Received: April 30, 2024
Revised: June 21, 2024
Accepted: June 24, 2024

KKBS JOURNAL of Business Administration and Accountancy
วารสารบริหารธุรกิจและการบัญชี มหาวิทยาลัยขอนแก่น
ปีที่ 8 ฉบับที่ 3 กันยายน - ธันวาคม 2567 Volume 8 Number 3 September-December 2024

Internal and External Factors Affecting Risk Management in Credit Services to Members of Agricultural Cooperatives and Farmers in Loei Province, Thailand

Ratchanee Kaew-arsa[1] Anchalee Kokanuch[2*]

Abstract

The objective of this research was to examine internal and external factors affecting risk management in providing credit services to members of agricultural cooperatives and farmer groups in Loei province, Thailand. The study population consisted of 90 individuals. They are individuals with authority to approve credit for agricultural cooperatives and farmer groups, including the chairman of the agricultural cooperative committee in Loei province, totaling 37 individuals, and the chairman of the farmer group committee in Loei province, totaling 53 individuals. Research tools included questionnaires, statistical analyses such as percentage, mean, standard deviation, Pearson's correlation coefficient, and multiple regression analysis.

The research findings indicated that opinions regarding internal factor related to credit service management ranked highest, followed by opinions on risk management in credit service management and external factor, respectively. Additionally, the research results showed that both internal and external factors influence risk management in providing credit services.
Keywords: Credit risk management, Internal factor, External factor

Introduction

Risk management is crucial in every organization, particularly in today's volatile, uncertain, complex, and ambiguous (VUCA) environment (Jitkraisorn, 2023). Internal and external factors play significant roles in shaping risk management practices, especially in credit service delivery to agricultural cooperative members and farmer groups. Internal factors such as organizational structure, policies, regulations, operational processes, personnel, and organizational culture, as well as external environmental factors such as economic, social, political, technological, natural disasters, and the spread of new infectious diseases, significantly impact internal risk management. Research by Kimathi et al. (2015), and Aldayel & Fragouli (2018) indicates that internal control systems influence risk management. Moreover, commercial banks' credit risk management policies, affect their credit service operations.

In general, the principles of credit management in cooperatives emphasize the pivotal role of the operational committee in establishing loan regulations and conditions and exercising management authority to set credit management policies, adhering to principles of ethical

[1] Graduate student, Faculty of Management Science, Loei Rajabhat University, Loei, Thailand
[2] Assistant Professor, Faculty of Management Science, Loei Rajabhat University, Loei, Thailand
[*] Corresponding Author e-mail: anchalee.kok@lru.ac.th

management. Development guidelines for cooperative management start with initial processes such as member data evaluation, pre-approval credit checks, credit approval decision-making, credit assessment for approval, and enhancing cooperative loan management efficiency. Intermediate processes include post-approval loan management, expenditure tracking to ensure loan objectives are met, delinquent debt collection strategies, and handling doubtful debts. Terminal processes involve managing repayments to cooperative members, resolving cooperative member issues, and addressing challenges such as member deaths or legal insolvency, and enforcing debt repayment through court judgments (Channarong, Thepsamritporn, & Suksamran, 2018).

In recent times, farmers have faced multifaceted challenges including natural disasters, high production costs, and fluctuating agricultural commodity prices, impacting agricultural cooperative and farmer group operations. Agricultural lending has unique characteristics compared to other forms of credit. Risk management for agricultural financial institutions places importance not only on internal factors related to organizational strategies, operations, finances, and regulations but also on external factors such as economic, social, and political conditions. Additionally, environmental factors including geographical and climatic conditions significantly impact agricultural production outcomes (Somboon et al., 2021). Government interventions through the Cooperative Promotion Department have assisted farmers, with cooperatives and farmer groups in Loei province participating in projects to reduce loan interest rates for cooperative member farmers. Seventeen cooperatives, comprising two farmer groups and 15 agricultural cooperatives, participated with a total of 11,398 members. The total initial loan debt amounted to 1,276,126,478.36 baht, with interest compensation requests totaling 30,093,825.51 baht (Loei Provincial Cooperative Office, 2022). From the information provided, it is evident that agricultural cooperatives and farmer groups in Loei province have significant amounts of overdue debts from providing credit services to their members. This situation could potentially impact the operations of cooperatives and farmer groups in terms of liquidity, business expansion, and may lead to future financial losses and even dissolution.

