least a decade, and that politically it is evident that it is difficult to reach agreements that would allow for solutions. According to the balance sheets, credit is in a negative cycle. "The biggest drop is that the flow of mortgage and consumer credit operations is at 50% of what pre-pandemic figures were," while "savings are relatively stabilized, stable with a slight decline (...) and term deposits are by far the instrument where the country saves the most.

Currently, microfinance institutions in Peru face high levels of credit risk due to the nature of their clients and the activities they carry out. Noriega et al. (2025) analyze how external factors (COVID-19, climate anomalies, social disruptions) are integrated into credit risk models using machine learning, demonstrating that not only are the institution's internal microeconomic variables important, but that systemic shocks significantly affect delinquency.

The Peruvian Institute of Economics (IPE, 2023) points out that in Peru, the delinquency rate in the financial system has increased in recent years, from a low of 1.4% in 2007 to 4.3% at the end of 2022. The increase in delinquency has been mainly associated with the diversification of the credit supply and the increase in the debtor base served, especially targeting small and medium-sized enterprises (SMEs). Between December 2010 and January 2023, the number of SMEs with active loans tripled, rising from 242,000 to 820,000. The delinquency rate in this category is above 8%, which raises the average for the entire financial system. However, SMEs represent 26% of total loans granted, below corporate and large companies, which represent more than 70% of total loans and have a delinquency rate of less than 3%. Therefore, late payments are not expected to pose a significant risk to the rest of the sector.

Ramos (2024) reports that according to SBS data, six municipal savings and credit banks are in the red compared to the same period in 2022. The list is as follows: Caja Sullana with -S/74 million 008,000, Caja Tacna with -S/1 million 484,000, Caja Maynas with -S/5 million 630,000, Caja Lima with -S/7 million 503,000, Caja Paita with -S/1 million 413,000, and Caja del Santa with -S/238,000.

Given this situation, this study poses the following research question: What are the causes and consequences of the microfinance crisis in Peru? It also addresses three specific problems: What is the profitability of microfinance institutions in Peru? What is the default rate in microfinance institutions in Peru? And finally, what is the proposal to improve the causes and consequences of the microfinance crisis in Peru?

## 1.2. Background in Peru

Ibarra and Daqui (2025). This study analyzes the forecasting of non-performing loan delinquency at a savings and credit cooperative in the city of Riobamba. A quantitative approach was used, applying time series techniques. The design was non-experimental, based on the collection and analysis of historical data using a longitudinal approach. The analysis allowed for the examination of the evolution of the non-performing loan portfolio and the construction of predictive models to identify patterns and trends in the cooperative. The results show that time series-based forecasting techniques, such as ARIMA models, are effective in generating accurate predictions about non-performing loan delinquency. Significant variations were also identified: a downward trend in consumer loan delinquency and, in contrast, an increase in the microcredit portfolio and total loan delinquency.

Rossi and Rossi (2023) in their study sought to measure the level of efficiency of Peruvian Municipal Savings and Credit Funds, in the period 2015-2021. This work uses the decision table technique with input variables Delinquency, ROE, Altman's Z2, and the degree of Delinquency-Z2 and ROE-Z2 ratio to measure the efficiency of the financial performance of Municipal Savings and Credit Funds (CMAC) in a sample of six entities with assets greater than S/2 trillion (2 trillion Soles). The empirical findings show that CMAC Huancayo, Arequipa, Cusco, and Piura manage to stand out in their financial performance in 2015-2021, while CMAC Trujillo manages to exceed 50% efficiency, but CMAC Sullana is alarmingly inefficient. The proposed model provides a comprehensive and pragmatic approach to measuring the efficiency of these microfinance institutions' financial performance, a limitation overcome by this research. Among the conclusions, it is important to understand the level of efficiency of the CMACs' financial performance to identify those with the best practices in a highly competitive environment.

Periche-Delgado et al. (2020) aimed to describe the evolution of delinquency rates during a COVID-19 lockdown at the Caja Rural de Ahorro y Crédito Raíz. The study had a non-experimental design, with a quantitative and descriptive approach. The population consisted of 44 branches and offices distributed nationwide. Among the instruments applied was the documentary analysis guide. The results showed that the company's delinquency rate showed an upward trend between 2016 and 2020, a result of microeconomic and macroeconomic factors, the latter due to the global crisis caused by COVID-19. Therefore, it is concluded that the increase in delinquency rates during the period analyzed was influenced by default on credit payments within the first 30 to 60 days, a result of customers' purchasing power deficits and/or temporary problems, and currently by the coronavirus pandemic, which has affected most Peruvians economically.

Tamay (2025). The objective of this study was to determine the predictive impact of credit risk management practices on the delinquency rate of a Peruvian savings and credit cooperative. A quantitative approach was adopted, with a correlational-explanatory scope and a cross-sectional design applied to 34 credit managers. Hierarchical multiple regression was used for the analysis, considering four dimensions of risk management: credit policies, debtor assessment, recovery mechanisms, and portfolio diversification. The results show that the model was statistically significant and explained 58% of the variance in delinquency. It is concluded that effective credit risk management requires going beyond formal documentation and focusing on operational processes that translate into daily practices of rigorous assessment and proactive recovery.

## 1.3. Theoretical foundation

Due to the large number of academic contributions, there is no precise definition of banking crises, as they vary according to the approach, methodological aspects, and economic reality of each country or region. However, the most general definitions are those suggested by

Mishkin (1996), who describes a banking crisis as an event caused by information asymmetry, adverse selection, and moral hazard between lenders and borrowers, and by Bell and Pain (2000), who define a financial crisis as an episode in which an institution or group of financial entities face internal difficulties due to a drop in the value of their assets. According to Santomero (1997), banking crises are directly linked to three types of financial risks: market, credit, and liquidity.

Bobadilla (2019), for its part, points out that default occurs when a person, company, or corporation requests a loan from a financial institution. That is, the client agrees to a payment method and date, but fails to comply with the agreement. In addition to what Bobadilla mentioned, this lack of payment harms financial institutions not only in their solvency but also in their profitability, since this indicator directly affects the company's results.

On the other hand, Bernal and Amat (2012) point out that the financial performance of companies is measured by profitability, solvency, and the ability to meet their obligations, among other analytical factors. Diagnosing financial performance using these indicators improves organizational performance.

