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A Study on Strategies for Overcoming Crises in Cooperative Banking: Focusing on the National Agricultural Cooperative Federation's Mutual Finance

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Abstract: Cooperative banking has long served as a community-oriented, people-friendly financial institution. Based on trust and solidarity, it has provided customized financial services to rural areas and the socially underprivileged who face difficulty accessing traditional financial institutions, contributing to the revitalization of local economies. (1) Background/Purpose: This study analyzes the crises facing cooperative banking in Korea, focusing on the case of the National Agricultural Cooperative Federation (NACF)'s mutual finance, and proposes concrete strategic responses for its sustainable development. NACF mutual finance, which developed alongside Korea's rural economy since the 1960s to address predatory lending, now faces serious threats from intensified regulatory burdens, rural depopulation and aging, and the rise of fintech competitors. (2) Study Design/Methodology/Approach: The study employs literature review, case analysis, and policy analysis. Domestic cases include Toss Bank and Kakao Bank, whose digital innovation strategies are examined for applicable implications. Overseas cases include the Netherlands' Rabobank and France's Crédit Agricole, whose sustainability strategies, crisis experiences, and recovery methods are analyzed. (3) Findings: Three core strategies for overcoming the current crises are identified: (i) development of a differentiated digital platform model leveraging agricultural data unique to NACF; (ii) strengthening of inclusive finance identity through community cooperation with local governments; and (iii) relaxation of regulatory barriers including restrictions on non-member service usage, individual lending limits, and disproportionate provisioning requirements. (4) Originality/Value: This study provides a comprehensive, institution-specific strategic roadmap for NACF's mutual finance by integrating digital innovation approaches from leading fintech institutions with sustainability-centered lessons from globally successful cooperative banking models, and by identifying specific regulatory reforms necessary for the sector's revival.

Keywords: cooperative banking; mutual finance; NACF; agricultural cooperative; fintech; digital platform; inclusive finance; Rabobank; Crédit Agricole; regulatory reform

1. Introduction

1.1. Research Background

Cooperative banking (Cooperative Banking) is a form of mutual finance (Mutual Finance) operated for the purpose of mutual financial support based on the common bond among cooperative members. Cooperative banking operates credit projects centered on members, and its distinctive feature is that financial services are provided based on mutual trust and reciprocal relationships among members. In particular, the agricultural cooperative (NACF) mutual finance has been designed as an inclusive finance organization (Inclusive Finance Organization) for farmers and ordinary citizens who have difficulty using existing financial institutions, aiming to provide financial services to marginalized groups and contribute to regional economic revitalization.

NACF mutual finance plays an important role in promoting the economic development of agriculture and local communities beyond simply providing financial services. The member-centered operational structure ensures

that the main beneficiaries of financial activities are the members, and the profits of financial activities are also returned to the members. This member-centered model adopts trust-based loan and savings services as its core business model. Furthermore, unlike general commercial banks, NACF mutual finance focuses on improving financial accessibility for rural areas and marginalized groups rather than maximizing profits, thereby enhancing agricultural productivity, strengthening the local economy, and supporting agricultural sustainability.

However, cooperative banking is currently facing serious crises. The first factor is the intensely competitive environment. In recent years, the rise of fintech companies has created a situation where competition must occur not only with existing financial institutions but also with digital financial service providers. The spread of digital financial services has become a major factor weakening the competitiveness of traditional cooperative banking.

The second factor is the current market situation where loan asset defaults are intensifying due to economic recession and the collapse of the real estate market. Particularly in the agricultural sector, loan repayment capacity has decreased due to natural disasters and price volatility, negatively affecting the profit and loss structure of NACF.

Third, while liquidity rapidly increased globally after the COVID-19 pandemic, the resulting sustained high interest rates have caused loan costs to rise, which is also a serious crisis. This situation has resulted in increased loan repayment burdens for members and deteriorating profitability of mutual finance institutions. In fact, in Korea, most mutual finance institutions except NACF recorded deficits in 2024.

Finally, the lack of trust among members and operational management inefficiency emerging as internal factors risk eroding the essential values of cooperative banking, while the absence of internal controls and risk management further highlights vulnerability in crisis situations.

To address these problems, a comprehensive evaluation of the structure and operational methods of cooperative banking is necessary. It is also important to analyze the root causes of the current crisis from multiple perspectives and prepare countermeasures. Therefore, this study aims to propose concrete strategies to resolve the problems faced by cooperative banking and secure its sustainability.

