

Internal Risk Rating System Regulatory Compliance and Sustainability of Rural Banks in Laguna

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Abstract

This study examined the regulatory compliance of the internal risk rating system of Rural Banks (RBs) in Laguna and its relationship with economic, environmental, and societal sustainability. Anchored on the Sustainable Finance Framework, the Credit Risk Management System under Sections 153 and 143 of the Manual of Regulations for Banks, the Theory of Planned Behavior, and the Triple Bottom Line, the study employed a quantitative descriptive-correlational research design. Data were collected using a validated researcher-made questionnaire administered to 100 bank personnel selected through stratified random sampling from a population of 245 respondents. Statistical analyses included the weighted mean and Pearson product-moment correlation coefficient. The findings revealed that the Rural Banks in Laguna fully complied with the Sustainable Finance Framework and Credit Risk Management System. Likewise, the banks demonstrated highly sustained economic, environmental, and societal sustainability in their credit operations. A significant positive relationship was found between regulatory compliance and environmental sustainability, while no significant relationships were observed with economic and societal sustainability. Based on these findings, an action plan was developed to strengthen the integration of sustainability principles into the internal risk rating system through enhanced risk profiling, policy development, risk monitoring, and validation procedures. The study concludes that strong regulatory compliance supports environmentally sustainable credit operations and recommends continuous monitoring, regular validation of the internal risk rating system, and periodic enhancement of sustainable risk management practices. The study supports Sustainable Development Goal (SDG) 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation and Infrastructure, and SDG 13: Climate Action by promoting responsible lending, sustainable financial management, and the integration of environmental considerations into banking operations. Its findings contribute to institutional, environmental, and economic sustainability by providing evidence that can guide rural banks and regulators in strengthening sustainable credit risk management and long-term financial resilience.

Keywords: Credit Risk Management, Environmental Sustainability, Internal Risk Rating System, Regulatory Compliance, Rural Banks, Sustainable Finance, Sustainability

1. Introduction

Sustainable banking has become essential as financial institutions integrate environmental, social, and economic considerations into their operations. International standards established by the Basel Committee on Banking Supervision (BCBS) and the Bangko Sentral ng Pilipinas (BSP) require banks to incorporate sustainability principles into governance and credit risk management. However, many rural banks continue to experience challenges in implementing these requirements because of operational limitations and compliance costs. This study examines the regulatory compliance of the internal risk rating system of Rural Banks in Laguna and its relationship with their economic, environmental, and societal sustainability.

1.1 Background of the Study

The growing emphasis on sustainable development has positioned banks as key contributors to environmental protection, social responsibility, and economic growth. In the Philippines, BSP Circular No. 1085 mandates banks to integrate sustainability into governance, strategy, and risk management to address climate-related and financial risks. Cabaron (2023b) found that sustainable banking practices improve rural banks' financial health, loan portfolio management, and long-term sustainability. Despite these benefits, many rural banks still view sustainable finance as a regulatory requirement that increases operational costs. Since rural banks generally use simple credit risk systems, assessing compliance with regulatory standards and its influence on sustainability remains essential.

1.2 Themes and Insights from Related Literature

The literature consistently emphasizes that an effective internal risk rating system is fundamental to sound credit risk management and sustainable banking. Karminsky and Margunov (2021), Sabeti et al. (2020), and Shndula and Mazhar

(2020) highlighted that reliable credit risk assessment improves regulatory compliance, default prediction, and loan portfolio management. Likewise, Vennila (2022), Abor et al. (2023), Edmans and Kacperczyk (2022b), Care and Weber (2023), Ender et al. (2022b), Roy and Shaw (2021), and Zeidan and Onabolu (2023) emphasized that integrating sustainability into banking enhances operational efficiency, financial performance, reputation, and investor confidence. Studies also indicate that effective credit risk management supports profitability and long-term financial stability (Veizi and Zhuli, 2023b; Khan, 2020; Tulum, 2022; Nyende and Kasozi-Mulindwa, 2022b; Zhang, 2022; Brahmaiah, 2022). Meanwhile, sustainability among financial consumers depends on financial literacy, responsible borrowing, and access to financial services (Lepekh, 2022; Suleiman et al., 2022; Zaniarti et al., 2022). Environmental and societal sustainability further influence banking performance through responsible lending, climate-conscious decision-making, stronger public trust, and community development (Galleta et al., 2021; Gautam, 2023; Burhanudin et al., 2020; Handayani et al., 2020; Khattak and Saiti, 2020; Dec and Masiukiewicz, 2021; Saeudy et al., 2021b; Puaschunder, 2020; Cabaron, 2023b). Overall, previous studies suggest that integrating sustainability into internal risk rating systems strengthens banking resilience and supports long-term sustainable development (Migliorelli, 2020; Loumiotis and Serafeim, 2022; Fan and Gao, 2024; Mohamed, 2023; Wang and Wang, 2024; Hock et al., 2020; Akbas, 2023; Da Silva Inacio and Delai, 2021).