The financial problems that come with the high cost of credits generate uncertainty in the clients of banking services, for which there is a very helpful tool to leverage in this type of situations, such as financial restructuring which consists of re-planning the conditions of the obligation to a longer period of time in which it is feasible to agree on a quota to meet the quotas and not enter into default (Valderrama et al., 2021),

Furthermore, Sam et al. (2025) argue that the implementation of credit insurance, collateral guarantees, and strong internal risk management schemes has a positive effect on MFI asset quality by reducing non-performing loans. According to Sakyi-Yeboah et al. (2025), the non-performing loan estimation model, which incorporates poor planning, unforeseen circumstances, and strategic defaults, allows for better identification of triggering factors and more appropriate responses in microfinance institutions..

According to Basilio et al. (2019), they establish a proposal for improving a microfinance product aimed at women entrepreneurs. To achieve this, the following actions must be taken:

- Conduct a new assessment starting with the second loan granted to each client.
- Loyalty through training that can be provided to develop certain skills within your business: knowledge in marketing, finance, and business development.
- Virtual training using the bank's digital media to develop skills related to the home: personal finances and household finances.
- The proposal is to create a variable remuneration incentive scheme for advisors who manage the women's credit product portfolio.
- A mobile app will be used to submit an assessment to each advisor in the field and online. This will allow pre-qualification of clients so they can respond more quickly and provide more efficient customer service.
- The approver will review the online assessment. The goal is to ensure that if the loan has no comments, it can be approved online, further improving customer response time.

According to Toledo et al. (2022), it is essential to establish a "digital transformation strategy in microfinance institutions." This strategy should include the following cross-cutting elements across the organization:

1) Design and implement a digital strategy (with an emphasis on strategic agility). For this reason, microfinance institutions must pay greater attention to strategy to maintain business relevance, while also keeping their social impact in mind.
2) Incorporate a digital culture. This implies a transformation of the business vision. In other words, for a digital transformation to occur in an organization, there must first be a cultural transformation throughout the organization.
3) Regarding processes, processes should be mapped and reoriented with an emphasis on customers, i.e., the credit-granting process.
4) Technology. Incorporate appropriate digital tools and platforms to achieve business objectives and strategy.
5) Implement digital transformation, from the customer experience (knowledge creation) and, above all, achieve greater financial inclusion.

Microfinance institutions must also establish predictive analytics strategies. To do so, they must observe GDP movements, exchange rates, and reference interest rates (cost of money) to project their company's growth in line with the economy and anticipate currency mismatch risks.

In addition to the literature review, microfinance institutions should consider the following proposed models for measuring financial performance, thus enabling them to make appropriate decisions to minimize credit risks.

**Table 1:** Models Used to Evaluate the Financial Performance of Microfinance Institutions

| Authors | Model or Technique | Indicators |
|---|---|---|
| Altman et al. (2017), Ko et al. (2017) | Altman's Z Multiple Discriminant Analysis | Working Capital/Total Assets<br>Total Profit/Assets<br>EBIT/Total Assets<br>Total Equity/Liability<br>Total capital |
| Ohlson (1980), Murthy (2013) | Logit for financial ratio analysis and credit management | Net interest margin<br>Return on investment<br>Return on capital<br>Cost-income ratio<br>Liquid assets/clients<br>Short-term financing<br>Liquid assets/total deposits<br>Loans<br>Total assets |
| Shamsuddin et al. (2018) | Analysis of financial ratios | Liquidity<br>Leverage<br>Efficiency<br>Performance |
| | Analysis of financial ratios and credit management | Productive assets/Total assets<br>Total Portfolio Delinquency |
| Peláez and Villacis (2022) | Analysis of financial ratios and credit management | Coverage of the Priority Consumer Credit Portfolio<br>Microcredit Porfolio Coverage<br>Operating Expenses/Financial Margin<br>Total Due Portfolio |

Note. The table describes the models used to evaluate the financial performance of microfinance institutions.

# 2. Methodology

## 2.1. Methodological route: tools and procedures followed

This study sought to analyze the causes and consequences of the microfinance crisis in Peru. Using documentary analysis and interview techniques, all available relevant research on the topic was compiled, evaluated, and interpreted, ensuring a comprehensive and critical view. The research was descriptive and explanatory in scope, using an analytical, synthetic, and deductive method.
Various recent bibliographies and electronic databases were consulted, as well as interviews with individuals nationwide.
The data sources were electronic, obtained from Scopus, Scielo, Latindex, Dialnet, and academic repositories from national and international universities. University libraries: Digital libraries of Peruvian and international universities will be reviewed to identify theses, dissertations, and other academic documents related to the topic.
Institutional reports: Reports from Peruvian financial and regulatory institutions, such as the Superintendency of Banking, Insurance, and AFP (SBS), the Central Reserve Bank of Peru (BCRP), and other relevant organizations, were consulted.
Government and regulatory documents: Peruvian government laws, regulations, and official documents related to the microfinance sector were reviewed.
Electronic databases and other data sources were searched using keywords such as "microfinance crisis in Peru," "causes of the microfinance crisis," "consequences of the microfinance crisis," and related terms. The titles and abstracts of the studies found were assessed for relevance to the inclusion criteria. Studies that passed this initial review were further assessed to confirm their relevance and methodological quality. Finally, a spreadsheet was used to extract key information from each study, including author, year of publication, objectives, methodology, results, and conclusions.
The findings are summarized, highlighting emerging themes and trends found in the financial literature. Diagrams and tables were used to visually summarize the main elements of the microfinance crisis in Peru. A critical discussion of the results is also presented, comparing them with previous studies and offering an interpretation of the results.
The population and sample consisted of 35 microfinance institutions in Peru, distributed as follows: 1 multiple bank, 9 financial companies, 12 municipal banks, 6 savings and credit banks, and 7 credit companies.

# 3. Results

## 3.1. Findings and analysis of results

The Institute of Economics and Business Development (IEDEP, 2023) reports that the microfinance system in Peru is made up of 35 companies, of which 12 are municipal banks (CM), nine financial companies (EF), seven companies of credits (EC), six rural banks (CR), and one bank (BM).

**Table 2:** Microfinance Institutions in Peru, 2022

| Detail | Number of companies | SME Credit Millions S/ | Term depositS/ |
|---|---|---|---|
| Multiple banking | 1 | 12,509.00 | 7,391 |
| Financial companies | 9 | 6,611.00 | 6,880 |
| Municipal savings banks | 12 | 22,306.00 | 20,6698 |
| Rural savings and credit banks | 6 | 1,197.00 | 1,698 |
| Credit companies | 7 | 986.00 | 0.00 |
| Total | 35 | 43,609.00 | 36,637 |

Note: The table shows the number of microfinance institutions in Peru, the amount of SME loans, and the type of term deposits. SBS (2022).