Furthermore, from the literature review, there have been no research studies related to studying factors impacting risk management in providing credit services to members of agricultural cooperatives and farmer groups in Loei province. Therefore, this study aimed to investigate internal and external factors affecting risk management in providing credit services to agricultural cooperative members and farmer groups in Loei province. The findings will guide cooperative business management procedures and develop risk management plans for credit service delivery to agricultural cooperative members and farmer groups in Loei province, Thailand and beyond.

Purpose of the study

To examine the internal and external factors affecting risk management in providing credit services to members of agricultural cooperatives and farmer groups in Loei province, Thailand.

Literature Review

Concept of Risk Management in Credit Services

The Committee of Sponsoring Organization of the Treadway Commission (COSO) has established a framework for risk management across organizations, COSO: ERM (Enterprise Risk Management Integrated Framework), and published it in 2004. Risk management is defined as a process resulting from the collaboration of the committee, management, and staff of the organization to be applied in formulating strategies and plans at all levels of the organization. It is designed to identify events that could impact the organization and manage risks to an acceptable level, ensuring confidence that the organization's objectives can be achieved effectively (Sakakorn, 2007). COSO: ERM comprises key components including Internal Environment, Objective Setting, Event Identification, Risk Assessment, Risk Response, Control Activities, Information and Communication, and Monitoring (Phanpong, 2019). Subsequently, the definition of organizational risk management, defined in 2017, emphasizes culture, knowledge, and practices in risk management to integrate with the strategies and activities of each organization (Chookhiatti et al., 2020). Key components including: 1) Governance and culture, which involves establishing committees, organizational structures, defining organizational culture, core value commitment, and motivating and developing personnel. 2) Objective and strategic goal setting, including business context analysis, identifying risks acceptable to the organization, evaluating strategic options, and setting organizational objectives. 3) Operations performance management, including risk identification, severity assessment, risk prioritization, risk response, and overall risk framework development. 4)Review and improvement, comprising significant change assessment, risk review, and commitment to improvement, rectification, risk management, and 5) Information, communication, and reporting, including upgrading information systems, data communication, risk reporting, culture, and performance reporting (Jittipichayanan & Uachanachit, 2022).

Concept of Risk Governance and Financial Institution Stability

According to the announcements and policies of the Bank of Thailand (Bank of Thailand, 2023), prudential measures for risk governance and financial institution stability have been stipulated. The credit risk aspects are outlined as follows:

1) Credit transaction policy, including; 1.1) Setting practices for credit provision in terms of policies, processes, procedures, and communication to employees; 1.2) Separation of responsibilities; and 1.3) Documentation for credit transaction consideration and review. 2) Policy for collateral valuation and unsold real estate received from debt repayment, where valuation refers to expressing opinions on the market value of collateral assets or the market value of unsold real estate received from debt repayment, collateral for credit provision, or acquired from off-market sales. This is carried out through appropriate valuation processes and methods to estimate the value of collateral assets or real estate, with either external or internal appraisers. 3) Debt restructuring policy entails financial institutions accommodating or modifying debt repayment terms for debtors facing financial difficulties, such as extending repayment periods, reducing principal or accrued interest, or adjusting interest rates for debtors. It also involves asset

transfers for debt repayment and debt-to-equity conversions. 4) Credit transaction audit policy serves as a significant credit risk management tool for financial institutions. Its objective is to confirm that credit transaction processes comply with the regulations set by financial institutions, covering the end-to-end process of credit transaction consideration, including post-approval processes. Credit transaction audit units, as the second line of defense, must operate independently from the first and third lines of defense. And 5) Reserve classification policy refers to criteria for classifying reserves and disposing of assets from accounts related to debt restructuring. Financial institutions are required to classify assets and liabilities subject to debt restructuring according to the policies set forth by the Bank of Thailand regarding debt restructuring. Institutions must have systems in place to closely monitor debtors who have undergone debt restructuring for at least one year from the date of restructuring. Additionally, financial institutions must establish reserves for assets and liabilities or dispose of assets from accounts subject to debt restructuring as specified in relevant accounting standards.

In addition, the Cooperative Promotion Department (2001) has established regulations for overseeing the risk and stability aspects of financial institutions concerning the classification of loan quality and provisioning for doubtful debts, in the year 2001, to ensure the efficient management of cooperative loan debt, thereby enhancing the stability of cooperatives. These regulations aim to establish cooperative practices regarding income recognition, provisioning for doubtful debts, and loan quality classification. Therefore, the Registrar of Cooperatives has promulgated these regulations to ensure that cooperatives adhere to the guidelines for classifying loan quality.

