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Assessing the Financial Performance of a Large Multi-purpose Cooperative: Foundation for Risk Treatment Blueprint

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Abstract: Cooperative's operations are inherently exposed to risks and effective risk management framework helps minimize losses and enhance sustainability. The study assessed the risk exposures of a large multi-purpose cooperative and proposed mitigation strategies utilizing mixed-method approach. Findings reveal loan delinquency, inadequate loan loss provisions, limited financing sources, and non-performing assets as major risk areas. These were assessed as either disastrous or critical risks. Proposed mitigating strategies include: updating policies, refining operational systems, and product and asset utilization analysis. The study concludes that liquidity and credit risks are the primary aspect affecting the cooperative's financial performance.

Keywords: Cooperative Governance; Industry Standards; Financial Statement Analysis.

1. Introduction

Risks are inherent in every aspect of business operation (Small Business Development Corporation, 2021). In today's environment, where risks are prevalent, it is crucial for a business entity to have a strong risk management system to ensure its sustainability. According to several researchers, risk can be minimized by identifying, analyzing, prioritizing, planning, tracking, and controlling events that may arise during the business lifecycle (Lab-oyan, 2017). As such, risk management has become an essential part of effective management and governance. In a study by Sugiyanto and Rahayu (2018), it was found that implementing risk management within cooperatives has a significant positive impact on governance. By addressing various risks such as credit, market, liquidity, operational, legal, reputation, strategic, and compliance risks, cooperatives can foster good governance.

Moreover, almost all types of risk carry financial consequences, including additional costs or lost revenue. Financial risk, which refers to a business's ability to manage debt and meet its financial obligations, is particularly significant in this context. This type of risk includes the potential for sudden financial loss due to outstanding debts or unforeseen expenses. There are generally four categories of financial risks: credit risk, market risk, operational risk, and liquidity risk. Credit risk refers to the likelihood of failing to pay creditors or suppliers. Market risk arises from fluctuations in factors like market volatility, interest rates, or the prices of raw materials and currencies. Operational risk stems from failures in business processes, systems, or policies, including issues like fraud, technical failures, or human error. Liquidity risk on the other hand pertains to a business's ability to meet short-term financial obligations, affecting its ability to carry out essential transactions (nibusinessinfo.co.uk, n.d.).

Risk management is a comprehensive approach that protects the cooperative's assets, revenues, personnel, and reputation while maintaining efficiency and minimizing costs. Despite its importance, not all cooperatives have formal risk management plans. For organizations handling people's resources, such as cooperatives, it is essential to assure shareholders that their investments are protected. Effective risk management can help address potential threats both within and outside the organization, yet many cooperatives lack hazard identification mechanisms. This absence of preparedness aggravates the consequences when risks materialize, often leading to financial losses, asset devaluation, and a decline in net surplus, which can negatively affect member dividends.

In the cooperative sector, risk management training is mandatory for officers of cooperatives handling at least PHP 5,000,000 in deposit liabilities as promulgated by the major oversight agency of cooperatives, the Cooperative Development Authority through Memorandum Circular No. 2015-09, sec. 3. This training ensures that cooperative leaders are equipped with the knowledge to manage risks effectively, which is crucial for achieving the cooperative's objectives while maintaining an acceptable level of risk. The board of directors (BOD) has a responsibility to identify and monitor key risks, ensuring that internal controls are in place.

Despite this effort by the CDA, risk management remains a relatively new discipline within the cooperative sector. Unlike private corporations, cooperatives often lack sophisticated risk management frameworks. Additionally, the board of directors and the audit committee who are elected by the general assembly, may not have the necessary technical expertise to effectively oversee risk management. A study by Fagyan (2015) found that many members of cooperative boards and audit committees in Mountain Province lack the business-related knowledge and skills needed to perform their duties adequately. This gap in qualifications complicates the implementation of an effective risk management system.

Savings and credit cooperatives play a crucial role in enhancing the quality of life through provision of sustainable financing sources as they serve as microfinance and microlending sectors. These cooperatives promote financial inclusion, particularly for vulnerable populations, and many of whom reside in rural areas and are members of agricultural cooperatives and associations (Vargas et, al., 2023). In Mountain Province, one cooperative, established as one of the

oldest in area has focused on providing credit services for decades. In addition to credit, it offers allied services such as bill payments, money transfers, flight bookings, and savings programs. By December 2020, the cooperative had served 3,980 members based in the cooperative's 2021 annual Report. Given the wide range of services offered, the cooperative's long-term sustainability is crucial. However, like many financial institutions, it faces a variety of business risks, particularly those with financial implications. The COVID-19 pandemic has only heightened these risks, disrupting business operations due to mobility restrictions. Notably, this cooperative also lacks a formal risk management system.

The study then seeks to address these issues by identifying the risk exposures faced by a large multi-purpose cooperative, evaluating its severity, and developing a risk management plan to guide the cooperative in mitigating these risks. The proposed strategies included risk treatment programs and activities aimed at enhancing the cooperative's sustainability and long-term success.

This study serves as a valuable foundation for cooperatives by providing baseline data on their financial performance through various ratios and analyses. Given the cooperative's vital role, this study contributes to improving its risk management practices, which were previously limited to basic internal controls. By identifying risks, the cooperative can create a more effective risk management strategies to mitigate potential impacts ultimately enhancing its ability to generate profits for its members. Finally, the study is also beneficial to decision-makers in both the private and government sectors in the development of policies to support the growth of the cooperative sector as a key player in socio-economic development.