Table 2 shows that, as of December 31, 2022, total microfinance loans granted by MFIs amounted to S/ 43,609 million, equivalent to 4.6% of GDP. Microfinance institutions account for 51.1% of total loans, followed by the only banking entity specializing in microfinance, Mibanco, which has a 28.7% share. Next in importance are financial institutions (FIs), with 15.2%; and residential and commercial institutions (CRs), with 2.7% and 2.3%, respectively. It is worth noting that MFIs hold term deposits totaling S/36.637 billion, representing 25.5% of the total of this type of deposit in the financial system. Furthermore, they account for 29% of CTS deposits, totaling S/3.096 billion, with 72% placed in fixed-term deposits and 17.3% in financial institutions.

Furthermore, IEDEP (2023) cMicrofinance institutions account for 68.7% of all loans granted to SMEs.Mibanco leads the market with a 28.7% share of total SME loans. It is followed in importance by CM Arequipa(12.1%), CM Huancayo (11.3%), CM Cusco (7.5%), and CM Piura (7.3%).
Likewise, CM loans are primarily used to finance activities in the commerce (32.4%), transportation and communications (8.5%), and real estate (7.7%). In the case of EFs, their lending structure is concentrated in sectors such as commerce (26.5%), agriculture (4.9%), transportation and communications (3.8%), and manufacturing (3.4%). CRs, on the other hand, are more diversified, providing loans in the commerce (25%), real estate (8.1%), agriculture (7.1%), transportation and communications (6.2%), and manufacturing (5.2%) sectors.

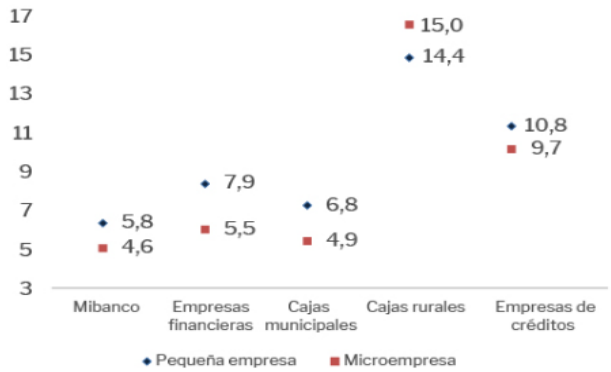


**Fig. 1:** Non-Performing Loans of MFIs as A Percentage of Loans Granted to Small and Micro-Enterprises, 2022.

Note: The figure shows the non-performing loans of MFIs as a percentage of loans to small and microenterprises according to the SBS.

The figure shows that, among MFIs, the percentage of non-performing loans is higher in small businesses than in microenterprises. As of January 2023, the market leader, Mibanco, recorded non-performing loans of 5.8% and 4.6%, respectively. Small and medium-sized businesses maintained similar levels for both small and microenterprises (6.8%). Rural banks maintained non-performing loans at 15.0% and 14.4%, and for small and microenterprises, at 10.8% and 9.7%, respectively. On the other hand, results for the first month of 2023 were negative for residential and commercial banks, which recorded non-performing loans of 14.4% and 15% for small and microenterprises, respectively. It is important to highlight that the trend in this indicator persisted in previous months and was accentuated this year by social unrest.

On the other hand, considering the entire financial system, the highest delinquency rate is found in loans to medium-sized companies (12.5%) and small companies (8%).

**Table 3:** Analysis of Losses of Municipal Savings and Credit Institutions in Peru, January 2024 Compared to January 2023

| Detail | Loss S/ |
|---|---|
| Sullana Box | 8.7 million |
| Tacna Box | 1.2 million |
| Metropolitan Bank of Lima | 680 thousand |
| Paita Box | 270 thousand |
| Holy Box | 98 thousand |
| Total | 10,948,000.00 |

Note: The table shows the losses of microfinance institutions according to the balance sheet of January 2023 compared to January 2022.

Ramos (2024). SBS (2024)

The table shows five savings and loan associations in Peru that reported losses of more than S/10 million according to their balance sheets compared to January 2023. In contrast, seven savings and loan associations achieved positive profits. "These results show us the current picture of the financial system, where we can still see traces of the recession and the blows that municipal savings and loan associations and the economy have received."

**Table 4:** Delinquency in Municipal Savings Banks, January 2024 Compared to January 2023

| Detail | Delinquency |
|---|---|
| Sullana Box | 17.7% |
| Tacna Box | 9.6% |
| Santa's Box | 8.3% |
| Paita Box | 8% |

Note: The table shows the delinquency rate at municipal banks in January 2024. Ramos (2024). SBS (2024).

The table shows that delinquency rates increased by 0.7 percentage points year-on-year in January, reaching 6.1%. In the breakdown, Sullana (17.7%), Tacna (9.6%), Del Santa (8.3%), and Paita (8%) banks were among those with the highest rates. Furthermore, in terms of delinquency rates by type of loan, medium-sized enterprises (14.3%) reported the highest rates, followed by small businesses (6.9%) and microenterprises (5.5%).

On the other hand, the annualized return on equity (ROE) of municipal savings banks went from 3.7% to 3.0% in January 2024. The savings banks reporting negative ROE were Sullana (-36.6.7%), Lima (-12.6%), Maynas (-11.2%), Paita (-3.9%), Tacna (-2.7%), and Del Santa (-0.8%).