1.2. Research Purpose

The purpose of this study is to analyze the nature and causes of the various crises facing NACF mutual finance from multiple perspectives and to present practical and executable strategic responses. NACF mutual finance, as a core financial institution for local communities and farmers, has a growing need to build a sustainable development model in the rapidly changing financial environment. Accordingly, this study aims to deeply understand the crisis factors facing NACF mutual finance and to enhance the long-term viability of cooperative banking by preparing specific improvement measures. Three detailed objectives are established.

1. To identify the major crisis factors by analyzing the structural problems and operational vulnerabilities of NACF mutual finance. This focuses on comprehensively analyzing internal and external factors that impede sustainability—including rural population decline, aging, and intensified competition—and supporting these with quantitative and qualitative data for clear understanding.
2. To derive effective crisis response strategies for cooperative banking through domestic and overseas success cases. In this process, key success factors such as digital innovation, regulatory relaxation, and business diversification are identified, and methods for converting these into applicable forms for NACF mutual finance are explored.
3. To propose institutional, structural, and technological innovation measures to guarantee the sustainability of NACF mutual finance. This involves preparing comprehensive solutions that include not only short-term crisis overcoming but also long-term growth strategies.

1.3. Research Methodology

This study applied various research methodologies for the systematic analysis of NACF mutual finance's crises and the presentation of practical alternatives. Research methods include literature review, case analysis, and policy analysis.

First, through literature review, the concepts and principles of cooperative banking were examined in depth. By analyzing existing research and academic materials, the historical background and key operational principles of cooperative banking were understood, and a theoretical framework was established for structurally analyzing the problems facing NACF mutual finance.

Second, through domestic and overseas case analysis, success factors of cooperative banking institutions and

internet-only banks in environments similar to NACF mutual finance were explored. Domestic cases of Toss Bank and Kakao Bank were analyzed, deriving implications that their digital innovation strategies and customer-centered service models can provide to NACF mutual finance. For overseas cases, the Netherlands' Rabobank and France's Crédit Agricole were selected, analyzing their sustainability strategies and success factors of the cooperative model, as well as their experiences overcoming existential crises.

Third, through policy analysis, the institutional constraints and regulatory impacts faced by NACF mutual finance were evaluated. Based on this, the necessity for regulatory relaxation and policy improvements was derived, and measures for NACF mutual finance to operate more flexibly were proposed. In this process, major financial regulations and legal limitations of the mutual finance sector were comparatively analyzed to derive improvement measures specific to NACF mutual finance.

Finally, based on results derived from multi-faceted research methodology, a strategic roadmap was designed for NACF mutual finance to overcome crises and achieve sustainable development.

2. Environmental Analysis

2.1. The Beginning of NACF Mutual Finance

In the 1960s, Korea's rural economy was plagued by high-interest private lending. At the time, farm households had small management scales and low income levels, making it impossible to secure the funds needed for agriculture. Policy funds were also supported on a limited scale according to investment priorities, making it difficult for farmers to receive sufficient financial support. Furthermore, with no proper financial institutions in rural areas, it was difficult to access funds from institutional finance. As a result, farmers fell into a vicious cycle of relying on private loans and high-interest borrowing from neighboring farm households.

When agriculture was a major national industry, to resolve the problem of high-interest private lending in rural areas, the Supreme Council for National Reconstruction resolved on June 15, 1961, to merge the old Agricultural Cooperative and the Agricultural Bank. The merged cooperative, launched from the integration of the old Agricultural Cooperative and the Agricultural Bank, was organized into three levels: village cooperatives (dongri cooperatives), county cooperatives (sigun cooperatives), and the central federation.

The village cooperatives, which can be considered the predecessors of today's NACF mutual finance, were not permitted to conduct financial business separately due to the existence of the Agricultural Bank as a separate corporation dedicated to agricultural finance, and were only allowed to carry out economic projects. Since financial business—the core of rural economic activities—was excluded, the village cooperatives had very small-scale economic projects, making independent management impossible.

An opportunity to reorganize and open the path to an integrated cooperative was provided by the Agricultural Cooperative Act implemented on August 15, 1961. Subsequently, village cooperatives were merged into town and township-level cooperatives, and in 1969, a five-year plan was established that included large-scale merger of existing village cooperatives into town/township-level cooperatives and the introduction of new businesses including mutual finance. Accordingly, mutual finance operations began on a pilot basis at 150 cooperatives in July 1969.

NACF expected mutual finance to contribute to: developing rural idle funds into investment capital, expanding short-term agricultural fund supply, raising members' awareness of cooperative roles and functions, and expanding cooperative business through increased self-funding.