Based on literature review, principles of risk management in providing credit services by the Bank of Thailand, and regulations for overseeing risk and stability of financial institutions by the Cooperative Promotion Department, the researchers have defined metrics for managing risk in providing credit services for agricultural cooperatives and farmer groups, including; 1) policies and guarantees, 2) credit analysis, 3) debtor classification, 4) collateral valuation, 5) credit examination, and 6) debt restructuring.

Concepts related to internal factor

The Securities Exchange of Thailand (2014) and Digital Government development (2020) have categorized internal factors related to risk management into four types: *1) Strategic risk:* This pertains to risks associated with the formulation of strategies, operational plans, and their inappropriate implementation, which may impact the organization's strategic planning, objectives, and operational guidelines. *2) Operational risk:* This encompasses risks related to the execution of individual processes or activities within the organization, including risks associated with managing information technology and various knowledge data to achieve defined objectives. Operational risks can affect the efficiency of work processes and the overall achievement of organizational objectives. *3) Financial risk*: This includes risks arising from internal factors such as liquidity management, credit, and investment, as well as external factors such as changes in interest rates, exchange rates, or counterparty risks that may lead to failure to fulfill contractual obligations, resulting in adverse effects on the organization. And *4) Compliance risk:* This involves risks related to compliance with regulations and regulations enforced by regulatory bodies. It includes risks arising from internal factors such as liquidity management, credit, and investment, as well as external factors such as changes in interest rates, exchange rates, or counterparty risks that may lead to failure to fulfill contractual obligations, resulting in adverse effects on the organization.

For a research study on credit risk management affecting the operational efficiency of a financial institution in Nakhon Ratchasima province, the findings revealed that the bank's risk management practices in the small business loan evaluation process align with risk management principles. Effective management of internal environmental risks overall instills confidence that the organization had a good risk management system, leading to efficient credit operations (Thongsook & Thummajariyawat, 2020). Similarly, Phanphong (2019), research investigated the effectiveness of risk management evaluation in the evaluation process of a small business unit, the Agricultural Bank and Agricultural Cooperative Bank. Based on the relevant literature review, this research identifies internal factors comprising strategic, operational, financial, and regulatory factors. Therefore, the research team can formulate the following research hypothesis:

Research Hypothesis 1: Internal factor influence risk management in credit services.

Concepts related to external factor

Taweepol (2019) states that external factors relevant to risk management include *1) Economic Conditions*: Changes in the global and national economies, such as fluctuations in national income, investments, currency exchange rates, commodity prices, and employment, as well as regional and local economic conditions, such as droughts affecting agricultural production in certain regions. These changes may impact credit risks in the form of changes in business cycles, exchange rates, interest rates, credit volume, and quality. Additionally, changes in regional economic conditions, such as liquidity shortages or financial difficulties, may lead to debtors' inability to fulfill agreements or contracts, resulting in adverse effects on financial institutions. Furthermore, changes in laws, regulations, and regulations affect financial institutions' operations, including changes in regulatory oversight, as well as the quality and ability to collect debts. *2) Competitive Environment:* Refers to competition among financial institutions in terms of growth, profitability, and market leadership. This competition exerts pressure on financial institutions to lower credit analysis standards or set inappropriate credit service prices, resulting in increased costs for financial institutions due to increased low-quality loans and reduced returns. *3) Political Changes:* Changes in laws or standards may create opportunities for financial institutions to introduce new products, leading to increased competition and more options for customers. Financial institutions may lower debtor quality criteria, increasing their risk or adjust transaction rates with certain debtor types, resulting in increased or decreased risk. And *4) Natural Disasters:* Another factor impacting debtors' businesses related to agriculture products, making it difficult for debtors to repay debts.

For research related to the study of factors affecting risk management in credit unions, it was found that external factor influencing risk management in credit unions are political and regulatory factors (Prasongsri & Avakiat, 2022), as well as risk management strategies resulting from changes in situations and external events affecting risk management (Roung-onnam, Kittiyantakarn & Phonprasit, 2023). Based on the literature review, this research thus identifies external factors including economic and social factor, political factor, competitive environment factor, and natural disaster factor. Additionally, the researchers can formulate the following research hypothesis:

Research Hypothesis 2: External factor influence risk management in credit services.