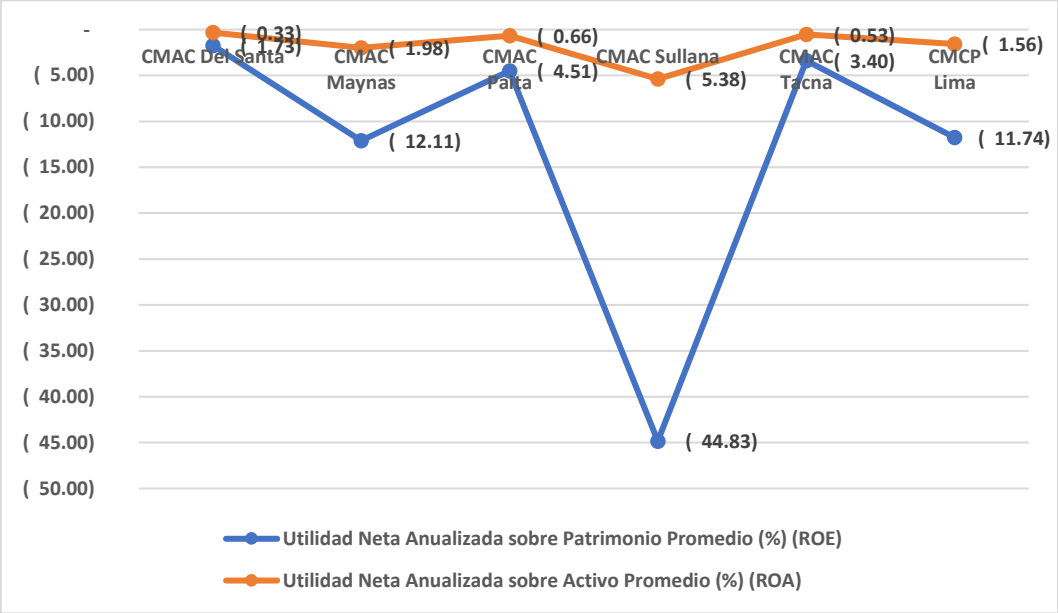


**Fig. 2:** Analysis of Negative Profitability Ratios as of April 30, 2024, of Microfinance Institutions with Financial Difficulties.

Note: Data obtained from the Superintendency of Banking, Insurance and AFP (SBS, 2024).

The figure shows a negative analysis of profitability ratios (ROE and ROA) as of April 31, 2024, for several microfinance institutions. All entities are experiencing significant losses: CMAC Sullana stands out with the largest drop in ROE (-44.83%) and ROA (-5.38%), indicating a severe crisis. CMAC Maynas and CMCP Lima also face large losses in ROE (-12.11% and -11.74%, respectively) and ROA (-1.98% and -1.56%, respectively). CMAC Del Santa, CMAC Paita, and CMAC Tacna, although with smaller losses, still show financial difficulties with negative ROEs of -1.73%, -4.51%, and -3.40%, and negative ROAs of -0.33%, -0.66%, and -0.53%. Taken together, these data reflect a challenging financial landscape for microfinance institutions, likely due to a combination of poor resource management and adverse economic factors. Furthermore, these results suggest the urgent need for strategic interventions to improve the management and operational efficiency of these microfinance institutions.

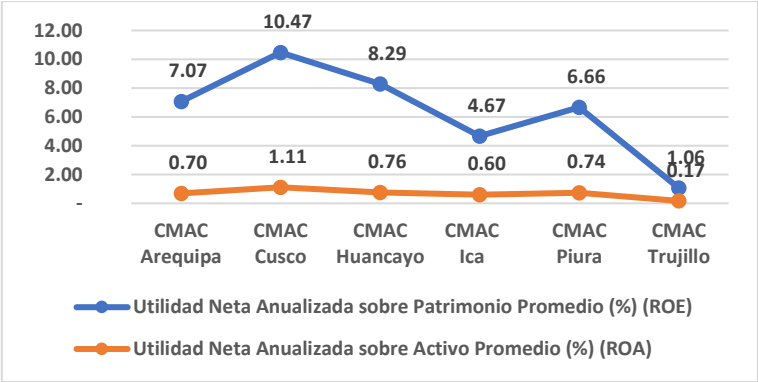


**Fig. 3:** Analysis of Positive Profitability Ratios as of April 30, 2024, for Microfinance Institutions in Good Financial Health.

Note: Data obtained from the Superintendency of Banking, Insurance and AFP (SBS, 2024).

The figure shows positive profitability ratios as of April 30, 2024, for several microfinance institutions with good financial health. These institutions stand out with solid ROE and ROA, reflecting their ability to generate profits. CMAC Cusco leads the way with an ROE of 10.47% and an ROA of 1.11%, indicating excellent efficiency in the use of its equity and assets. CMAC Huancayo and CMAC Arequipa also perform well, with ROE of 8.29% and 7.07%, and ROA of 0.76% and 0.70%, respectively. CMAC Ica and CMAC Piura show healthy profitability ratios, with ROE of 4.67% and 6.66%, and ROA of 0.60% and 0.74%. CMAC Trujillo, although with a more modest ROE of 1.06% and ROA of 0.17%, is still in a positive financial position. These results reflect efficient management and the ability of these microfinance institutions to generate profits while maintaining a solid financial position.

**Table 5:** Delinquency Rates by Days of Default by Municipal Funds with Financial Difficulties as of April 30, 2024

| Companies | Percentage of credits with More than 30 days of non-compliance | More than 60 days of non-compliance | More than 90 days of non-compliance1/ | More than 120 days of non-compliance |
|---|---|---|---|---|
| CMAC Del Santa | 6.00 | 4.99 | 4.46 | 3.61 |
| CMAC Maynas | 9.88 | 8.82 | 5.94 | 5.48 |
| CMAC Paita | 9.62 | 8.61 | 7.65 | 7.25 |
| CMAC Sullana | 20.52 | 17.83 | 16.24 | 14.75 |
| CMAC Tacna | 11.24 | 10.00 | 8.77 | 7.91 |
| CMCP Lima | 5.80 | 4.33 | 3.66 | 3.02 |

Note: Data obtained from the Superintendency of Banking, Insurance and AFP (SBS, 2024).

The table shows the delinquency ratios by days past due as of April 30, 2024, for several financially distressed municipal savings banks. CMAC Sullana stands out negatively with the highest delinquency ratios across all categories: 20.52% of loans with more than 30 days past due, 17.83% with more than 60 days, 16.24% with more than 90 days, and 14.75% with more than 120 days, indicating a serious delinquency situation. CMAC Maynas and CMAC Paita also present high levels of delinquency, with CMAC Maynas reaching 9.88% in the more than 30 days category and gradually decreasing to 5.48% in the more than 120 days category, while CMAC Paita shows a similar pattern with 9.62%, dropping to 7.25%. CMAC Tacna presents intermediate ratios, with 11.24% over 30 days, decreasing to 7.91% over 120 days. On the other hand, CMAC Del Santa and CMCP Lima have the lowest delinquency ratios, with CMAC Del Santa ranging from 6.00% over 30 days to 3.61% over 120 days, and CMCP Lima showing 5.80% over 30 days, decreasing to 3.02% over 120 days. These data underscore the urgency of implementing risk management and credit recovery strategies to mitigate liquidity issues and improve the financial health of these institutions.