2. Literature Review

Financial cooperatives play a crucial role in many countries' financial systems. They provide a safe haven for deposits and serve as significant sources of credit for households and small- and medium-sized businesses (McKillop et al., 2020). However, like any other organization, financial cooperatives face the risk of unexpected and damaging events that could result in financial losses or even closure. Cooperatives, like banking institutions, are exposed to various risks, including credit, interest rate, liquidity, and operational risks. If these risks are not properly managed, cooperatives may not only experience financial losses but also fail to achieve their strategic objectives. In extreme cases, poor risk management could lead to the collapse of a cooperative, causing depositors to lose their savings (Co-operative Banks Development Agency, n.d.). As defined by the International Standards Organization (ISO), risk encompasses uncertainty that arises from both known and unknown sources. In Ecuador, savings and credit cooperatives prioritize profitability by assessing the viability of their business operations, which impacts overall financial performance. A key focus is placed on the profitability of the microcredit portfolio, as it plays a crucial role in sustaining the cooperative's contributions to both financial stability and social value creation (Vargas et, al., 2023).

To minimizing risks and control extra costs before they occur, risk management play a vital process for businesses, enabling them to prepare for unforeseen circumstances. Risks can arise from multiple sources, including financial uncertainty, legal liabilities, strategic mismanagement, accidents, and natural disasters. Financial risk management specifically focuses on assessing assets and liabilities, both in the present and for the future (Svetlova and Thielmann, 2020). It involves identifying, managing, and hedging exposure to various financial risks. A well-established risk management framework is necessary to predict and measure the potential impacts of uncertainties on a business.

Verma (2021) identifies three primary types of risks: business risks, non-business risks, and financial risks. Non-business risks are those that are beyond the control of the organization, while business risks are those actively taken by enterprises to maximize shareholder value and profits. Financial risks, as the term implies, are those that result in financial losses to businesses, often caused by instability in the financial markets, such as fluctuations in stock prices, currency values, or interest rates. Financial risks are further classified into four categories: market risk, credit risk, liquidity risk, and operational risk (nibusinessinfo.co.uk, n.d.). These risks affect an organization's financial performance, including profitability, asset management, and cash flow. On the other hand, market risk refers to the potential for loss due to market volatility, which can negatively impact investments

For financial cooperatives, market risk includes the possibility of financial losses when the market value of investments falls. Credit risk, or default risk on the other hand, arises from the possibility that borrowers will not meet the terms of their loans, leading to financial loss (Co-operative Banks Development Agency, n.d.). Relevant to credit risk, cooperatives are exposed to it with material contribution coming from the loan receivables. Credit risk is not isolated, so cooperatives must ensure sufficient capital to cover any potential defaults. Also, liquidity risk refers to the potential threat to savings and credit cooperative's earnings or capital arising from its inability to fulfill financial obligations as they become due. This risk can significantly impact the cooperative's financial stability and operational effectiveness if not managed properly (Wanjiru and Jagongo, 2022). This risk includes both asset liquidity and operational funding liquidity. Effective liquidity management is critical for maintaining cash flow and avoiding financial strain. Finally, operational risk stems from the failure of people, processes, or systems within the organization. It includes risks such as fraud, legal issues, and employee errors (Maverick, 2021).

To effectively manage these risks, it is essential to identify the key individuals involved in risk management. One of the primary actors is the board of directors, which plays a critical oversight role. According to Lipton et al. (2018), the board of directors must ensure that risk management policies align with the organization's strategy and risk appetite, and that these policies are being implemented correctly. The board also fosters a culture of risk awareness across the enterprise. Tucci (2021) notes that in the wake of the COVID-19 pandemic, many boards are reevaluating their risk management strategies and considering more proactive approaches to managing risks, with an emphasis on sustainability, resilience, and agility.

In addition to the board of directors, the audit committee is also responsible for overseeing the implementation of risk management measures. Lipton et al. (2018) note that while the full board often discusses fundamental risks, most risk management oversight is delegated to the audit committee, which coordinates risk management activities. This practice is consistent with the New York Stock Exchange rule that mandates audit committees to discuss risk assessments and management processes.

Management or CEOs plays a central role in the risk management system of any organization. In today's rapidly evolving business landscape, CEOs who adopt a comprehensive and proactive risk management strategy can significantly enhance their organization's value, benefiting both the company and its customers. CEOs who embrace their role as the primary decision-makers in risk management and collaborate closely with other executive team are more effective in utilizing advanced risk management strategies (McKinsey & Co., 2022). The CEO, under the oversight of the board, is responsible for implementing sound risk management practices and ensuring internal controls are in place within the organization's defined risk appetite. However, risk management practices of the cooperative appear to be inadequate making it essential for the relevant authorities to implement suitable risk management systems, with a strong focus from management on improving risk oversight (Paudel, 2022).

Financial statement analysis is an important tool in risk management. Shamsuddin et al. (2018) argue that financial statements are essential for stakeholders to assess the financial health of a cooperative or financial institution. They provide valuable insights into an organization's ability to manage its risks and make informed decisions. Financial analysis is the process of reviewing a company's financial data to understand its performance and suggest ways to improve.

It helps measure the company's stability, profitability, and ability to pay its debts. Internally, it helps manage finances, while externally, investors use it to evaluate the company's health and value. There are two types of financial analysis: Horizontal and Vertical Analysis. The key difference between them is that horizontal analysis compares the percentage change in an item on the financial statement to the corresponding item from a base year. In contrast, vertical analysis evaluates each item in the financial statement as a percentage of another item within the same period (Shaji, 2021).

In addition, the financial performance of cooperatives could also be evaluated using PISO standards, which assess profitability, institutional strength, asset structure, and operational strength (CDA MC No. 2013-15, s. 2013). This analysis is typically performed by the audit committee or financial officers.

Failure to manage these risks can impact a cooperative's profitability and asset management. Culp (2017) notes that low profitability is a concern for any business, and risk management is vital for ensuring sustainable growth. Studies, such as those by Kioko et al. (2019), have shown a significant negative relationship between financial risk and financial performance, underscoring the importance of managing financial risks to maintain financial stability. Furthermore, the management of non-performing assets (NPA) is critical to improving the overall financial health of an organization, as evidenced by the study of Arasu et al. (2019), which highlighted the relationship between NPA levels and financial performance. Further, the existence of non-performing assets (NPAs) can severely affect profitability, solvency, and overall financial stability. Addressing this issue requires the implementation of sound risk management strategies, strategic restructuring, and efficient resolution processes to minimize the negative impact on the institution (Kumar et, al., 2024). By implementing effective risk management strategies, cooperatives can mitigate financial risks, protect their assets, and ensure long-term sustainability.