Conceptual framework

From the literature review related to the topic, the researchers have thus outlined the conceptual framework as depicted in Figure 1.

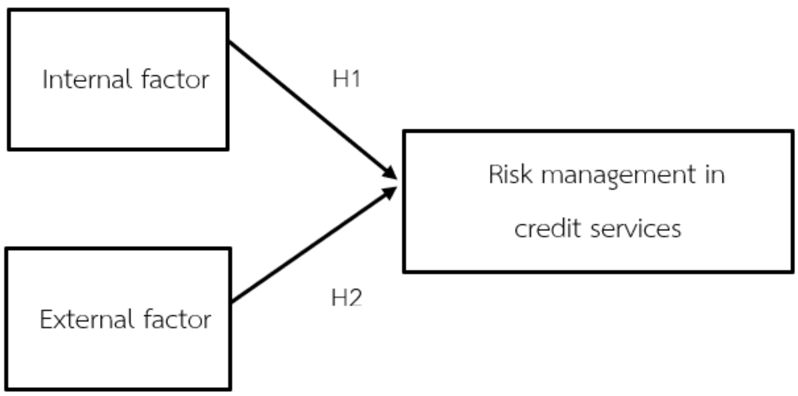

Figure 1 Conceptual framework

Methodology

Since this research involved risk management in providing credit services within agricultural cooperatives and farmer groups in Loei province, the unit of analysis for the study is at the organizational level. Therefore, the research population represents organizational representatives providing information, with each respondent representing one person. They are individuals with authority to approve credit for agricultural cooperatives and farmer groups, including the chairman of the agricultural cooperative committee in Loei province, totaling 37 individuals, and the chairman of the farmer group committee in Loei province, totaling 53 individuals. The total population was 90 individuals (Loei Provincial Cooperative Office, 2022). The data collection tool used in this research was a questionnaire that consists of closed-ended questions, structured into 4 sections:

Section 1: General information of the cooperatives and farmer groups. The questionnaire format is a checklist consisting of 8 items.

Section 2: Internal factors (INT) include questions related to strategies, operations, finance, and laws/regulations, totaling 12 items.

Section 3: External factors (EXT) include questions related to socio-economic, political, competitive landscape, and natural disasters, totaling 11 items.

Section 4: Risk management in credit services (RMC) consists of questions related to policies and guarantees, credit analysis, debtor classification, collateral valuation, credit examination, and debt structure improvement, totaling 31 items.

The questionnaire of sections 2-4 used a rating scale format based on the Likert scale, with each level defined as: very high, high, moderate, low, and very low.

The quality inspection of the research tool. The researchers conducted a content validity test by experts, which involved examining the appropriateness, clarity, and alignment with operational definitions of the questionnaire items. Following this, a reliability test was conducted by administering the revised questionnaire to a try-out group of 30 individuals outside the target population of this study. The data obtained were then used to test the reliability of the questionnaire using Cronbach's alpha Coefficient. The acceptable Cronbach's alpha coefficient level is considered to be above 0.70. The obtained alpha coefficients for the internal factors (INT) were 0.951, for the external factors (EXT) were 0.955, and for the risk management in credit services (RIS) was 0.984, all exceeding the threshold of 0.70. Therefore, the reliability of the questionnaire is considered acceptable (Hair et al., 2019).

For data collection, the researchers officially coordinated with agricultural cooperatives and farmer groups in Loei province to request cooperation in responding to the questionnaires from the target population. After that, the questionnaires were distributed with a collection period of approximately one month. Then, the questionnaires were collected in person.

Data analysis included percentage, mean, standard deviation. Multiple Regression Analysis (MRA) was conducted to analyze the predictors, and Pearson's correlation coefficient was used to examine the relationships between predictor and outcome variables. Furthermore, Variance Inflation Factor (VIF) analysis was conducted to identify multicollinearity.

Results

General information from the questionnaire respondents of agricultural cooperatives and farmer groups in Loei province, totaling 90 individuals, revealed that the majority were farmer groups, amounting to 53 (58.88%). Among them, 49 (54.44%) held the position of committee chairman. The highest level of education attained was below a bachelor's degree, with 64 individuals (71.11%). Approximately 61 individuals (67.77%) had served as committee members for more than 5 years. Committees with 5-7 members overseeing operations were found in 49 cooperatives (54.44%). Moreover, 71 cooperatives (78.90%) did not have credit department staff. The majority operated with capital ranging from 100,000 to 500,000 baht, totaling 31 cooperatives (34.44%).