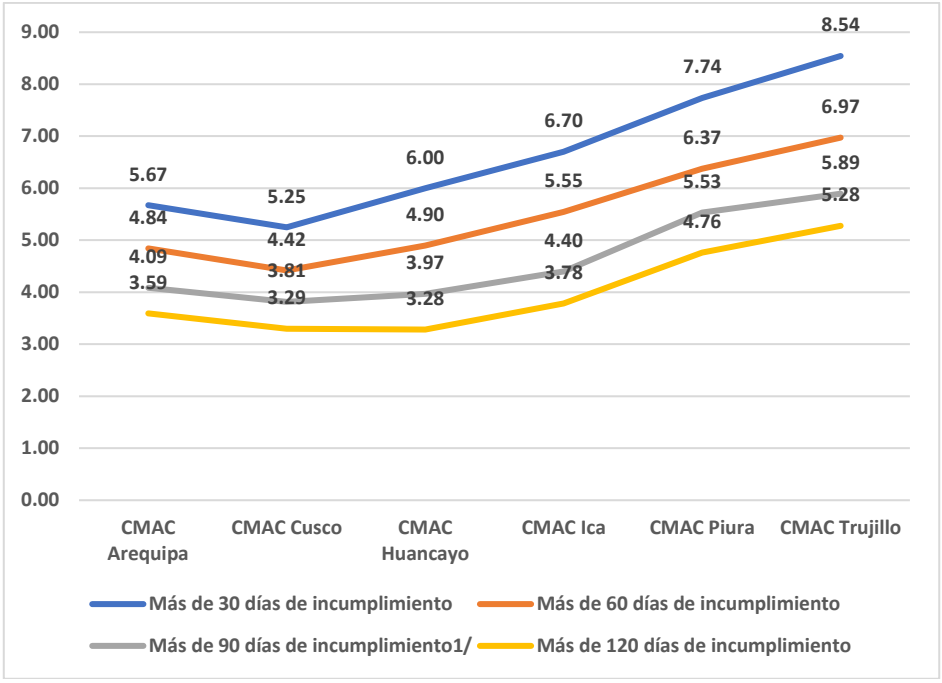


**Fig. 4:** Delinquency Rates by Days of Default by Municipal Funds in Good Financial Health as of April 30, 2024.

Note.Data obtained from the Superintendency of Banking, Insurance, and AFP (SBS, 2024)

The figure shows the delinquency ratios by days in default as of April 30, 2024, for several municipal savings banks in good financial health. CMAC Cusco stands out with the lowest delinquency rates, with 5.25% of loans over 30 days in default, decreasing to 3.29% over 120 days, reflecting effective credit risk management. CMAC Arequipa and CMAC Huancayo also have low delinquency ratios, with CMAC Arequipa ranging from 5.67% over 30 days to 3.59% over 120 days, and CMAC Huancayo from 6.00% to 3.28% over the same periods. CMAC Ica shows a slight increase, with 6.70% over 30 days and 3.78% over 120 days, while CMAC Piura and CMAC Trujillo have slightly higher ratios, with CMAC Piura ranging from 7.74% to 4.76% and CMAC Trujillo from 8.54% to 5.28%. Overall, these data indicate that, despite the current delinquency rate, these institutions maintain good financial health thanks to effective portfolio management and loan recovery, positioning them favorably in the microfinance sector.

**Table 6:** Delinquency by Type and Type of Credit of Municipal Savings Banks with Financial Problems as of April 30, 2024 (In percentage)

| Concept | CMAC Del Santa | CMAC Maynas | CMAC Paita | CMAC Sullana | CMAC Tacna | CMCP Lima |
|---|---|---|---|---|---|---|
| Corporate credits | | - | | - | | - |
| Credits to large companies | | - | | - | | |
| Loans to medium-sized companies | 21.98 | 25.39 | 20.77 | 42.56 | 21.84 | 12.34 |
| Small business loans | 4.83 | 7.50 | 11:00 | 20.04 | 12.97 | 6.45 |
| Credits to microenterprises | 5.86 | 7.68 | 5.27 | 19.70 | 8.59 | 6.74 |
| Consumer credits | 6.21 | 3.28 | 6.41 | 10.96 | 5.56 | 2.99 |
| Mortgage loans for housing | | 13.37 | | 10.24 | 19.63 | 18.30 |

Note: Data obtained from the Superintendency of Banking, Insurance and AFP (SBS, 2024).

The table shows delinquency rates by type and type of loan as of April 30, 2024, for several municipal savings banks with financial difficulties. Loans to medium-sized businesses have the highest delinquency rates, especially in CMAC Sullana, with an alarming 42.56%, followed by CMAC Maynas (25.39%) and CMAC Paita (20.77%). Regarding loans to small businesses, CMAC Sullana again stands out with a rate of 20.04%, while CMAC Tacna and CMAC Paita have rates of 12.97% and 11.00%, respectively. Loans to microenterprises also show worrying levels of delinquency, with CMAC Sullana leading the way with 19.70%, followed by CMAC Tacna (8.59%) and CMAC Maynas (7.68%). Consumer loans have lower, but still significant, rates, with CMAC Sullana registering 10.96% and CMAC Paita 6.41%. Residential mortgage loans show high delinquency rates at CMAC Paita (19.63%) and CMAC Sullana (18.30%). In summary, CMAC Sullana consistently exhibits the highest delinquency rates across all loan types, indicating serious portfolio management and loan recovery issues, while the other institutions also face significant challenges in several loan categories.

**Table 75:** Delinquency by Type and Type of Credit of Municipal Savings Banks That Are in Good Financial Health as of April 30, 2024 (Percentage)

| Concept | CMAC Arequipa | CMAC Cusco | CMAC Huancayo | CMAC Ica | CMAC Piura | CMAC Trujillo |
|---|---|---|---|---|---|---|
| Corporate credits | - | | | | | - |
| Credits to large companies | - | - | - | | 1.76 | |
| Loans to medium-sized companies | 5.13 | 14.35 | 16.61 | 8.31 | 12.75 | 10.17 |
| Small business loans | 6.10 | 5.51 | 6.04 | 6.92 | 8.06 | 9.17 |
| Credits to microenterprises | 5.28 | 4.50 | 4.68 | 4.91 | 6.07 | 7.75 |
| Consumer credits | 3.60 | 2.74 | 3.30 | 4.14 | 5.19 | 3.89 |
| Mortgage loans for housing | 2.91 | 1.63 | 6.55 | 1.35 | 3.38 | 4.15 |

Note: Data obtained from the Superintendency of Banking, Insurance and AFP (SBS, 2024).