1.3 Local, National, and Global Context

Globally, sustainable finance has become a regulatory priority as banks are expected to manage environmental, social, and climate-related risks while supporting the United Nations Sustainable Development Goals (SDGs). The Basel Committee on Banking Supervision (BCBS) promotes integrating sustainability into prudential regulation and risk management to strengthen financial stability. Nationally, the Bangko Sentral ng Pilipinas institutionalized sustainable banking through BSP Circular No. 1085 and the Manual of Regulations for Banks (MORB), requiring banks to integrate sustainability into corporate governance and credit risk management. These policies recognize that environmental and social risks may significantly affect banks' financial performance and long-term resilience. Locally, Rural Banks in Laguna play a vital role in promoting financial inclusion and supporting rural communities. However, limited operational capacity, simple credit risk assessment systems, and compliance challenges may hinder the effective integration of sustainability principles into credit operations, highlighting the need to evaluate their regulatory compliance and sustainability performance.

1.4 Theoretical or Conceptual Basis

This study is anchored on the Sustainable Finance Framework and Credit Risk Management System under Sections 153 and 143 of the Manual of Regulations for Banks, which require banks to integrate sustainability into their internal risk rating systems and credit risk management practices. It is further supported by the Theory of Planned Behavior (TPB), which explains how beliefs and social influence encourage sustainable behavior, and the Triple Bottom Line (TBL), which emphasizes balancing economic, environmental, and societal performance. These frameworks support the assessment of how regulatory compliance influences the sustainability of Rural Banks in Laguna.

1.5 Research Gaps and Rationale

Previous studies have emphasized sustainable finance, credit risk management, and the benefits of sustainability in banking (Karminsky and Margunov, 2021; Vennila, 2022; Abor et al., 2023; Care and Weber, 2023). However, limited evidence explains how the operational and legal soundness of internal risk rating systems influences the economic, environmental, and societal sustainability of rural banks. Existing studies also focus largely on broader banking sectors rather than Rural Banks in Laguna. These theoretical, empirical, and spatial gaps justify examining the relationship between regulatory compliance of internal risk rating systems and the sustainability of Rural Banks in Laguna.

1.6 Alignment with Relevant Sustainable Development Goals (SDGs)

This study supports SDG 8 – Decent Work and Economic Growth by promoting sustainable banking practices that strengthen rural banks' financial stability and responsible lending. It also aligns with SDG 9 – Industry, Innovation and Infrastructure through the improvement of internal risk rating systems and sustainable financial management. Moreover, the study contributes to SDG 13 – Climate Action by encouraging the integration of environmental considerations into credit risk management and lending decisions, consistent with the BSP Sustainable Finance Framework.

1.7 Importance of the Study to Multidisciplinary Sustainability

The study contributes to economic sustainability by promoting sound credit risk management that enhances the long-term viability of rural banks. It supports institutional and governance sustainability by assessing compliance with BSP regulations on sustainable finance and credit risk management. The study also advances environmental sustainability by encouraging environmentally responsible lending practices and community sustainability by improving financial services that support rural development, financial inclusion, and responsible borrowing. Its findings may guide rural banks, regulators, and future researchers in strengthening sustainable banking practices.

2. Material and methods

2.1 Research Design

This study employed a quantitative descriptive-correlational research design to determine the relationship between the regulatory compliance of the internal risk rating system and the sustainability of Rural Banks in Laguna. Quantitative research utilizes numerical data and statistical analyses to objectively examine research problems (Sciberras and Dingli, 2023), while the descriptive-correlational approach measures the degree of association between variables without establishing cause-and-effect relationships (Bhandari, 2021). This design enabled the researcher to assess how regulatory compliance relates to the economic, environmental, and societal sustainability of rural banks.