Mutual finance operations gradually grew, and on May 15, 1970, NACF amended unit cooperative bylaws to establish the basis for handling mutual finance. In August 1972, a special provision on NACF's handling of mutual finance was inserted into the Credit Union Act, allowing unit cooperatives to be regarded as credit unions.

The implementation of mutual finance by unit cooperatives brought several effects. First, it greatly contributed to eliminating rural high-interest private lending by absorbing rural idle funds into savings and supplying them to members as agricultural and household funds. Additionally, NACF still performs an important role as a national bulwark against rural and regional extinction. Unlike new village banks and credit unions in the same mutual finance sector—which are largely located in small and medium cities where first-tier banks operate—NACF and Suhyup (fisheries cooperative), whose main customers are farmers and fishermen, are also located in small communities and rural/fishing areas underserved by large financial institutions, providing financial services including deposits, loans, and insurance.

2.2. Business Structure and Growth Drivers of NACF Mutual Finance

NACF has a business structure that uses revenue from credit projects to compensate for losses in economic projects. In this business structure, the importance of credit projects is even more emphasized for NACF cooperatives with large deficit scales in economic projects.

NACF mutual finance is a non-profit organization that prioritizes members' interests over the cooperative's profits. It legally limits members' business usage and stably provides financial services. Unlike large financial institutions that focus on corporate credit, it concentrates on supporting members through small-amount loans. This formed the foundation for NACF mutual finance to wisely overcome crises when other financial institutions focused on corporate finance became insolvent during the 1998 IMF crisis, the 2008 financial crisis, and the 2011 savings bank bank run. NACF mutual finance also fulfills its original role by providing rational interest rates to members at the time of loan execution, unlike other financial institutions, reducing members' financial burden.

NACF also provides financial education services to members and generously supports its essential economic and guidance projects. In addition, it actively engages in activities for local community development and environmental protection to realize social responsibility. Unlike general financial institutions where profit is the top priority, NACF mutual finance focuses on expanding members' financial accessibility to resolve economic inequality among members and build a sustainable society—a model that can serve as an exemplary case in terms of other financial institutions' Corporate Social Responsibility (CSR).

One of the major factors enabling NACF mutual finance to grow rapidly was institutional support from the state. As mentioned, it received various institutional support such as agricultural policy fund support channels and tax-free deposit systems, backed by government support during the 1960s–70s when agriculture was a national foundation industry. This made financial regulation on the mutual finance sector relatively relaxed compared to the banking sector, allowing financial work to be performed more easily than competitors.

Possessing numerous offline branches centered on local communities and rural areas, providing a monopolistic position in face-to-face transactions compared to competing institutions, was also a major growth factor. The high customer loyalty resulting from the owner consciousness of cooperative members, and the high customer support based on stability from the nature of a local people's financial institution and public institution, became a stable customer base that led NACF's growth.

2.3. Threat Factors for NACF Mutual Finance

However, mutual finance has come to face drastically changed financial environmental conditions and intensified competition among institutions, along with many other threat factors.

The first threat is the increased management burden on agricultural cooperatives due to regulatory tightening. The most significant issue is the increasing internal management burden due to soundness reinforcement—support for the mutual finance sector is being reduced, and supervision standards similar to banks conducting similar businesses are increasingly being applied. In particular, as government regulations have been strengthened due to increased household debt and real estate PF defaults, the burden of loan loss provision for all financial institutions has greatly increased. The financial authorities have raised the provisioning ratio for real estate and construction industry loans above previous levels, and are guiding financial institutions to additionally set aside provisions for projects whose ratings fall through business feasibility assessments on real estate PF-related loans.

For banks as single corporations, once the head office obtains a fund business license, all branches nationwide can acquire fund products and appeal to customers for product diversity. However, in the mutual finance sector, where each unit cooperative is an independent legal entity, every cooperative nationwide must obtain licenses separately.

The second threat is the decline of farmer members—NACF's core customer group. Rural population continues to age and decrease, threatening the main customer base of regional cooperatives. Additionally, the deepening imbalance between urban cooperatives and rural cooperatives that are somewhat removed from this problem can be a major obstacle to NACF mutual finance's sustainable growth. As Table 1 shows, competition is intensifying both between banks and other mutual finance institutions by urban/rural area, and among individual agricultural cooperatives for interest rates, products, and branch territory.

Table 1. Annual Trend of Agricultural Workers.

(Unit: 10,000 persons, %)

Category	1960	1970	1980	1990	2000	2010	2020
Population (10,000)	1,400	1,440	1,100	748	460	300	224
Population ratio (%)	66	46	30	17	10	6	4.3

Source: Statistics Korea, Korea Rural Economic Institute (KREI).