The table shows the analysis of delinquency rates by type and type of loan for Municipal Savings Banks in good financial health as of April 30, 2024, showing varied trends. The highest delinquency rates are observed in loans to medium-sized businesses, with CMAC Huancayo standing out at 16.61%, followed by CMAC Cusco at 14.35% and CMAC Trujillo at 10.17%. In contrast, mortgage loans for housing have the lowest delinquency rates, led by CMAC Cusco at 1.63% and CMAC Ica at 1.35%. Consumer loans also show moderate delinquency rates, with values ranging from 2.74% to 5.19% across the different Municipal Savings Banks. This analysis underscores the importance of efficiently managing the risks associated with each type of loan, tailoring specific strategies to mitigate delinquency based on the characteristics of the customer segment and local economic conditions.

**Table 8:** Delinquency by Type of Credit between June 2024 and December 2023, Expressed in Percentages (%)

| Entity | | Multiple Banking | | Financial companies | | Municipal savings banks | | Rural banks | | Credit companies | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2024 | 2023 | 2024 | 2023 | 2024 | 2023 | 2024 | 2023 | 2024 | 2023 |
| Type of credit | Corporate company | 0.57 | 0.32 | 15.16 | 42.47 | | | | | | 1.59 |
| | Large companies | 2.29 | 1.92 | 3.74 | 7.12 | 1.26 | 0.91 | | | 2.9 | 2.74 |
| | Medium-sized business | 13.11 | 13.44 | 12.92 | 40.83 | 15.35 | 14.03 | 4.46 | 3.67 | 9.82 | 10.03 |
| | Small business | 10.43 | 9.71 | 10.22 | 8.75 | 7.96 | 6.35 | 11.66 | 8.23 | 8.33 | 8.77 |
| | Microenterprise | 4.4 | 4.33 | 9.07 | 5.89 | 6.28 | 4.96 | 9.85 | 5.57 | 9.44 | 5.11 |
| | Consumer credits | 4.12 | 3.96 | 6.79 | 6.19 | 4.1 | 3.28 | 6.91 | 5.27 | 3.56 | 5.77 |
| | Mortgage loans | 2.9 | 2.71 | 3.54 | 4.12 | 4.31 | 4.05 | 30.35 | 26.40 | 4.63 | 4.62 |

Note: The table presents the delinquency of the overdue portfolio of direct credit that is overdue and in judicial proceedings between December 2023 and June 2024. (Narváez, 2024).

A comparative analysis of NPL rates between December 2023 and June 2024 shows that, in commercial banking, loans to businesses and large enterprises remain low, albeit with a slight increase, while loans to medium-sized (13.11%) and small-sized (10.43%) enterprises have the highest rates, reflecting the greater vulnerability of these segments. In financial companies, NPL rates for loans to businesses and medium-sized enterprises decreased significantly compared to 2023 (from 42.47% to 15.16% and from 40.83% to 12.92%, respectively), although they remain at high levels, suggesting improvements in management, but still present significant risks. In municipal savings banks, NPL rates increased for loans to small and microenterprises, and for mortgage loans, indicating greater difficulties in smaller-scale sectors. In rural banks, the deterioration is more evident: mortgage delinquency rates soared to 30.35%, and delinquency rates among small and microenterprises also increased, reflecting the fragility of their portfolios. Finally, among credit institutions, stability was observed among medium-sized enterprises and an increase among microenterprises (9.44% compared to 5.11%), while consumer credit decreased.

**Table 9:** Analysis of the Losses of Rural and Municipal Savings Banks

| Institutions | Losses in sales |
|---|---|
| Rural Banks | |
| CRAC Censosud Scotia | -S/7 million 905 thousand |
| CRAC Los Andes | -S/3 million 788 thousand |
| CRAC Prymera | -S/5 million 355 thousand |
| CRAC Incasur | -S/511 thousand |
| CRAC of the Center | -S/6 million 887 thousand |
| Municipal Savings Banks | |
| CMAC del Santa | -S/2 million 34 thousand |
| CMAC Maynas | -S/3 million 768 thousand |
| CMAC Paita | -S/2 million 106 thousand |

Note: The table shows the losses of more than 30 million soles from municipal and rural funds, according to balance sheets as of September 2024. (INAGEP, 2024).

Table 11 shows the magnitude of the crisis facing Rural and Municipal Savings Banks in Peru as of September 2024. In the former, all institutions report significant losses, with the most affected being CRAC Censosud Scotia (–S/ 7 million 905 thousand), CRAC del Centro (–S/ 6 million 887 thousand), and CRAC Prymera (–S/ 5 million 355 thousand), reflecting serious liquidity and financial sustainability problems. In contrast, Municipal Savings Banks present a mixed picture: while most show negative results, such as CMAC Maynas (–S/ 3 million 768 thousand) and CMAC Paita (–S/ 2 million 106 thousand), CMAC del Santa stands out with a profit of S/ 2 million 34 thousand, which shows differences in management capacity and resilience between the institutions. Overall, the results show that the crisis has had the greatest impact on rural savings banks, while municipal savings banks have seen a differentiated effect, with specific cases of positive performance.

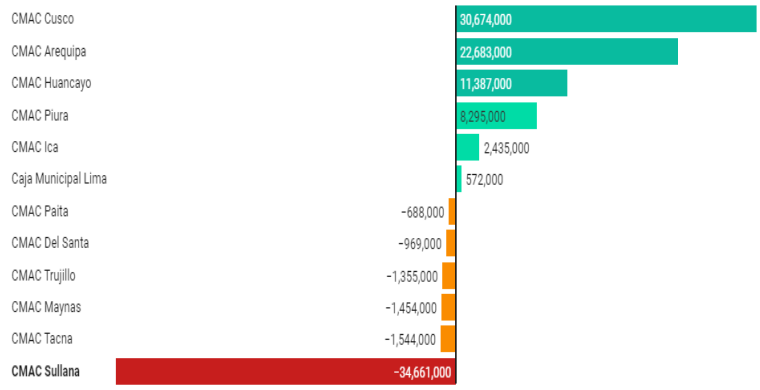


**Fig. 5:** Municipal Savings Banks: Profits at the End of May 2024 (In Thousands of Soles)

Note.Data obtained from the Superintendency of Banking, Insurance, and AFP (SBS, 2024).