Additionally, the researchers investigated internal factors (INT), external factors (EXT), and risk management in credit services (RMC). The research findings are presented in Table 1-3.

Table 1 Mean and standard deviation of internal factor

No.	Index	μ	σ
1.	The organization has clear policies and strategic plans.	3.91	1.12
2.	The organization has operational plans aligned with its clear policies.	4.03	1.04
3.	The organization conducts realistic internal assessments.	3.93	1.10
4.	Employees are proficient in efficient credit management.	3.81	1.14
5.	The organization has effective technology systems in place.	3.53	1.27
6.	Staff consistently follow policies, strategic plans, and operational plans.	4.06	1.03
7.	The organization conducts job performance reviews and provides guidance.	4.03	1.12
8.	Roles and responsibilities are clearly assigned.	3.92	1.09
9.	The organization secures sufficient funds or reserves for member services.	4.30	0.99
10.	Cash positions of cooperatives/farmer groups are regularly reviewed.	4.06	1.00
11.	The organization monitors and controls operations according to risk-related policies and procedures.	4.32	0.96
12.	Staff consistently follow policies, strategic plans, and operational plans.	4.33	0.95

From Table 1, it was found that staff consistently follow policies, strategic plans, and operational plans (mean = 4.33). Following this, the organization monitors and controls operations according to risk-related policies and procedures (mean = 4.32). The organization's effective technology systems ranked lowest (mean = 3.53).

Table 2 Mean and standard deviation of external factor

No.	Index	μ	σ
1.	The organization assesses economic and social conditions that may impact it.	3.89	0.98
2.	The organization evaluates risks from external economic and social factors for loan approval.	3.80	1.04
3.	The organization has plans and developments to adapt to changing economic and social situations.	3.69	1.17
4.	The organization assesses political conditions that may impact it.	3.89	1.02

Table 2 Mean and standard deviation of external factor (Cont.)

No.	Index	μ	σ
5.	The organization evaluates risks from external political factors for loan approval.	3.76	1.12
6.	The organization has plans and developments to adapt to changing political situations.	3.68	1.17
7.	The organization reviews credit analysis standards and surveys interest rates competitively from financial institutions.	4.16	0.92
8.	The organization assesses risks from external competitive factors, such as profit competition or market leadership from other financial institutions, for loan approval.	3.86	1.06
9.	The organization has plans and developments to adapt to changing competitive situations.	3.67	1.10
10.	The organization evaluates risks from external natural disaster factors for loan approval.	3.54	1.22
11.	The organization has plans and developments to adapt to changing natural disaster situations.	3.90	1.19

From Table 2, upon examination, it was found that the organization has reviewed credit analysis standards and surveys interest rates competitively from financial institutions.(mean = 4.16). Following this, the organization has plans and developments to adapt to changing situations caused by natural disasters (mean = 3.90). Meanwhile, the organization evaluate risks arising from external factors, particularly natural disasters, for loan approval and credit limits, which ranked lowest (mean = 3.54).

Table 3 Mean and standard deviation of risk management in credit services

No.	index	μ	σ
1.	The organization has clear credit risk management policies and strategies.	3.60	1.20
2.	The organization has projects and plans aligned with its credit risk management policies and strategies.	3.64	1.13
3.	Credit objectives are set according to decisions made in management committee meetings.	4.07	1.10
4.	The organization appoints a risk management committee.	3.54	1.20
5.	Regular joint meetings of the management committee and staff are held to clarify credit policies and objectives clearly.	3.90	1.19
6.	Credit decisions are made in committee meetings.	4.33	1.03
7.	The credit committee understands credit processes well.	4.19	1.04

Table 3 Mean and standard deviation of risk management in credit services (Cont.)