The third threat is the more intensely competitive financial environment, including the emergence of fintech companies. As the internet environment developed, sharing of information on interest rates among consumers became easier, increasing the number of customers who move according to interest rate levels. Also, as the financial knowledge of financial institution users increased, needs for various financial products increased. Accordingly, investment in the digital sector became necessary for NACF mutual finance, and this fixed investment directly led to increased burdens for agricultural cooperatives.

Table 2. Status of Platform-Based Fintech Companies' Entry into the Financial Industry.

Category	Kakao	Toss	Naver
Banking	Kakao Bank ('17)	Toss Bank ('21)	—
Payment	Kakao Pay ('19)	PLCC with Hana Card ('20)	Naver Pay ('19)
Securities	KakaoPay Securities ('20)	Toss Securities ('21)	CMA account with Mirae Asset ('18)
Insurance	Kakao Non-life Insurance ('22)	Toss Insurance ('18)	—

Source: MEDIA RESEARCH.

Finally, the reduction of national support for the agricultural sector amid continued national economic low growth is also a major risk factor for NACF mutual finance operations. As shown in Table 3, while the absolute government budget amount for the agricultural sector appears to be increasing, the proportion of the agricultural sector in the overall national budget is significantly decreasing—reflecting that strategically concentrated industries receive priority support, resulting in a relative decrease in the proportion allocated to the agricultural sector.

Table 3. Trends in Government Budget Changes for the Agricultural Sector.

(Unit: 100 million KRW, %)

Category	1960s	1970s	1980s	1990s	2000s	2010s	2020s
Total budget	509	2,000	30,000	190,000	100,000	300,000	512,000
Agricultural budget	100	200–300	1,500–3,000	7,600–13,300	3,000–5,000	8,100–10,500	16,300
Proportion (%)	15–20	10–15	5–10	4–7	3–5	2.7–3.5	3.18

Source: Statistics Korea, Korea Rural Economic Institute (KREI).

3. Case Studies

To find concrete solutions for the threat factors facing NACF mutual finance, this study analyzes various domestic and overseas cases. Among domestic cases, rather than examining other mutual finance sectors facing similar threats or banks that have long engaged in the financial industry, this study focuses primarily on the fintech sector, which has grown rapidly in recent years. Analyzing how fintech companies have overcome rapidly changing financial environmental conditions is important for NACF mutual finance, which must overcome similar environmental changes. Subsequently, overseas cooperative banking success cases are examined to find examples that have overcome crises by leveraging the unique characteristics of the mutual finance sector.

3.1. Domestic Cases

3.1.1. Toss Bank

Toss Bank is one of Korea's representative fintech companies that started as a simple remittance service in 2015 and has grown into a comprehensive financial platform providing financial services. Its remarkable growth is attributable to key strategic factors such as user-centered services and products, technology and execution capability, and the One-App strategy.

(1) User-Centered Services and Products

At the core of Toss Bank's innovative services is the remittance service sector. It implemented user-centered services by simplifying the complex remittance procedures of existing banks. Toss Bank's remittance procedure is designed so users can send money easily and quickly through a simple UI/UX: ① launch app and log in ② select account to send from ③ enter recipient's account number or mobile phone number ④ enter amount ⑤ send. In contrast, commercial banks have relatively complex UI requiring additional authentication steps including ① app launch and login ② menu selection ③ withdrawal account selection ④ entering recipient's bank and account number ⑤ entering amount ⑥ security medium (security card, OTP) ⑦ send.

Toss Bank also implemented a lifetime free remittance policy, positioning itself as an innovative financial alternative for users who pay fees at existing banks. The lifetime free remittance policy provides unconditional remittance services without limitations on amount, frequency, or conditions, successfully attracting new users.

Revolutionary products that cannot be attempted by existing commercial banks are also noteworthy. While commercial banks operate various demand deposit products by occupation (office workers, self-employed, public officials) and purpose (living expenses, salary), Toss Bank operates only one account with customer convenience as its top priority. It provides higher interest rate benefits compared to commercial banks (1.5% annually as of January 1, 2025), and allows free deposits and withdrawals anytime, satisfying users' utility and practicality. The 'divided saving' account that pays interest daily (2.0% annually) has introduced daily compound interest rather than monthly compound interest effects, inducing rational users to participate and spreading new experiences.