2.2 Locale of the Study

The study was conducted among Rural Banks located in the Province of Laguna, Region IV-A (CALABARZON), one of the regions with the highest concentration of rural banks in the country. According to the Philippine Deposit Insurance Corporation Official Website (n.d.), approximately one-fourth of the rural banks in CALABARZON are located in Laguna. The study covered rural banks operating in selected municipalities and cities across the province that implement internal risk rating systems and comply with the Sustainable Finance Framework and Credit Risk Management requirements under Sections 153 and 143 of the Manual of Regulations for Banks (MORB).

2.3 Respondents of the Study

The respondents consisted of Compliance Officers, Internal Auditors, Loan Officers, Credit Risk Officers, Loan Appraisers, and other personnel assigned to the front office functions of the loan department. These personnel were selected because of their direct involvement in regulatory compliance, credit evaluation, loan monitoring, collateral appraisal, and borrower assessment, making them knowledgeable about the internal risk rating system and sustainability practices of the participating rural banks.

2.4 Sample and Sampling Procedure

A stratified random sampling technique was employed. From a population of 245 bank personnel, a sample of 100 respondents was determined using G*Power 3.1.9.7 with a 0.315 effect size and a 95% confidence level. The respondents included personnel from the self-assessment functions and the front office functions of the credit or loan department. Population data were obtained from the official directories of the Rural Bankers Association of the Philippines (RBAP) and the Philippine Deposit Insurance Corporation (PDIC). Most respondents came from the front office functions because they comprised the larger proportion of the study population.

2.5 Research Instrument

The study utilized a researcher-made questionnaire developed from relevant literature, BSP regulatory issuances, the Sustainable Finance Framework, the Credit Risk Management System under Sections 153 and 143 of the MORB, and the Philippine Sustainable Finance Taxonomy Guidelines (PSFTG) under BSP Circular No. 1187, s. 2024. The instrument consisted of two sections: the first assessed the level of regulatory compliance of the internal risk rating system, while the second measured the sustainability of Rural Banks in Laguna. Responses were collected using separate four-point Likert scales, with higher ratings indicating greater regulatory compliance and higher levels of sustainability. The questionnaire underwent content validation by external auditors, graduate school professors, and the designated statistician. It obtained a Lawshe's CVR/CVI score of 1.00, indicating excellent content validity. A pilot test involving 20 rural banks in Batangas yielded Cronbach's alpha values of 0.853 and 0.865, demonstrating high internal consistency and reliability of the instrument.

2.6 Data Gathering Procedure

Upon approval of the study, permission was secured from the presidents of participating rural banks through official email communications. Support was likewise requested from the Laguna RB Compliance Officers Federation through its FB Messenger group. After obtaining approval, the survey questionnaire was distributed through Google Forms to Compliance Officers, Internal Auditors, and front office personnel. Respondents were given two to three days to complete the questionnaire before follow-up communications were conducted. For banks that did not respond online, the researcher personally visited their head and branch offices to administer the survey after obtaining approval from bank officials. One rural bank specializing in microfinance declined participation due to internal policies, while the remaining rural banks participated in the study. The collected responses were consolidated, analyzed, and interpreted with the assistance of the designated statistician.

2.7 Data Analysis Techniques

The collected quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS). The weighted mean and four-point Likert scale were used to determine the level of regulatory compliance of the internal risk rating system and the sustainability of Rural Banks in Laguna. The Pearson product-moment correlation coefficient (r) was employed to determine the significant relationship between regulatory compliance and the sustainability of the rural banks.

2.8 Ethical Considerations

The study complied with the Data Privacy Act of 2012 and the research ethics guidelines of Laguna College of Business and Arts (LCBA). Informed consent was obtained from all respondents and authorized bank officials before data collection. Participants were informed of the study's objectives, procedures, benefits, and their voluntary participation. Confidentiality was maintained through secure storage of research data and restricted access to authorized personnel. The researcher also ensured that respondents clearly understood their role in the study and that participation involved no physical, emotional, or psychological harm.