No.	Index	μ	σ
8.	The organization regularly monitors its credit status and reviews credit risks.	4.02	1.08
9.	Credit staff are knowledgeable, experienced, and perform credit services efficiently.	4.02	1.10
10.	Organization checks borrower qualifications according to its regulations, rules, and lending criteria.	4.28	0.98
11.	Organization assesses borrowers' repayment ability.	4.12	0.98
12.	Organization compares borrowers' equity to requested loan amount or debt-to-equity ratio before approving loans.	3.94	1.02
13.	Organization uses collateral such as real estate and personal guarantees to analyze loan applications and secure loans in case borrowers cannot repay.	4.01	1.12
14.	Organization evaluates economic conditions based on natural disasters and current market prices of agricultural products.	3.98	1.05
15.	Organization establishes clear rules or criteria for classifying borrower quality.	3.73	1.09
16.	The organization records borrower information, including loan amounts, purposes, repayment schedules, and outstanding debts.	4.11	1.04
17.	Organization documents the classification of borrower quality based on borrower history.	3.89	1.15
18.	Organization sets credit limits according to borrower classification quality and approval authority.	3.94	1.04
19.	Maintaining individual borrower accounts separate from the debtor ledger.	4.11	0.98
20.	Organization conducts assessments of the liquidity of collateral for credit.	3.83	1.12
21.	Organization verifies the adequacy of collateral for credit.	3.96	1.12
22.	Organization monitors changes in the current value of collateral.	3.84	1.18
23.	Entities approved by the Securities and Exchange Commission evaluate the value of real estate and structures used as collateral.	3.76	1.23

Table 3 Mean and standard deviation of risk management in credit services (Cont.)

No.	Index	μ	σ
24.	Committee meetings verify borrower details including personal information, loan amounts, repayments, outstanding balances, interest rates, and due dates.	4.16	1.06
25.	Relevant units collaborate to verify borrower details.	4.19	1.04
26.	Borrowers' ability to repay is assessed based on main and additional income sources, and future financial trends.	4.01	1.06
27.	Previous repayment history is reviewed.	4.13	1.01
28.	The organization prepares documentation for considering clear debt restructuring guidelines for borrowers.	3.81	1.06
29.	Meetings are held to consider and develop action plans to assist members facing financial difficulties according to established guidelines.	3.78	1.15
30.	Clear regulations or procedures are established regarding debt restructuring, approval processes, reporting, and monitoring.	3.83	1.16
31.	The organization reviews debt restructuring policies, measures, and procedures at least once a year.	3.80	1.13

According to Table 3, it is apparent that credit decisions are made in committee meetings, which scored the highest (mean = 4.33). Following this, the organization checks borrower qualifications according to its regulations, rules, and lending criteria (mean = 4.28). The credit committee understands credit processes well, and relevant units collaborate to verify borrower details (mean = 4.19). Committee meetings verify borrower details, including personal information, loan amounts, repayments, outstanding balances, interest rates, and due dates (mean = 4.16). Additionally, previous repayment history is reviewed (mean = 4.13), and the organization appoints a risk management committee, which ranked lowest (mean = 3.54). As this research involved more than one predictor variable, the researchers conducted an examination of the relationships between predictor variables themselves using Pearson's correlation coefficient. The results are presented in Table 4.

Table 4 Analysis of Pearson's Correlation Coefficient, mean, and standard deviation between predictor variables and risk management in credit services

Variables	Mean	S.D.	INT	EXT	RMC
INT	4.02	0.86	1.000		
EXT	3.80	0.91	0.766*	1.000	
RMC	3.92	0.92	0.825*	0.789*	1.000

From Table 4, the correlation data between predictor variables, including internal and external factors, showed a coefficient of 0.766, which falls within an acceptable range below 0.800 (Hair et al., 2019).

The examination of internal and external factors impacting risk management in credit services showed significant effects: internal factors had a regression coefficient of 0.548, while external factors had a coefficient of 0.370. The regression analysis accounted for 73.40% of the variability in risk management. Multicollinearity analysis using the VIF test indicated VIF values of 2.424 for internal and external factors, well within the acceptable range (Hair et al., 2019). See Table 5 for detailed research findings.

Table 5 Multiple Regression Analysis of predictor variables and risk management in credit services

Variables	β	SE	Beta	t	*p-value*
Constant	0.344	0.235		1.461	0.148
INT	0.548	0.087	0.533	6.269	0.000*
EXT	0.370	0.083	0.381	4.475	0.000*
VIF = 2.424, R = 0.740, R^2 = 0.734, SEE = 0.45537, F = 124.027, Sig. of F = 0.000					