(2) Technology and Execution Capability

Toss Bank launched an emergency disaster relief fund application service in just two days during the COVID-19 period, further securing loyal users. It introduced a pre-application system to provide notification services aligned with the five-day-of-week system, resulting in approximately 800,000 pre-application customers through Toss Bank. The core element of this rapid service development is the one-team system—within this system, Toss Bank members prioritize achieving the overall one-team goal over each team's KPI. Also, when new development service channels are created, team members with various technologies voluntarily join to proceed with work, and development proceeds through close collaboration in service development, application, feedback, and correction through team messengers. This rapid decision-making system allowed quick responses even when service direction changed, and quick service application through partial modification of already established systems.

(3) One-App Strategy

Toss Bank's One-App strategy as an online financial institution without offline branches is also noteworthy. Rather than creating separate applications, Toss Bank allows users to use not only banking services but also various financial services (securities, insurance, etc.) within the existing Toss app. This greatly improves user experience as multiple apps need not be installed, saving smartphone storage space, and seamless service use is possible without switching apps. The cost savings are also significant, as separate app development costs are saved, and operational and development costs for internal terminal-based business processing channels—as with commercial banks—can also be reduced, allowing resources to be returned to online operations. Additionally, a lock-in effect is created that keeps users within the Toss ecosystem, enhancing customer loyalty.

3.1.2. Kakao Bank

Kakao Bank is growing based on various factors including convenient user experience linked to the platform through KakaoTalk—Korea's national messenger—innovative products, and character marketing.

(1) Convenient User Experience

Kakao Bank's account opening process is designed to maximize user convenience, resulting in an average time of approximately 7 minutes to open an account. As an internet-only bank, it enables account opening with just a smartphone without branch visits, and complex document preparation or additional authentication tools are not needed. Kakao Bank provides an intuitive UI and UX that considers users' usage flow, guiding users through the account opening process without complex explanations. Simple authentication methods such as fingerprint

recognition and pattern locks are adopted instead of public certificates, maintaining security while greatly enhancing user convenience.

(2) Innovative Products

Kakao Bank received tremendous responses by launching innovative products reflecting customers' actual needs—products not found at existing banks—such as '26-Week Savings' and 'Group Account.' The '26-Week Savings' is a short-term savings product where a set amount is saved weekly, starting small and gradually increasing automatically, providing a small premium interest rate upon final automatic transfer success. The 'Group Account' was launched targeting people who need transparent account management for things like membership fee management and family living expenses. By enabling one-step invitation of KakaoTalk chatroom friends when opening this account, and making it possible for customers without Kakao Bank accounts to participate as members, user convenience was enhanced. Fee management was made conveniently possible through KakaoTalk as well.

(3) Character Marketing

Kakao Bank achieved great success with character marketing utilizing 'Kakao Friends'—the popular characters of parent company Kakao. The check card featuring the 'Chunsik' character was issued over 8 million times. Character integration was extended to various financial products and services—free KakaoTalk emoticons were provided when opening accounts, and a feature was added to '26-Week Savings' where characters gather each time a deposit is made, adding fun to saving. Characters were applied throughout the mobile app, making customers feel more familiar with Kakao Bank and allowing them to find enjoyment in the service usage process.

3.1.3. Summary of Domestic Cases

Since the emergence of internet-only banks, commercial banks have been accelerating digital innovation by benchmarking them in various ways. The most notable change is in the UX improvement area—commercial banks are designing mobile-optimized UI/UX and simplifying complex banking tasks by referencing the intuitive and simple interfaces of internet banks. They are also introducing authentication systems usable without public certificates or security cards, and working to build integrated platforms where all financial services can be handled in one app.

The influence of internet banks is also significant in terms of innovative financial product development. Commercial banks are developing fresh savings products similar to the 26-week savings, launching specialized products targeting young customers, and providing deposit products with high interest rates and flexible conditions. Digital marketing strengthening is also a noteworthy change—inspired by Kakao Bank and Toss Bank's rapid customer acquisition through effective digital marketing, commercial banks are also strengthening targeted marketing through SNS and digital channels.

However, NACF mutual finance still has difficulty flexibly adapting to new changes due to legacy infrastructure. Therefore, NACF mutual finance must pursue improvement tasks in various areas to compete with internet-only banks and resolve internal problems:

4. Digital finance strengthening: Continuously improve functions and services of mobile banking application 'NH Kok Bank' and improve non-face-to-face products and systems to enhance competitiveness. A next-generation digital finance system is currently being built with completion expected in January 2025.
5. Customized financial product development: Develop agriculture-specific financial products considering the regional characteristics that are NACF's strength. For example, 'seasonal variable rate loan products' with lower rates during harvest season and 'smart farm support loans' that support agricultural technology innovation.
6. Non-face-to-face service expansion: Introduce video consultation services for elderly customers with mobility difficulties, allowing customers in rural areas to receive professional financial consultation without branch visits.
7. Data-based risk management system construction: Utilize agricultural-related big data (crop production, climate data, market prices) to develop individual farm credit evaluation models for more accurate loan examination and risk management.
8. Active utilization of open banking systems: Develop innovative financial services through collaboration with various fintech companies and strengthen linkage with external services through APIs.