3. Conceptual Framework

The study is anchored on the Agency theory as a framework that seeks to explain the relationship between principals and agents, particularly in business contexts. The principal is the party that delegates authority, while the agent is entrusted with acting on the principal's behalf. In this model, the agent is expected to prioritize the principal's interests over personal gain (The Investopedia Team, 2024). In a business setting, the principal is typically the shareholder, and the agent is the company's executive. The theory suggests that if the executive acts in a way that negatively impacts the shareholder's interests—such as diminishing stock value—a conflict arises, leading to a poor relationship. Conversely, when the executive's actions increase the shareholder's wealth, a positive relationship is fostered.

In the context of cooperatives, Bakar et al. (2020) highlight the significance of managing internal controls effectively to enhance the cooperative's performance in risk management, which aligns with agency theory. This concept rests on the notion that the board of directors (BOD) and the audit committee have the responsibility to ensure vigorous internal controls are in place.

In the study, agency theory is applied with the general assembly acting as the principal, and the board of directors, audit committee, and general manager serving as the agents. The board and audit committee are elected by the general assembly, while the general manager, though not directly elected by the assembly, holds the highest managerial position in the cooperative's structure. These groups are critical in the cooperative's operations. According to agency theory, these agents must act in the best interests of the principal, which includes ensuring effective risk management practices that prevent adverse financial consequences for the cooperative.

Moreover, this study is also based on the ISO 31000: Risk Management - Principles and Guidelines for Implementation, which outlines a systematic process for managing risks which is not limited to a specific sector and can be applied universally across various types of organizations and contexts (International Organization for Standardization, 2018).

The ISO Risk Management Framework is used to assess the risk exposure of the participating large cooperative. By identifying and analyzing potential risks within the cooperative, the goal is to develop a targeted risk management program that outlines the best possible risk response and treatment strategies. The conceptual framework presented in Figure 1 illustrates the integration of these elements, guiding the risk management process and helping to establish a comprehensive risk management plan for the cooperative.

The primary purpose of defining scope, context, and criteria in the risk management process is to tailor it to the specific needs of the organization, ensuring a focused and efficient approach to risk assessment and treatment. Once the scope has been defined, the next step is risk assessment, which encompasses a systematic process of identifying, analyzing, and evaluating risks. This assessment should be collaborative, iterative, and based on the best available information, enriched by stakeholder input and additional investigation when necessary.

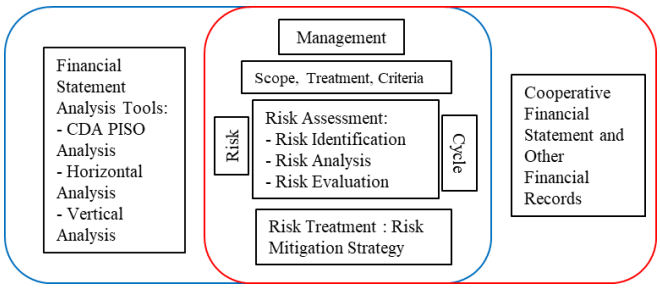


Figure 1. Conceptual Framework

The first phase of the risk assessment process is risk identification wherein during this stage, the cooperative's financial data plays a crucial role by reflecting the financial health of the cooperative. Tools like the PISO analysis from the Cooperative Development Authority (CDA), along with horizontal and vertical financial analyses, are instrumental in determining the cooperative's risk exposure. PISO, which stands for Profitability, Institutional Strength, Structure of Assets, and Operational Strength, helps assess the cooperative's financial performance. Horizontal analysis identifies trends over multiple accounting periods, while vertical analysis (common-size analysis) shows each financial statement item as a percentage of a base figure within the statement.

Next is risk analysis, which focuses on understanding the nature of risks and their characteristics, including their potential impact. This step involves a thorough examination of the uncertainties, sources of risk, possible consequences, likelihood, and control measures in place. Further, in this phase, a risk matrix, which is a four-by-four matrix, is applied to assess the likelihood of different risks.

The final phase of risk assessment is risk evaluation, where the results of the risk analysis are compared against predefined criteria to determine if additional actions are necessary. This step helps guide decision-making by identifying where further intervention is required.

Once risk assessment is completed, the focus shifts to risk treatment process that includes formulating and selecting treatment options, implementing them, assessing their effectiveness, and deciding whether the residual risk is acceptable. If the remaining risk is deemed unacceptable, further action is taken. The goal of risk treatment in this study is to develop a responsive risk management activity that will provide guidance to top management and the board of directors in effectively addressing and managing assessed risks.

4. Objectives of the Study

The study aims to generally enhance the risk management of a large multi-purpose cooperative. Specifically, the study aims to:

1. Identified risk areas of a large multi-purpose cooperative.
2. Assessed level of identified risk areas of the large multi-purpose cooperative.
3. Develop a propose risk treatment strategy to address the assessed risk exposures of the cooperative?

5. Methodology

5.1. Research Design

The study employed a mixed-methods approach, combining both quantitative and qualitative research designs utilizing a descriptive research method. Data collection was conducted using document analysis and focus group discussions. The quantitative aspect focused on analyzing financial statements to identify potential risk areas and assess the likelihood and impact of these risks. The qualitative component aimed to gain deeper insights into the cooperative's experiences, providing context for the evaluation of the identified risks and designing a risk treatment strategy.

5.2. Locale and Population

The study was conducted in Sagada, Mountain Province, where the primary cooperative's business is based. The participating cooperative is one of the oldest cooperatives in the province, legitimizing it as a key participant due to its long-standing presence and strategic importance. As of 2020, the cooperative had accumulated more than 250 million total assets, ranking it among the top six cooperatives in Mountain Province.