* Statistical significance level at 0.05

Discussion

From the study of factors affecting risk management in providing credit services to members of agricultural cooperatives and farmer groups in Loei province, it was found that internal factors significantly influence risk management in providing credit services to members of agricultural cooperatives and farmer groups in the province. Based on the perception of internal organizational factors by the respondents, it was found that the staff consistently implemented policies, strategies, plans, and operational plans. The organization monitored and controlled activities related to regulations and policies concerning risks, adhering to principles and operational rules of cooperative work, and in line with the announcements and policies of the Bank of Thailand (2023), the principal financial institution of the country. Furthermore, effective internal management of the cooperative must emphasize the implementation of policies, strategic plans, and control of operations related to lending, as it is a primary mission of the cooperative that affects risk management and the cooperative's performance. Additionally, the research results align with the study on 'Factors affecting the success of cooperative business in Bogor city,' which indicated that the cooperative internal control system influences cooperative business success (Ritonga, Kusuma, & Setiawan, 2023) And the research by Otache et al. (2023), which studied 'Internal factors affecting the performance of employee-based savings and credit cooperatives: evidence from Nigeria,' found that internal control systems affect employee-based savings and credit cooperatives. Furthermore, the research is consistent with the findings of Prasongsri & Avakiat (2022) regarding risk management guidelines for cooperative savings in Thailand. The study identified significant internal factor affecting risk management in cooperative savings, including strategic, financial, operational/practical, legal and regulatory/anti-money laundering, financial crime support, reputation, and information technology aspects.

Regarding external factors influencing risk management in providing credit services to members of agricultural cooperatives and farmer groups in Loei province, the perception of respondents on external organizational factors indicated that the review of credit analysis standards and the competitive surveying of interest rates from financial institutions were the most important external factors. Following this, the organization has plans and developments to adapt to changing situations caused by natural disasters. This is consistent with research that analyzed the influence of external factor on operational risk factors of local banks, it was found that significant external factors included the economic condition impacting bank operations (Ariyanto & Hadiprajitno, 2023) Similarly, research on the external financial and lending factors of cooperatives in Kisii District, Kenya, indicated that financing policies were the most influential factors on organizational operations (Ondieki et al., 2017), consistent with the research by Maboon & Suriya (2016). A study on factors affecting loan delinquency of members of Phu Wiang Agricultural Cooperative Limited, Khon Kaen province, found statistically significant factors affecting loan delinquency, categorized into two aspects: 1) Economic and social aspects of farmers, and 2) External factor, including natural disasters.

Conclusion

The findings of this study conclude that both internal and external factors influence risk management in credit services provision. This aligns with the framework of COSO ERM 2017, emphasizing the importance of internal control operations and organizational management. Internally, significant factors affecting risk management in credit service provision include strategy formulation, organizational structuring to define clear responsibilities, regulatory compliance, and financial activity management. These factors are in line with governance and organizational culture components. Additionally, emphasis on analyzing business-related contexts in terms of socio-economic, political, and competitive landscape of financial institutions aligns with risk management strategies and organizational objectives. Both internal and external factors are relevant and interconnected with risk management and stability activities of financial institutions, as per the policies of the Bank of Thailand and the Cooperative Promotion Department. Furthermore, this research highlights environmental factors, specifically natural disasters, as external components unique to financial institutions involved in agricultural credit services provision.

Suggestions

Suggestions for management, based on the research findings suggest that cooperative managers of agricultural cooperatives and farmer groups in Loei province should prioritize internal organizational factors related to credit management, particularly in terms of monitoring and controlling operations according to policies and regulations. It is advised to update regulations to align with current situations. Additionally, external factors concerning credit management should involve reviewing standards for credit analysis and setting interest rates based on competition from other financial institutions. Managers should also review and plan to adapt to situations arising from natural disasters.

For future studies, it is recommended to focus on risk management in credit service provision that impacts cooperative operations and analyze factors contributing to non-income-generating debts among farmers. This would provide insights for addressing or preventing risks related to debt repayment abilities in the future.

References

Aldayel, M. & Fragouli, E. (2018). Risk management and performance: A case study of credit risk management in commercial banks. The Business and Management Review, 10(1),169-183.

Ariyanto, S. & Hadiprajitno, P. B. (2023). Analysis of the influence of internal factors, external factors and bank risk factors on rural banks performance. Journal of Business, Social, And Technology, 5(1), 18-31.