9. Professional talent development: Organize differentiated curricula by rank level and diversify educational channels for capability enhancement.

Ultimately, both Toss Bank and Kakao Bank share the common success factor of successfully maximizing user convenience by providing mobile-optimized services. They quickly responded to increasing demand for non-face-to-face financial services, providing faster and simpler UX than traditional financial institutions. Additionally, they successfully built customer loyalty by providing customized financial services through analysis of users' app usage experience data. NACF mutual finance should not overlook the success cases of these two leading domestic institutions.

3.2. Overseas Cases

3.2.1. Rabobank: Success Factors

Rabobank is a representative cooperative banking institution established in the Netherlands as an agricultural finance specialist bank that has since grown into a global financial group.

10. Agricultural finance expertise: Rabobank was established to support Dutch agricultural development and has strengths in agricultural and rural finance. It provides financial solutions across the entire agricultural supply chain by cooperating with agriculture-related companies worldwide. Rabobank treats sustainability as an important value in the agricultural sector, providing financial products supporting eco-friendly agriculture, sustainable production methods, and energy efficiency.
11. Cooperative model: As a cooperative-form financial institution, Rabobank was able to maintain close relationships with customers. Through this, strong bonds were naturally formed with farmers and local communities, and each branch was allowed to operate autonomously with roots in the local community, further strengthening connections with the local economy.
12. International expansion and diversification: Rabobank utilized its strengths in agricultural finance expertise to expand internationally, entering major agricultural production areas in Europe, Americas, and Asia. While initially focused on agriculture-related finance, it gradually expanded to corporate finance, asset management, and investment banking, successfully diversifying its portfolio.
13. Digitalization and innovation: Rabobank succeeded in constructing various digital platforms through fintech and digital innovation, enabling customers to use financial services more easily. It also focused on providing customized financial solutions to customers through agricultural management analysis and financial risk management utilizing data.

3.2.2. Rabobank: Crises and Recovery

In 2013, Rabobank was involved in the LIBOR (London Inter-Bank Offered Rates) manipulation scandal and suffered a major blow. Charged with involvement in interest rate manipulation along with various global banks, it was fined over USD 1 billion, causing its credibility to drop sharply and international reputation to be damaged.

In response to this crisis, Rabobank immediately undertook leadership replacement—the then-CEO resigned to take responsibility, and organizational reform was pursued through new leadership. Subsequently, internal control systems were strengthened and ethical management was emphasized. Additional education and management systems were constructed to create a culture of strictly complying with financial regulations and ethical standards.

After the crisis, Rabobank concentrated further on sustainability in agriculture and food supply chains, working to preserve the company's fundamental values and strengthen CSR activities. This sustainability strategy greatly helped Rabobank recover lost trust in the market.

Following the 2008 global financial crisis, Rabobank experienced declining profit margins amid reduced profitability in the agricultural sector and economic recession across Europe. To overcome these difficulties, Rabobank concentrated on digital expansion and business diversification—actively introducing digital financial services and applying digital innovation to the agricultural sector. By providing new financial solutions through fintech partnerships, innovative services were introduced to customers. Additionally, Rabobank diversified revenue sources by expanding into non-agricultural sectors including corporate finance and investment management, maintaining financial stability even during difficult periods in the agricultural sector.

3.2.3. Cr dit Agricole: Success Factors

Cr dit Agricole is a cooperative banking institution established in France to support agricultural development,

and has grown into one of the world's largest financial groups.

14. **Strengths in agricultural finance:** Like Rabobank, Crédit Agricole is a bank specialized in agricultural and rural finance that has greatly contributed to French agricultural development. By providing customized financial products to both agriculture-related companies and agricultural workers, it played an important role in revitalizing France's rural economy. Through this process, Crédit Agricole accumulated a strong regional network throughout France, using it to provide financial services tailored to the characteristics of each region.
15. **Diverse financial services:** Not limited to agricultural finance, Crédit Agricole has grown into a comprehensive financial group providing diverse financial services including personal finance, asset management, insurance, and investment banking, with a diversified revenue structure. It has also expanded to Europe, Asia, Africa, and other regions to exert significant influence in global financial markets.
16. **Cooperative model and customer-centered management:** Maintaining a cooperative structure, Crédit Agricole has built close relationships with customers. Through this, customer-centered management methods have been realized, maintaining long-term relationships built on trust. It also emphasizes CSR and focuses on developing sustainable agricultural and eco-friendly financial products.
17. **Digitalization:** Crédit Agricole actively promoted digitalization, providing customers with various digital financial services including mobile banking and online investment, obtaining strong positive responses from younger customer groups. It also continuously develops innovative financial services through collaboration with various fintech companies.