3. Results and Discussion

3.2 Sustainability of Rural Banks in Laguna

3.2.1 Economic Sustainability

The Rural Banks (RBs) in Laguna attained a highly sustained level of economic sustainability, with an overall mean of 3.86. All indicators were rated Highly Sustained, indicating that borrowers generally used loan proceeds productively and fulfilled their financial obligations. The highest-rated indicator showed that borrowers repaid loans using returns generated from their investments, while the lowest-rated indicator pertained to securing credit through deposits with a written waiver of rights. Overall, the findings indicate that the existing borrowers of Rural Banks in Laguna maintain sustainable economic activities that support timely loan repayment and continued business operations. The findings suggest that the credit evaluation and underwriting processes of Rural Banks in Laguna effectively support borrowers' economic sustainability by promoting responsible borrowing and repayment. This aligns with Suleiman et al. (2022), who emphasized that improving financial literacy enables borrowers to make informed financial decisions and fulfill their contractual obligations. Similarly, Zaniarti et al. (2022) associated financial literacy with long-term financial resilience and sustainability. Although Tegar and Wibowo (2022) recognized that sustaining borrowers in rural areas is more challenging because of unstable income sources, Rural Banks in Laguna appear to have addressed this through repayment schemes suited to borrowers' financial capacity. Nevertheless, Podgorskaya (2021) noted that higher transaction costs and digital inequality remain challenges that may affect the long-term economic sustainability of rural financial consumers.

3.2.2 Environmental Sustainability

The Rural Banks (RBs) in Laguna likewise achieved a highly sustained level of environmental sustainability, with an overall mean of 3.76. All indicators were interpreted as Highly Sustained, demonstrating that borrowers generally engaged in environmentally responsible activities. The highest-rated indicator reflected borrowers' contribution to improving community adaptability to climate change, while the lowest-rated indicator involved establishing concrete remediation plans for residual environmental harm. These findings indicate that environmental considerations are consistently incorporated into credit evaluation and lending decisions among the participating rural banks. The findings indicate that integrating sustainability principles into credit risk assessment encourages environmentally responsible investments among borrowers while reducing environmental risks that may affect banking operations. This supports Galleta et al. (2021), who found that climate-related business strategies improve environmental performance through responsible management decisions. Likewise, Handayani et al. (2020) emphasized that banks promote sustainable development by directing lending toward environmentally responsible economic activities while ensuring compliance with environmental regulations. Furthermore, Burhanudin et al. (2020) explained that banks' environmental initiatives influence borrowers' behavior and strengthen support for sustainable banking practices. These studies reinforce the environmental sustainability demonstrated by Rural Banks in Laguna.

3.2.3 Societal Sustainability

The Rural Banks (RBs) in Laguna also demonstrated a highly sustained level of societal sustainability, obtaining an overall mean of 3.74. All indicators received a Highly Sustained rating. The highest-rated indicator involved compliance with laws promoting and protecting human rights, while the lowest-rated indicator related to contributions toward improving public health standards. Overall, the findings suggest that borrowers financed by Rural Banks in Laguna generally conduct their activities in ways that promote social responsibility and community welfare. The findings suggest that Rural Banks in Laguna have successfully integrated social considerations into their credit risk assessment processes, enabling management to evaluate social risks alongside financial risks during lending decisions. This supports Saeudy et al. (2021b), who emphasized that sustainability initiatives strengthen societal trust and help banks manage social risks. Likewise, Puaschunder (2020) highlighted the role of financial institutions in advancing social welfare through socially responsible strategies consistent with the Sustainable Development Goals. In addition, Cabaron (2023b) noted that adopting sustainable

banking practices improves financial performance while supporting employment generation, gender development, and the growth of micro, small, and medium enterprises (MSMEs). These findings indicate that the sustainability practices of Rural Banks in Laguna extend beyond financial performance to include broader social development objectives.