As can be seen in the figure, CMAC Sullana had a loss of more than S/34 million as of May 2024. While other entities have accumulated a total of S/6 million in losses, these are considerably lower than those of the fund being intervened by the SBS. As of January 2024, Caja Sullana already had losses of S/8 million 707 thousand, which only continued to worsen throughout the year. In February, these losses increased to S/18 million 13 thousand, their largest single-month increase, with almost S/10 million added. In March, Caja Sullana reported S/26 million 839 thousand in losses, a figure that rose to S/33 million 700 thousand in April. Finally, as of May 31, 2024, the last report was issued, recording a loss of S/34 million 661 thousand.

However, while the municipal savings banks of Paita, Del Santa, Trujillo, Maynas, and Tacna posted negative profits as of May 31, 2024, they were nowhere near the same level as Caja Sullana's losses. The entities in the red were: Caja Tacna reported losses of S/1,544,000; Caja Maynas, negative profits of S/1,454,000; Caja Trujillo, losses of S/1,355,000; Caja Del Santa, losses of S/969,000; and Caja Paita, losses of S/688,000.

Otherwise, Caja Arequipa is the first Caja to exceed S/ 9 billion soles in loans. The Arequipa-based financial institution closes the first half of 2024 with a new record as the first Municipal Savings Bank to exceed S/ 9 billion soles in loans. In the last ten years, Caja Arequipa has achieved profits of S/ 919.3 million soles, which represents 43% of the total profits of the CMACs (Municipal Savings and Credit Funds). It is the third entity in the financial system with the largest SME portfolio in the country, with more than S/ 6 billion.

Also, Chávez (2024), head of the IEDEP, explained that the fastest-growing default rates are among medium-sized companies, reaching 14%, while default rates among small businesses are approaching 10%. According to a 2024 interview with accounting expert Alfonso Yong, he stated that the causes of the deterioration in financial solvency are an excessively aggressive credit policy, which includes lax credit evaluation parameters, poor management of bad loans, and a weak corporate governance model. According to a 2023 interview with Caja Arequipa manager Wilber Dongo Díaz, he considered that high inflation has reduced the purchasing power of households, which decreases demand for goods and directly affects microentrepreneurs, who face higher costs and limitations in replenishing inventories. This contraction is reflected in the decline in financial loans, which in August registered a 1.5% drop compared to the previous year, in contrast to the annual growth of 12% to 20% experienced by the financial system in previous years. The situation reflects a weakened economy and negative expectations among both consumers and businesses, with no signs of improvement under the current government administration.

In this regard, the causes of losses in financial institutions are varied and complex. Some of the main causes include:

1) Poor risk management: Ineffective risk management can lead to significant losses. This includes an incorrect assessment of credit risks, such as granting loans without adequate collateral or with poor track records; market risks, such as excessive exposure to rate fluctuations that can affect the value of assets; operational risks related to failures in internal processes, human error, or technological problems; and liquidity risks, such as when the institution does not have sufficient funds to meet its immediate obligations.
2) Low-quality loan portfolio: When a financial institution grants loans to individuals or companies with a high probability of default, this can increase bad loans and, consequently, losses. This problem arises when there is pressure to increase lending, and evaluation criteria are relaxed.
3) Fraud and malpractice: Internal fraud (tampering with accounting records) or external fraud (credit theft), as well as inadequate corporate governance practices, poorly independent boards of directors, and conflicts of interest, can seriously affect an institution's financial stability.
4) Adverse economic conditions: Economic crises, recessions, and high inflation can lead to an increase in customer defaults, thus discouraging demand for new loans and affecting the institution's revenue.
5) High operating costs: High operating costs (increased branch offices, manual processes, and heavy administrative burden) can significantly reduce net profits, becoming a source of losses for the institution.
6) Lack of diversification: A lack of diversification in financial products and services, or excessive concentration in certain sectors or types of clients, can increase the institution's vulnerability.
7) Regulations and regulatory changes: Deficient supervision by the SBS in the face of the rapid growth of microfinance institutions, insufficient regulation of client over-indebtedness, and failures to implement financial consumer protection policies. All of this can lead to increased compliance costs and restrictions on activities.
8) Liquidity problems: Inadequate management of liquidity (cash, short-term investments, accounts receivable) often leads to difficulties in meeting short-term obligations, which can result in losses.
9) Insufficient technological innovation: Lack of investment in modern technologies(fintech, digital banking, big data for risk analysis)leads to a loss of competitiveness compared to other, more innovative and efficient institutions.
10) Unforeseen external factors: Natural disasters (floods, earthquakes), pandemics (e.g., COVID-19 pandemic), or geopolitical crises cause significant disruptions to operations and negatively affect the institution's finances.

On the other hand, the consequences of losses in financial institutions in Peru are significant and affect various aspects of the country's financial and economic system:

1) Impact on financial stability Losses weaken institutions' financial position, which in turn can affect depositor and investor confidence in the banking system.

2) Reduction in credit availability. Loss-making financial institutions are becoming more cautious about lending, which can limit access to financing for individuals and businesses, impacting economic growth.
3) Systemically significant losses at major financial institutions can create systemic risk, affecting the stability of the financial system as a whole and potentially requiring regulatory interventions to mitigate the impact.
4) Increase in interest rates. Financial institutions raise interest rates to offset losses, which can make credit more expensive and discourage investment and consumption.
5) Reputation and trust losses can damage the reputation of the affected financial institution, leading to the loss of customers and affecting its ability to attract deposits and financing.
6) Impact on employment and the local economy. Severe cases, loss-making financial institutions are forced to reduce staff or close branches, which would affect local employment and economic activity in the areas where they operate.
7) Pressure on the regulatory and supervisory system. Losses at financial institutions test the effectiveness of regulatory and supervisory mechanisms, leading to possible regulatory adjustments or improvements in supervisory practices.
8) Impact on competitiveness and development of the financial market. Persistent losses hamper the growth and competitiveness of financial institutions relative to their healthier peers, limiting diversification and innovation in the financial sector.

These results highlight the need for clear strategic and policy interventions to strengthen financial management and reduce the crisis in the microfinance sector, thereby ensuring its long-term sustainability.

I. Strategic solution proposal

Thus, based on what has been obtained in terms of both financial data and models, the following proposal for a resilient strategic model is presented.

1) Financial restructuring: Financial restructuring is proposed as a fundamental tool to alleviate excessive credit costs and reduce default rates. It consists of redesigning loan terms with longer terms and manageable installments, thus facilitating customer compliance.

Strategy:

- Periodic evaluation of clients with difficulties in meeting their quotas.
- Renegotiation of terms, credit to establish longer terms and lower installments.
- Continuous monitoring of the financial performance of restructured clients.