3.2.4. *Crédit Agricole: Crises and Recovery*

Crédit Agricole also suffered a major shock from the 2008 global financial crisis. During this period, economic recession occurred throughout not only France but all of Europe, resulting in loan defaults and asset value decline. In particular, there were major losses in asset management and investment sectors, and bank-wide profits dropped sharply.

After the financial crisis, Crédit Agricole greatly strengthened its risk management systems—tightening loan screening procedures and restructuring asset portfolios to reduce risk. The French government's support at this time greatly helped stabilize the banking system. Crédit Agricole subsequently focused on retail banking to secure stable revenue sources, maintaining relatively stable profits compared to other financial institutions by strengthening personal customer and SME lending.

However, the long-term European economic stagnation and low-growth environment continued to pressure Crédit Agricole's profit margins. To overcome this, it sought new profit opportunities through global expansion to regions outside Europe. It adopted digital banking and mobile finance to reduce costs while simultaneously attempting to improve customer services. Through collaboration with fintech companies and focus on technology-based financial service provision, customer convenience was greatly enhanced. Like Rabobank, Crédit Agricole also focused on agricultural and sustainability reinforcement—expanding agricultural and eco-friendly financial products while focusing on sustainability.

3.2.5. *Summary of Overseas Cases*

Both Rabobank and Crédit Agricole are representative cooperative banking institutions that started from agricultural finance and have grown into global financial groups. Both banks secured strong market positions in this field based on deep understanding of agricultural and rural finance, provided customer-centered services through cooperative structures that value trust relationships with customers, and maintained close relationships with local communities as cooperative banking institutions, positively strengthening their corporate images by emphasizing sustainable agriculture, eco-friendly finance, and social responsibility.

Furthermore, both banks succeeded in business diversification including corporate finance, asset management, and investment banking, and did not fall behind in adopting popular fintech and digital technologies. They actively adopted related technologies to improve efficiency and accessibility of financial services, striving to maximize customer convenience.

In the process of overcoming crises, both banks showed a tendency to focus on strengthening risk management systems to minimize uncertainty and stably managing asset portfolios after crises. They also actively adopted digital finance and fintech to improve cost efficiency and enhance customer service convenience.

Both banks also succeeded in creating new revenue sources through expansion into global markets rather than depending solely on domestic markets, and diversifying businesses while growing from agricultural finance to

comprehensive financial groups. Lastly, rooted in agriculture, both banks share the characteristic of treating sustainability with both customers and agriculture as an important management philosophy, working to fulfill CSR through eco-friendly financial product development.

Therefore, NACF must also not lose its identity rooted in agriculture and actively respond to the rapidly changing financial environment to remain sustainable as a financial institution in the future.

4. Strategic Suggestions

4.1. Technological Innovation and Differentiated Digital Platform Construction

The cases of Toss Bank and Kakao Bank examined earlier are among the most successful domestic examples of non-face-to-face financial institutions. Both institutions secured customer bases and provided comprehensive financial services optimized for mobile while maximizing user convenience through attention to UI/UX. Additionally, they analyzed user data to provide customized financial services, solidly maintaining the customer base initially attracted and further expanding their customer layers.

From these cases, the utilization of customer data accumulated by NACF is essential for strengthening NACF mutual finance's non-face-to-face competitiveness. In particular, since no private company has accumulated more agricultural data than NACF, it needs to actively leverage this—not limiting itself to a simple financial app but continuously developing its non-face-to-face app as an agricultural-related lifestyle financial platform. This can be an effective customer strategy given the characteristics of agricultural cooperatives with high proportions of farmer members.

Specifically, based on accumulated data on agricultural and livestock product prices and transactions, information needed by individual farmers at shipment time can be provided quickly in real-time. Information on crops needed for return-to-farming activities, information on living conditions by village, and similar data can support returnees to farming, and further guide them to join as farmer members to create new customers. Also, environmental setting values for calculating optimal production volumes can be guided using smart farm operational sensor data. Agricultural management support services utilizing information on each farmer can be created by additionally securing agricultural management data held by other institutions such as the Korea Institute of Planning and Evaluation for Technology in Food, Agriculture, Forestry.