The study's participants included the top-level management, members of the board of directors, and audit committee members, who were responsible for the cooperative's governance and risk management. These groups were chosen based on their roles, exposure, and experience with the cooperative's operations. Further, key participants were selected based on key criterion such as number of years in the current positions for the officers and a permanent manager for at least five years in the cooperative to possessing sufficient knowledge of the cooperative's activities during the study period. A total of nine participants met these set criteria to include one manager, five board of directors, and three audit committee members. The number of respondents for the board of directors and the audit committee which is five and three, respectively follows the approved number of officers indicated in the cooperative by-laws. Since a set criterion were established, purposive sampling was used following the approved number of officers as per cooperative by-laws.

5.3. Data Gathering Tools

This study primarily used document analysis for data collection. The cooperative's audited financial statements from 2018, 2019, and 2020, extracted from the annual reports, were analyzed using various financial analysis tools: PISO analysis, horizontal analysis, and vertical analysis. Audited financial statements were chosen for their reliability, ensuring the data's credibility. The PISO analysis, a performance standard set by the Cooperative Development Authority (2013), eliminated the need for additional reliability and validity testing. Risks were identified based on areas where the cooperative did not meet the CDA's financial standards or exceeded the materiality threshold. In addition to the financial statements, other documents such as management reports and the audit committee's reports were analyzed to support the study's findings. All documents used were official, signed, and verified by cooperative officers for authenticity.

For risk assessment, the study employed a four-by-four probability and impact risk matrix, adapted from Massey University's Risk Management Framework (Massey University, nd.), to evaluate the likelihood and impact of identified risks. This matrix helped eliminate any biases during the evaluation process.

5.4. Data Gathering Procedures

Ethical considerations with high regards to confidentiality through obtaining approval for the scope and nature of the

study during the regular board meeting was sought before the data gathering procedure commence. Further, informed consent from all the key participants for the board of directors, audit committee, and top management, were also sought.

The cooperative's financial reports, although publicly available to members during the general assembly, required board approval for their use in the research.

After which, the researcher gathered the requested financial documents and reports and proceeded to conducting financial analyses using PISO, horizontal, and vertical analysis tools. These analyses identified areas of financial risk, which were then evaluated using the four-by-four risk matrix during a focus group discussion to evaluate the likelihood and impact of the identified risks.

Once the risk evaluation was complete, the findings were transcribed, coded, and categorized to form the basis for the proposed risk management plan. An informal interview with the key participants was held to validate the results and ensure data triangulation.

To secure proper data management all data gathering procedures were done during official board meetings. Further, data gathered for the research were explicitly permitted by the cooperative board. Finally, other relevant data gathering procedures such as document analysis on cooperative reports and manual of policies were done in the cooperative office since confidential files which were not allowed to be brought outside the cooperative premises. These mechanisms were made to protect the cooperative, the participants, and the researcher.

5.5. Treatment of Data

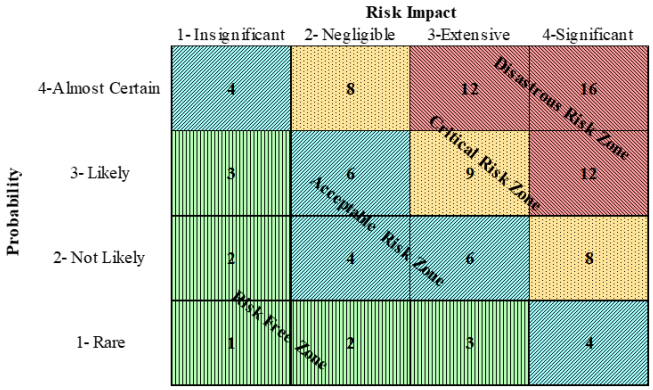
Both financial and non-financial data were sorted and analyzed according to the research objectives. In analyzing the cooperative's audited financial statements during the horizontal and vertical analysis, the 5% materiality threshold, as outlined in the International Standards on Auditing (ISA) 320 (ICAEW International Accounting, Auditing and Ethics, n.d.), was applied to pinpoint areas of financial concern. For the PISO analysis, any performance indicators failing to meet the CDA's standards were flagged for further investigation wherein key accounts or parameters falling below the standards were further analyzed. A focus group discussion (FGD) was conducted with the key participants to evaluate the likelihood and potential impact of the identified risk areas using the four-by-four risk matrix. The study had the following likelihood and impact assessment description and its corresponding interpretation using the 4-point rating scale. This assessment tool is presented in table 1.

Table 1. Likelihood and Consequence Assessment Descriptions and its Corresponding Interpretation

Likelihood	Rating	Description	Interpretation
Almost Certain	4	Expected to occur - above 50% chance to occur in most circumstances	Without additional controls the event is expected to occur in most circumstances
Likely	3	Will probably occur in most circumstance- 21%-50% occurrence	The event has occurred in different industries with similar levels of controls in place
Unlikely	2	Not expected to occur- 20% to 5% change to occur	The event hasn't occurred, but it could occur in some circumstances
Rare	1	Exceptional circumstances only - < 5% chance to occur	A small chance of occurring that would be caused by events not previously seen.
Impact	Rating	Description	Interpretation
Significant	4	Annual financial loss of more than 33%.	The impact has critical financial effect to the cooperative's financial status and demands immediate course of action.
Extensive	3	Annual financial loss of more than 20%-33%.	The impact has a major effect to the cooperative's financial status and needs strict implementation of controls.
Negligible	2	Annual financial loss of more than 15%-20%.	The impact has a manageable effect to the cooperative's financial status given proper controls.
Insignificant	1	Annual financial loss of less than 15%.	The impact has a negligible effect to the cooperative's financial status and current controls is still sufficient.