3.3 Relationship Between Regulatory Compliance and the Sustainability of Rural Banks

The analysis revealed a significant positive relationship between the regulatory compliance of the internal risk rating system and the environmental sustainability of Rural Banks (RBs) in Laguna. Compliance with both the Sustainable Finance Framework and the Credit Risk Management System showed low positive correlations with environmental sustainability, with computed probability values below the 0.05 level of significance, leading to the rejection of the null hypothesis for this dimension. However, no significant relationship was found between regulatory compliance and the economic or societal sustainability of the rural banks. These findings indicate that higher compliance with Sections 143 and 153 of the Manual of Regulations for Banks is associated with improved environmental sustainability in credit operations but does not significantly influence the economic and societal dimensions of sustainability. The findings suggest that compliance with the Sustainable Finance Framework primarily strengthens environmental sustainability by integrating environmental considerations into credit risk assessment and lending decisions. The absence of significant relationships with economic and societal sustainability may be attributed to the relatively recent implementation of the Sustainable Finance Framework, which allowed banks a transition period to fully integrate sustainability principles into their operations. This finding is consistent with Hock et al. (2020), who emphasized that incorporating environmental considerations into investment and lending decisions enhances borrower creditworthiness and supports sustainable banking. Similarly, Loumioti and Serafeim (2022) noted that integrating environmental, social, and governance (ESG) considerations into credit assessment improves access to sustainability-linked loans through reliable sustainability evaluation. Moreover, Da Silva Inacio and Delai (2021) emphasized that measuring sustainability among financial consumers enhances banks' decision-making processes and supports long-term sustainable development. These findings reinforce the importance of maintaining regulatory compliance to strengthen environmentally sustainable credit operations among Rural Banks in Laguna.

3.4 Proposed Action Plan

Based on the findings, an action plan was developed to strengthen the internal risk rating system of Rural Banks in Laguna by enhancing the integration of sustainability principles into credit risk management. The proposed initiatives focus on improving risk profiling, formulating comprehensive risk management policies, strengthening risk monitoring through sustainability-based credit risk measurement, and conducting regular stress testing and scenario analysis. These strategies are intended to improve compliance with Sections 143 and 153 of the Manual of Regulations for Banks, strengthen the quality of loan portfolio management, and enhance the integration of economic, environmental, and societal sustainability into banking operations. Clear implementation timelines, responsible personnel, and measurable performance indicators were identified to support effective implementation, accountability, and continuous improvement of sustainable credit risk management among Rural Banks in Laguna.

4. Conclusion & Recommendations

This study concludes that Rural Banks in Laguna fully comply with the Sustainable Finance Framework and Credit Risk Management requirements under Sections 153 and 143 of the Manual of Regulations for Banks by integrating sustainability principles into their internal risk rating systems and credit operations. The banks also demonstrated highly sustained economic, environmental, and societal sustainability among their existing borrowers. Moreover, regulatory compliance was found to have a significant positive relationship with environmental sustainability, indicating that stronger compliance supports more sustainable credit operations. To further strengthen risk assessment and sustainability integration, an action plan was developed to enhance the effectiveness of the internal risk rating system.

Rural Banks in Laguna should continue strengthening compliance with the Sustainable Finance Framework and Credit Risk Management System through regular monitoring, independent assessments, and continuous improvement of internal controls. The banks should maintain sustainable lending practices by using appropriate and reliable credit risk assessment tools to accurately evaluate borrowers and reduce errors in credit decisions. Regular validation of the internal risk rating system through reviews, stress testing, and scenario analysis is likewise recommended to ensure its continued effectiveness in supporting credit operations. Furthermore, the proposed action plan should be periodically reviewed and updated to address changes in the banks' risk profile, industry conditions, and regulatory requirements. Future studies may also expand the investigation to other financial institutions, such as cooperative banks, to further examine sustainable finance practices.

The study was limited to Rural Banks in the Province of Laguna and focused only on the regulatory compliance of the internal risk rating system under Sections 153 and 143 of the Manual of Regulations for Banks. It examined sustainability only in terms of economic, environmental, and societal dimensions within rural banks' credit operations and did not include other banking sectors or financial institutions. Consequently, the findings are specific to the participating rural banks and may not be generalized to other banking institutions or geographic locations.

Compliance with ethical standards

The author declares no conflict of interest and confirm that this study received no external funding. The study was conducted in accordance with the ethical guidelines of Laguna College of Business and Arts (LCBA) and the Data Privacy Act of 2012, with voluntary participation and informed consent obtained from all respondents and the appropriate authorized personnel of the participating Rural Banks in Laguna. Data were collected through a non-invasive survey questionnaire, and all information was treated confidentially, with no identifying information disclosed to protect the privacy of the participants and institutions involved.

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