Costs:

- Administrative costs: Credit staff hours spent on renegotiation and supervision.
- Technology costs: Adapting systems to register new payment plans.
- Indirect costs: Possible temporary losses due to interest rate reductions or expansion of the deadlines.

2) Improvement of microfinance products: Implement a specialized approach for microfinance products aimed at women entrepreneurs, considering the following actions proposed by Basilio et al. (2019):

Actions:

- Conduct a comprehensive evaluation starting with the second loan granted.
- Offer loyalty programs that include training in areas such as marketing, finance, and business development.
- Develop virtual training in personal and household finances.
- Establish a variable compensation incentive scheme for advisors.
- Implement a mobile app for customer evaluation and pre-qualification, facilitating rapid credit approval.
- Adjust interest rates according to the sector that enjoys tax exemptions, longer grace periods, and flexible credit lines.

Costs:

- Training and loyalty programs: hiring consultants, providing educational materials, and virtual training platforms.
- Mobile applications and digital tools: software development, licensing, and technical support.
- Advisor Incentives: Variable bonuses and additional compensation plans.
- Interest rate adjustments: impact on loan revenues in tax-advantaged sectors

3) Digital transformation: Adopt a comprehensive digital transformation strategy in microfinance institutions, as suggested by Toledo et al. (2022), to improve operational efficiency and financial inclusion.

Elements of the strategy:

- Design and implement a digital strategy focused on business agility and sustainability.
- Promote a digital culture within the organization.
- Map and reorient processes with a focus on customer satisfaction.
- Incorporate appropriate digital tools and platforms to meet business objectives.
- Improving customer experience and increasing financial inclusion through digitalization.

Costs:

- Technological infrastructure: investment in servers, management software, and cybersecurity systems.
- Internal training: digital skills training for managers and operational staff.
- Digital strategy and consulting: hiring external specialists for design and implementation.
- Digital marketing: communication campaigns to migrate customers to digital channels.

4) Risk management and predictive analysis: Implement predictive analytics strategies and financial models for more effective risk management.

Models and techniques:

- Use the Altman Z model for multiple discriminant analysis, other logit models, and financial ratio analysis.
- Evaluate key indicators such as working capital, profit, liquidity, leverage, and efficiency.
- Incorporate financial ratios and credit management analysis to monitor delinquency and portfolio coverage.

Costs:

- Analytical software licenses: big data tools, statistical modeling, and machine learning.
- Staff training: costs of specialized training in risk models (Altman Z, logit, discriminant analysis).
- Financial consulting: external advice on predictive model design and portfolio monitoring.

5) Investment in human capital and technology: Strengthen the microfinance relational model through investment in human capital and technology.

Strategies:

- Attract and retain human talent with a high level of professionalism.
- Invest in technology platforms and fintechs to improve information quality and customer portfolio segmentation.
- Complement the relational model with an operational efficiency and risk management model.

Costs:

- Talent attraction and retention: costs of selection processes, hiring, and retention programs for key personnel.
- Fintech and CRM platforms: acquisition of systems for customer management and portfolio segmentation.
- Continuing education: courses in risk management, digital finance, and customer service.

6) Financial regulation and supervision: Strengthen financial oversight by the SBS.

Strategies:

- Strengthen oversight mechanisms for institutions with high default rates through more frequent audits, corrective action plans, and the promotion of debt restructurings that facilitate compliance with obligations and prevent bankruptcy.
- Evaluate regulations issued by the SBS, the World Bank, and the OECD on emerging issues related to data protection, cybersecurity, and the prevention of money laundering.

Costs:

- Internal oversight costs: external audits and strengthening of internal control systems.
- Regulatory adaptation: adaptation of internal processes to new regulatory standards.
- Regulatory compliance training: training in financial regulations and regulatory risk prevention.

## 4. Discussion and Conclusions

Regarding the discussion, microfinance institutions such as CMAC Sullana, CMAC Maynas, and CMCP Lima face serious financial difficulties with significant negative profitability ratios (ROE and ROA). CMAC Sullana stands out with the largest decline in ROE (-44.83%) and ROA (-5.38%), indicating a severe crisis. These results suggest that poor resource management and adverse economic factors have severely impacted their profitability. In contrast, entities such as CMAC Cusco and CMAC Huancayo show positive ratios, reflecting efficient management and the ability to generate profits. This underscores the critical importance of sound financial management to maintain financial health in the microfinance sector. Furthermore, delinquency in microfinance institutions presents another critical aspect. CMAC Sullana consistently exhibits high levels of delinquency across all loan categories, indicating serious problems in portfolio management and loan recovery. This situation contrasts with CMAC Cusco and other institutions that, despite facing some delinquency, maintain much lower rates, reflecting effective risk management strategies. The urgent implementation of risk management and credit recovery strategies is crucial to mitigate these problems and improve the institutions' liquidity and financial stability. In this regard, the causes of the microfinance crisis in Peru include factors such as poor risk management at financial institutions, high levels of delinquency in loan portfolios, and a lack of diversification of financial products. These factors contribute to the vulnerability of the microfinance sector to economic and financial shocks. Therefore, the microfinance crisis results in a reduction in the availability of credit for the most vulnerable segments of the population. This negatively impacts local economic development and intensifies financial exclusion, limiting access to essential financial services for disadvantaged communities. Therefore, the implementation of the proposal will significantly contribute to mitigating the causes of the microfinance crisis in Peru, improving the financial stability of institutions, and increasing client confidence and satisfaction. Adopting a comprehensive approach that combines financial restructuring, product enhancement, digital transformation, and risk management will ensure a more sustainable and resilient future for the microfinance sector.

Finally, it is concluded that the study contributes to theoretical progress by identifying the main triggers of the microfinance crisis in Peru, highlighting poor risk management, high loan delinquency, and limited diversification of financial products as structural elements that compromise the sector's sustainability. From a practical and policy perspective, the findings underscore the need to implement strategies aimed at strengthening credit evaluation processes, optimizing portfolio recovery mechanisms, promoting the digitalization of services, and fostering broader diversification that reduces institutions' vulnerability to external shocks.

Beyond these measures, it is pertinent to propose a novel conceptual framework, such as a resilience model for microfinance, that allows for the articulation of financial management practices with social and technological sustainability approaches. This framework will contribute not only to strengthening the sector's stability but also to aligning research with global financial trends, to generate applied knowledge and innovative solutions to the contemporary challenges of emerging economies.

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