The four-by-four risk matrix, as adapted from Massey University's Risk Management Framework and was modified to fit the research objectives, employing a scale from 1 to 4 to assess the likelihood of a risk occurring in relation to the severity of its potential impact on the cooperative. Under this four-by-four matrix, risks rated between 1 and 3 are considered negligible and do not require any action since there is insignificant level of losses. This risk is "risk-free" and coded green. Risk with ratings between 4 and 6 are allowable meaning losses are manageable within the cooperative's capacity. This risk is "acceptable" and coded blue. Risks with ratings of 8 to 9 should be immediately mitigated since the cooperative could face potential material losses on current assets. This risk is considered "critical" and coded orange signifying a scenario where the cooperative could lose all its net assets. Finally, risk rated between 12 and 16 should be at all means be avoided since this scenario initially could signal signs of bankruptcy. This risk is considered "disastrous" and coded red. Each of these risk zones is associated with specific risk treatment strategies. By combining the likelihood and impact parameters along with the corresponding risk color codes, the risk matrix is structured presented in table 2.

Table 2. Four-by-Four Risk Matrix



5.6. Ethical Considerations

Ethical issues are the primary consideration in every research, especially on a non-disclosure agreement. The involvement of all participants was voluntary and was explicitly stated in their informed consent. During the duration of the research, no participants withdraw from taking part in the research up until its completion. In terms of confidentiality of information, all the gathered data were identified during the proposal presentation and were approved by the cooperative. Further, the cooperative endorsed the manuscript for validation and approval before publication. In terms of selecting the participants, the criteria were also presented during the proposal meeting. The cooperative identified the participants who bore the qualification and were endorsed to participate. All of the endorsed individual joined the research activities on their own free will. Moreover, disclosure of the identification of the participants was only allowed up to the extent of identifying their position but not their names.

Regarding the audited financial statement disclosure, the data gathered were limited to those included in the cooperative's annual report complemented by management reports and the cooperative PISO data. Finally, dissemination and utilization of the research findings was done through various platforms, one during a meeting with the cooperative management and officers. Another one is the cooperative adopted the research output as a basis for policymaking enhancement and product development to address the identified cooperative risk exposures.

6. Results and Discussion

6.1. Identified Risk Areas of the Large Multi-Purpose Cooperative

The horizontal analysis of the participating cooperative's financial condition and operations, covering the years 2018, 2019, and 2020 with a 5% materiality threshold (based on ISA 320, 2009), highlights key risk areas. Significant changes in major accounts, such as cash and cash equivalents, loans receivable, property, plant and equipment, accrued expenses, other payables, other liabilities, share capital, and statutory funds, as well as interest income from loans, miscellaneous income, and administrative costs, are identified to possess potential risks.

Similarly, the vertical analysis of the income statement and balance sheet, applying the same 5% materiality threshold, also points to risk areas including cash and cash equivalents, loans receivable, long-term investments, interest on share capital payable, share capital, statutory funds, interest income on loans, service fees, credit service, other income, administrative expenses, and democratic expenses.

Additionally, the PISO analysis from 2018 to 2020 reveals that the cooperative does not meet several Cooperative Development Authority (CDA) standards, including profitability growth ratio, asset efficiency, provisioning adequacy, members' equity to assets, deposit liabilities to total assets, receivables to total assets, business volume to total assets, solvency, liquidity, and turnover ratios.

From the financial statement analyses and further applying theoretical analysis, the following reveal key risk areas for the cooperative that revealed consistent falling short of standards include risks related to loan delinquency and inadequate provisions for loan losses, limited funding sources, non-performing assets, and declining revenue.

Fist is the risk from loan delinquency and insufficient allowance for probable loan losses. This risk pertains to the cooperative's loan portfolio, where collectability is below standard. The allowance for probable loan losses is insufficient to cover the total amount of past-due accounts. If these loans become uncollectible, the uncovered portion will be expensed, reducing the net surplus available for member dividends. Document analysis shows that the past-due ratio exceeds acceptable levels, and loan defaults are already experienced. Loan delinquency is an inherent risk for credit institutions, with a high probability that not all loans will be fully collected.

Under the Philippine Financial Reporting Standards for Cooperatives, loans receivable must be reported at their net realizable value to accurately reflect their worth. This requires the cooperative to prepare an aging schedule for its loan receivables. While the Cooperative Development Authority (CDA) has set standards for aging receivables, these are often seen as rigid, potentially impacting the cooperative's net income. When an allowance for probable loan losses (APLL) is provided, an expense is charged against revenue based on the aging schedule, which has hindered the cooperative's willingness to adequately allocate for potential loan losses. This finding supports the study of Otieno et, al. (2023) highlighting a significant relationship between credit risk management and financial performance where insufficient allowance for loan losses is linked to the aging of receivables.

Next is the risk from limited fund sources. This risk highlights the cooperative's limited financing to meet its operational cash needs, particularly concerning loan disbursements and the ongoing construction of its corporate building. Document analysis shows that the growth rate of loans receivable, compared to share capital, is insufficient to meet the cooperative's cash demands. This is supported by horizontal analysis, which shows a consistent decrease in cash and cash equivalents over the past three years. While cash demand increases, available cash sources do not match. The cooperative relies primarily on member capital infusions, but despite steady increases in share capital since 2017, the demand for loans—especially with the introduction of a housing loan product in 2019—has grown significantly. The management reported heightened loan uptake in 2020, particularly during the COVID-19 pandemic.

This situation is common in cooperatives, as noted in studies by Dirse and Japee (2024) revealing equity and deposit financing are key sources of capital which provide long-term financial source for cooperatives. These funding sources provide the stability and resources necessary for cooperatives to operate effectively and support their growth. Equity financing, while essential for capital accumulation, can present challenges for cooperatives. A study by the United States Department of Agriculture highlighted those cooperatives often face difficulties accessing sufficient capital, which can impede their growth and operational efficiency (USDA Rurak Development Research Report, 2011). In the same manner, cooperatives' limited access to external equity financing can lead to undercapitalization, restricting their ability to invest in growth opportunities and potentially impacting their financial stability (Tortia, 2021).