Bank of Thailand. (2023). Index of announcements and policies of the Bank of Thailand. Retrieved August 12, 2023, from https://www.bot.or.th/content/dam/bot/fipcs/Index-of-BOT-Announcements-in-FI-group_upload.pdf (In Thai)

Channarong, Y., Thepsamritporn, W., & Suksamran, S. (2018). Guidelines to develop the Management of the Teachers' Savings and Credit Cooperatives in the Southern Provinces of the Andaman Coast. Phuket Rajaphat University Academic Journal, 14(2), 42-70. (In Thai)

Chookhiatti, S. et al. (2020). Key points of enterprise risk management: Integrating with strategy and performance (COSO ERM (2017)). Journal of Accounting Profession, 16(49), 60-71. (In Thai)

Cooperative Promotion Department. (2001). Regulations of the cooperative registrar regarding the classification of loan quality and provision for doubtful debts. Retrieved August 12, 2023, from http://e-service.cpd.go.th/elib/pdf_file/1018_2544.pdf (In Thai)

Hair, J. F., et al. (2019). Multivariate data analysis: A global perspective. 8th ed. Upper Saddle River, N.J.: Cengage Learning.

Jitkraisorn, R. (2023). Risk management: A new context in VUCA world. Journal of Innovation and Management, 8(1), 134-149. (In Thai)

Jittipichayanan, P. & Uachanachit, D. (2022). Elements of enterprise risk management. Suan Dusit Graduate School Academic Journal, 19(3), 175-192. (In Thai)

Kimathi, A. et al., (2015). Factors affecting liquidity risk management practices in microfinance institutions in Kenya. Journal of Economics and Sustainable Development, 6(4), 90-78.

Kwaik, N. A. et al. (2023). Factors affecting risk management in industrial companies in Jordan. Administrative Sciences, 13(132), 1-28.

Loei Provincial Cooperative Office. (2022). Cooperative profile data system. Retrieved May 31, 2023, from https://smartprofile.cpd.go.th/coop/shopping (In Thai)

Loei Provincial Cooperative Office. (2022). Project to reduce interest rates on loans for agricultural cooperative members' farmer groups: Summary of budget allocation request for the project to compensate interest on loans for agricultural cooperative member's farmer group. Loei: Provincial Cooperative Office. (In Thai)

Maboon, P. & Suriya, P. (2016). Factors affecting non-debt repayment of members of Phuwiang Agricultural Cooperative, Khon Kaen Province. Khon Kaen Agriculture Journal, 44(4), 605-614. (In Thai)

Ondieki, A. N., Okioga, C., Okwena, D. K., & Onsase, A. (2017). Assessment of the effect of external financing on financial performance of savings and credit cooperatives in Kisii Central District, Kenya. Kenya: JKUAT Annual Scientific Conference.

Otache, I., Echukwu, I. J., Umar, K., Yunusa, A. & Audu, S. (2023). Internal factors affecting the performance of employee-based savings and credit cooperatives: Evidence from Nigeria. Journal of Enterprising Communities: People and Places in the Global Economy, 17(6), 1154-1170.

Phanphong, K. (2019). Evaluation of the effectiveness of risk management in the credit approval process of small and medium-sized enterprises: A case study of agricultural bank and agricultural cooperatives. Bangkok: Thai Chamber of Commerce University. (In Thai)

Prasongsri, S. & Avakiat, S. (2022). Risk management approaches of savings cooperatives in Thailand. Academic Journal of North Bangkok University, 11(1), 200-213. (In Thai)

Ritonga, L., Kusuma, I. C., & Setiawan, A. B. (2023). Factors affecting the success of cooperative business. Accounting Journal of Binaniaga, 8(2), 123-134.

Roung-onnam, R., Kittiyantakarn, K. & Phonprasit, C. (2023). Factors affecting risk management Of Savings Cooperatives in Thailand. Journal of MCU Peace Studies, 11(1), 40-49. (In Thai)

Sakakorn, C. (2007). COSO: ERM and internal audit. Journal of Accounting Profession, 3(8), 79-75. (In Thai)

Somboon, S. et al. (2021). Credit scoring model. Focus and Quick, 187, 1-11.

Taweepol, U. (2019). The impact of corporate governance on risk management for credit of the financial institutions listed on the Stock Exchange of Thailand. Bangkok: Sripratum University.

The Securities Exchange of Thailand. (2014). Enterprise risk management. Bangkok: SET. (In Thai)

Thongsook, A. & Thummajariyawat, M. (2020). Credit risk management affecting the performance of employees Ngern Tid Lor company limited Muang Nakhonratchasima District Nakhonratchasima Province. Nakhonratchsima: Ramkhamhaeng University, Nakhonratchsima.