Another one is the risk from non-performing assets. This risk indicates that the cooperative holds a significant portion of its assets in non-earning assets, such as tools, equipment, office buildings, and land, which generate minimal or no

income. When a large portion of the asset portfolio is tied up in non-earning assets, it limits the cooperative's ability to generate income. While these assets serve auxiliary functions necessary for cooperative operations, excessive investment in them reduces the cooperative's earning potential. In the case of the participating cooperative, the increase in non-performing assets is due to funding the ongoing construction of a four-story corporate building, approved in 2019. However, the building's current underutilization has hindered its potential to generate returns, further contributing to non-performing assets in 2020. According to Kumar et, al., (2024), existence of non-performing assets can severely affect profitability, solvency, and overall financial stability. Addressing this issue requires the implementation of sound risk management strategies, strategic restructuring, and efficient resolution processes to minimize the negative impact on the institution.

Finally, the risk from decreasing cooperative revenue is a risk area which reflects a reduced capacity to generate income from its operations. This decline can impact financial stability, hinder growth, and limit the cooperative's ability to meet obligations or invest in future opportunities. Financial data analysis shows that loans receivable, the cooperative's largest asset, have progressively lost their revenue-generating power. During focus group discussions (FGDs), management highlighted a high rate of loan restructuring, where past-due loans were restructured to become current after paying penalties. However, many members who participated in the amnesty program eventually became delinquent again. The cooperative has not yet fully implemented their co-maker system to strengthen loan repayment. As a result, the cooperative has resorted to charging off uncollectible loans to members' share capital, which only partially addresses the defaults and fails to generate substantial revenue. Intensifying loan collection, with interest, fines, and penalties, remains a key revenue source, though the economic challenges brought by COVID-19 have intensified collection difficulties. Additionally, the board noted that funding the construction of the corporate building required pulling out investments, further decreasing revenue, as the building is still under construction and has not yet generated income for the cooperative. Arasu et, al. (2019) highlights on his study the negative impact of NPA on the returns of assets and suggests taking necessary steps to reduce their presence in the company.

6.2. Risk Assessment of the Large Multi-Purpose Cooperative

The risk areas were prioritized according to their probability and severity of impact. A risk analysis and evaluation were conducted during a focus group discussion at the regular board meeting utilizing the four-by-four risk matrix to assess the likelihood and impact of each risk. The results of this assessment is as provided in the four-by-four risk matrix in Table 3. Based on the risk assessment and evaluation, three major risk areas were identified as the cooperative's top priorities, with one risk being of lesser priority.

Table 3. Risk Assessment of the Large Multi-Purpose Cooperative

Probability \ Risk Impact	1- Insignificant	2- Negligible	3-Extensive	4-Significant
4-Almost Certain	4	8	Loan delinquency & Insufficient APLL	16
3- Likely	3	Risk from decreasing revenue	Risk from Non-performing assets	Limited funding sources
2- Not Likely	2	4	6	8
1- Rare	1	2	3	4

Emerging as the most critical risk faced by the participating cooperative is the risk from loan delinquency and insufficient allowance for probable loan losses. This risk, categorized as red and within the disastrous zone, reflects the critical level of past-due loans and insufficient allowance for probable loan losses (APLL) in the cooperative. Over the past three years, past-due loans have risen, while APLL has remained unchanged, weakening the cooperative's ability to manage loan delinquency effectively. The average past-due ratio stands at 11% over this period. Although this ratio has decreased from 12% in 2018 to 9% in 2020, it remains well above the CDA's acceptable standard of 5%.

To address this issue, the cooperative has introduced amnesty programs, allowing delinquent members to settle only the principal and accumulated interest, often with discounts on interest to encourage repayments. This initiative aims to alleviate the financial strain on members caused by escalating loan obligations. Additionally, loan restructuring has been implemented as another strategy to manage delinquency. However, many members still struggle to meet their obligations after restructuring, often necessitating further restructuring. This ongoing cycle does not mitigate the fact that these loans remain high-risk.

Another challenge highlighted by cooperative top management is the intense competition from other financial institutions and cooperatives offering credit services in Sagada. This competition makes loan collection difficult, especially when loan collectors lack effective skills to collect payments from members. The situation was further complicated by pandemic-related restrictions, which then limited residents' ability to go out and interact with field collectors. As a result, the cooperative's office staff had to handle collections for members after office work.

Additionally, the vertical financial statement analysis revealed that loans receivable, amounting to over 188 million pesos (75% of total assets in 2020), are the cooperative's largest asset. Failing to address the growing volume of delinquent loans could further undermine the cooperative's financial health and its ability to generate income. Since loans make up a substantial portion of its assets, any issues with loan repayments will have a direct impact on the cooperative's overall financial performance.

As part of credit management, the cooperative regularly reviews the aging of loans receivable to identify overdue loans and determine the appropriate APLL. This process is essential to mitigate the risks of uncollected loans, especially if member-borrowers face financial difficulties. However, if the APLL is insufficient to cover uncollectible loans, the shortfall is charged as an expense, directly reducing the cooperative's income. In the worst case, this could lead to a

net loss, meaning members would not receive dividends, and the loss would be deducted from the cooperative's general reserve fund.

The current APLL is significantly below the CDA's standard of 100% for loans overdue by more than a year. Over the past three years, the cooperative has maintained only a 10% APLL, which leaves a 90% gap if these overdue loans become uncollectible. The cooperative has not been setting provisions for loan losses, with the last provision made in 2018 and 2019. Despite a slight decrease in past-due loans from 20 million in 2017 to 17 million in 2020, they still represent a significant portion of the cooperative's assets, increasing the risk of uncollectible loans.

Cooperative officers have expressed reluctance to fully comply with the CDA's standards, fearing that doing so would decrease the cooperative's net surplus. The CDA requires a 100% provision for loans overdue by more than a year and a 35% provision for loans overdue for one month to a year, which the officers consider excessive.

Given that loans are the cooperative's primary asset, its income is largely dependent on timely loan repayments. Omondi and Mwangi (2023) highlight in their study that strategic repayment practices positively address non-performing loans in the savings and credit cooperatives in Kenya.

The next top priority risk is the risk from limited fund source. This risk, categorized as red and falling within the disastrous risk zone, highlights the cooperative's limited financing capacity to sustain its operations efficiently. The challenge arises from increased loan disbursements to members and rising property, plant, and equipment costs, particularly due to the ongoing building construction. While the cooperative continues to offer loan services, the available cash from collections and member capital infusions is insufficient to meet the same level of funding, compounded by regular operating expenses.

Since its inception, the cooperative has primarily relied on member capital infusions for financing. However, as of December 31, 2020, the cooperative does not offer deposit services such as savings or time deposits. Horizontal analysis reveals a decline in cash and cash equivalents from 2018 to 2020. While there was a modest increase of 17.82% in 2018, the growth slowed to 5.92% in 2019 and plummeted by -52.03% in 2020, signaling an urgent need for improved fund sourcing.

The cooperative's equity financing scheme, dependent on member contributions, is no longer sufficient to fund the building project, which was approved prior to the pandemic. Additionally, the increase in loans receivable, driven by members' emergency needs, aggravates the situation. If short-term payables or other significant cash disbursements coincide, the cooperative may incur unnecessary financing costs, such as interest on borrowed funds or pre-termination of short-term investments, sacrificing planned interest income. This situation results to challenges the financial performance of the cooperative. In response, the cooperative has begun external borrowings in 2021 to support operations and introduced time deposit services, attracting some members to invest. However, savings deposit services, which could offer a substantial financing source, have yet to be implemented.

These findings negate the result of the study by Wuave et, al. (2020) revealing that there is a positive effect of the liquidity of banks in on its financial performance. Moreover, Esnard et al. (2017) suggest that poor management, lack of capital, and significant external influences contribute to the underperformance of cooperatives. Capital shortages often force cooperatives to seek additional funding from banks or increase share capital, which may not appeal to members.

Next, is the risk of maintaining non-performing assets. This risk is categorized as orange, falling within the critical risk zone, and signifies that the cooperative holds a substantial amount of non-productive assets that do not generate income. Non-performing assets include cash on hand, office supplies, property, plant, equipment, and other non-current assets that fail to provide returns. These assets are deemed non-productive as they do not directly contribute to income generation, unlike cash in bank or long-term investments, which yield interest. The accumulation of non-performing assets over time limits the cooperative's earning potential, as funds are tied up in assets with no return.

A key factor contributing to the rise in non-performing assets is the construction of the cooperative's new corporate office. Since 2019, the cooperative had been renting office space, but in 2020, the construction of a five-story building was approved. According to the BODs, the new building was designed to serve as both a corporate office and a commercial space, with plans to include restaurants, inns, and laundry services. However, the COVID-19 pandemic severely impacted the tourism economy of Sagada, which hindered the expected revenue generation from the new property. With significant funds tied up in the building's construction, the cooperative faces challenges in ensuring sufficient resources for its core operations, particularly its loan services.

The cooperative's PISO analysis of non-earning assets as a percentage of total assets showed an increase from 2.75% in 2018 to 6.89% in 2020, approaching the maximum acceptable level of 10%. Given that the building is still under construction, non-performing assets are likely to continue rising, impacting the cooperative's financial structure and earnings, especially if resources are primarily directed towards completing the building instead of strengthening loan collections or diversifying funding sources.

Chungyas and Trinidad (2021) emphasize that cooperatives with high profitability efficiently utilize their assets, equity, and capital to generate income. Its is to be noted that non-performing assets not only block funds but also result in opportunity costs, where the potential profits from investing in productive assets are lost. Further, Arasu et al. (2019) also found a negative relationship between non-performing assets and return on assets, recommending that cooperatives take steps to reduce non-performing assets and enhance recovery mechanisms.

Lastly, is the risk of decreasing revenue. This risk is categorized as blue, falling within the acceptable risk zone, and indicates a decline in the cooperative's profitability. This suggests that the cooperative's income sources are not performing as effectively as they once did. Despite the cooperative being involved in various services, its primary revenue still comes from credit services, including loan interest, service fees, and fines. Additionally, miscellaneous income is derived from interest on investments and cooperative loan insurance.

The cooperative has faced challenges with increasing loan delinquencies, which have significantly impacted its income. From the vertical analysis, this was further intensified by the termination of certain investments that previously generated substantial interest income. The horizontal analysis of the financial statements indicates a consistent decline in revenue over the last three years. Although revenue increased from

2017 to 2018, it began to fall after that, with a drop of 2.9 million pesos in 2020. While the economic slowdown from the pandemic has played a role, declining interest income from loans and reduced miscellaneous income also contributed to this downturn. The management noted that the drop in interest income was partially due to changes in the loan policy, where interest for the first year is pre-deducted, but in subsequent years, the effective interest method applies. This change means that members' monthly payments are first applied to interest, and only the remaining amount goes toward the principal, which has slowed the loan amortization process.

Furthermore, there has been a noticeable decline in miscellaneous income. Previously, the cooperative managed its own loan insurance for members, but following a ruling from the CDA in 2019, the cooperative was required to partner with an external insurance company, which reduced its income from this source. Although the cooperative positively generates net surplus, if this trend persists without stronger controls, it could pose future financial challenges.

Additionally, the cooperative allows loan restructuring to reduce fines and penalties on overdue loans. While this makes loans appear current, restructured loans are often problematic and tend to default again, which limits the cooperative's interest income from these loans. The board mentioned that there is currently no policy in place regarding the number of times a loan can be restructured, further complicating the situation.

In a study by Kakati and Roy (2021) where they analyzed the financial performance of Farmer Producer Companies (FPCs) in Northeast India and found that these companies often faced challenges such as weak capital bases and poor profitability. Specifically, the study revealed that the FPCs performed poorly in terms of solvency, efficiency, and profitability during the three years under study.

6.3. Risk Treatment Strategy to Address the Risks under Disastrous Risk Zone

The researcher recommends a risk avoidance strategy for risks classified in the disastrous risk zone, focusing on improving collection processes, revising loan policies, and exploring alternative funding sources such as savings deposits.

6.3.1. Strengthening Loan Collection Processes

First, improving loan collection processes is essential. The cooperative should shift from passive collection methods to more proactive ones, using electronic fund transfer channels to expand collection opportunities. Revising the loan restructuring policy is also necessary to prevent abuse and curb the continuous restructuring of overdue loans. Clear guidelines and limits for restructuring should be set to encourage timely repayment. A system to track delinquent loans should be implemented, with a dedicated loan clerk responsible for providing regular reports to the board. These reports should analyze delinquent loans by factors like loan amount, collateral, type, and frequency of restructuring. The audit committee should regularly review these reports to ensure appropriate actions are taken. Additionally, exploring online payment options will provide greater convenience for members while ensuring accurate transaction tracking to minimize errors.

6.3.2. Creating Provisions for Loan Losses

Establishing provisions for probable loan losses is critical in managing the risk of overdue loans. This provision will act as a financial cushion to absorb potential losses, spreading the impact over time based on the loan aging schedule. It helps reduce financial strain when loans become uncollectible. The higher the delinquency rate, the larger the required provision. Proper management of this provision is vital for maintaining financial stability and preventing unnecessary dividend distribution during periods of underperformance in the loan portfolio.

6.3.3. Revising the Cooperative's Financing Structure to Offer Savings and Time Deposit Services

Given the cooperative’s current cash shortage risk, which has a high probability of severe impact, a change in the financing structure is necessary. Since its inception, the cooperative has relied on member capital infusions as its primary funding source. This model worked until the introduction of large loan products like housing loans. Under the current policy, qualified members can borrow up to five million pesos, payable over 20 years at 8% interest per annum. This loan product is highly attractive due to the cultural importance of homeownership, but the large loan amounts and long repayment periods strain the cooperative's funding capacity.

While members have consistently contributed to their share capital, the COVID-19 pandemic increased demand for loans, yet the growth in share capital has not kept pace. Since members cannot partially withdraw from their share capital, they turned to loans in 2020. As the loan portfolio grew, the rate of share capital growth did not match this increase, highlighting the need for additional funding sources.

To address these cash flow challenges, the cooperative should offer savings and time deposit services. As of 2021, the cooperative did not offer savings deposit options, leaving members with no alternative but to borrow for emergency cash needs. However, due to delayed repayments caused by the pandemic, the cooperative faced a cash shortage. In 2020, the cooperative resorted to borrowing from external financial institutions, which introduced additional financial leverage and interest costs.

By offering savings and time deposits, the cooperative can create a more stable and flexible source of funding. Members would have the ability to save and access emergency funds, reducing the dependency on loans. Time deposits, in particular, could be a valuable source of funds for the cooperative while also offering members a solid investment option.

6.3.4. Promoting Time Deposits

The cooperative has already begun offering time deposits to enhance cash flow, but further marketing efforts are needed to increase awareness among members. While feedback has been positive, many members are still unaware of this product. Intensifying the marketing campaign will help expand the member base for time deposits, making it a more reliable funding source for the cooperative and providing a beneficial investment option for members.

6.4. Risk Treatment Strategy to Address the Risks under Critical Risk Zone

Risk mitigation strategies to address the challenge of non-performing assets (NPAs) should focus on completing the cooperative building while aligning it with market demand through a comprehensive feasibility study and optimizing asset utilization. The probability of increased non-performing assets is quite high, as a significant portion of the

cooperative's funds will be allocated to completing the corporate building. Therefore, the board must strategically design the building's utilization to transform it into a commercial space that reflects the market demand identified through the feasibility study.

Since its inception, the cooperative has never owned its building and has been renting office space. As the cooperative has grown over the years, expanding its products and services, membership, and workforce, the need for a larger space has become evident. The new building will provide the cooperative with the capacity to accommodate more members and clients. Additionally, the building is designed to function as a lodging facility, capitalizing on Sagada's status as a popular tourist destination.

Initially, the plans for the building were promising in terms of functionality and revenue generation potential. However, the COVID-19 pandemic severely impacted the tourism and hospitality sectors, including in Sagada, which has affected the cooperative's original plans for the building. As a result, the current investment in the construction of the building has not yet generated the expected returns and may face challenges in doing so, even after its completion.

To mitigate this risk, the board should conduct a thorough feasibility study to determine viable alternative uses for the building. This study should also explore additional business ventures the cooperative could pursue with the new property once completed. By carefully reassessing and realigning the building's utilization, the cooperative can maximize its investment and reduce the impact of non-performing assets.

6.5. Risk Treatment Strategy to Address the Risks under Acceptable Risk Zone

Lastly, the risk allowance strategy for addressing the risk of declining revenue should focus on diversifying income streams, enhancing current services, and reassessing loan policies to improve interest income while minimizing the impact of loan restructuring. While the initial assessment suggested that the potential impact of reduced revenue would be minimal, it remains crucial to actively manage this risk.

To mitigate the effects, the board should carefully review and adjust the cooperative's loan policies, setting a cap on the number of allowed loan restructurings before exploring other collection methods, such as utilizing the amount pledged by co-makers or the total equity pledged by member-borrowers as loan security. This would strengthen the loan receivables portfolio, allowing the cooperative to better leverage funds from collections to generate additional revenue.

Another source of reduced revenue stems from other income. Evaluating the competitiveness of the cooperative's products and services in the market could significantly improve its revenue-generating potential. By identifying gaps, optimizing offerings, and aligning with current market demands, the cooperative can enhance its value proposition, attract more customers, and increase overall profitability.

7. Conclusion

The primary risks for the large multi-purpose cooperative stem from loan receivables collectability, capital structure, and non-earning fixed assets, which hinder revenue generation and cash flow management. These risks fall under financial and credit categories, significantly impacting the cooperative's financial health and stability. Finally, the proposed mitigation strategies include targeted actions to address these risks and improve overall risk management practices.

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