Such services could help all farmers operating agricultural management entities, and further help suppliers providing various products to these entities. These data can be combined using the agricultural management entity registration numbers held by both institutions. These services can be NACF-specific digital businesses capable of revitalizing the agricultural industry itself, and further serve as new profit models creating new revenue.

However, as the importance of personal credit information continues to rise and related laws are being detailed, active utilization of information is becoming increasingly difficult. The Financial Supervisory Service's recent indication of Toss Bank's personal information law violations and imposition of penalties demonstrates this. In such an environment, NACF's active information utilization is even more difficult, as each cooperative currently holds individual information and NACF Central Federation manages it as trustee—meaning the Central Federation cannot use the information for purposes beyond essential consent for financial transactions.

Furthermore, since all information is held by individual legal entities of each agricultural cooperative, combining information held individually by cooperatives also requires going through data professional institutions without a special provision. Therefore, to actively utilize this, national-level support is absolutely necessary, such as adding special provisions to the Agricultural Cooperative Act stating that data individually held by cooperatives is considered held by NACF Central Federation, or designating NACF Central Federation itself as a data professional institution.

4.2. Building Sustainable Financial Models through Strengthening the Role as an Inclusive Finance Institution via Comprehensive Finance

Active support from government or local governments is also essential for NACF mutual finance to continue its role as a people's financial institution with members as shareholders. Currently, many cooperative projects are being conducted with local agricultural cooperatives in local communities. Agricultural cooperatives operate direct market and local food stores where local agricultural products can be sold directly to consumers, increasing farm income and revitalizing the local economy. They also operate various educational and cultural programs for local residents, improving their quality of life through agricultural technology education, crop cultivation methods, and cultural events such as singing classes, and strengthening community consciousness.

Additionally, they contribute to improving agricultural productivity through agricultural water supply systems, agricultural machinery rental services, and agricultural infrastructure construction.

Table 4. Examples of Local Agricultural Cooperative Projects in Collaboration with Local Governments.

Project	Region & Cooperative	Key Content
Local Food Direct Store	Naju City, Naju Agricultural Cooperative	Promote consumption of local agricultural products and increase farm income; reduce distribution stages to provide fresh products at reasonable prices, benefiting both consumers and producers
Urban Agriculture Revitalization Project	Yongin City, Yongin Agricultural Cooperative	Create community gardens by providing citizen allotments to increase urban residents' understanding of agriculture
Agricultural Product Processing Center Operation	Pyeongchang County, Pyeongchang Agricultural Cooperative	Process locally produced agricultural products to increase farmers' added value, revitalize local economy, and create employment
Organic Agriculture Support Project	Goesan County, Goesan Agricultural Cooperative	Jointly build direct market and online sales channels to expand sales channels for organic agricultural products
Welfare Support Project	Yeongju City, Yeongju Agricultural Cooperative	Jointly operate programs including health examinations, daily necessities support, and residential environment improvement for elderly farmers and vulnerable groups

Source: Excerpted from NACF Central Federation internal data.

It is important for local governments and local people's financial institutions to collaborate to discover mutually beneficial content. Additionally, if local agricultural cooperatives raise funds and local governments provide guarantees for development investments in local infrastructure—roads, public facilities such as schools, medical facilities, libraries—this can promote growth of sound loans as basic financial institution revenue sources, and the resulting profits can be utilized for support of farmer members such as grain purchases, fertilizer costs, and feed costs, creating a structure where local governments and NACF mutually benefit. Ultimately, this virtuous cycle connects with regional economic revitalization and job creation, also helping to improve residents' quality of life and resolve regional imbalances.

4.3. Legal and Institutional Regulatory Relaxation

Institutional support at the national level is needed not only in the areas mentioned above. Fintech companies also would not have been able to grow as they have without institutional support such as national designation of internet-only banks. Just as internet-only banks grew with institutional support in recognition of their social contributions, institutional support to promote the sector's development should be provided considering the contributions the mutual finance sector makes to local community development.

Currently needed institutional support for the mutual finance sector includes regulatory relaxation. First is regulatory relaxation specific to the mutual finance sector that is differentiated from banks. Although there are few practical differences between banks and mutual finance institutions in financial industry behavior such as risk management and transaction systems, there are areas where the mutual finance sector is excessively regulated compared to the banking sector.

(1) Non-Member Service Usage Limits

For mutual finance institutions, non-member service usage for each business in one accounting year cannot exceed one-half of that accounting year's business volume for each business (Article 141, Paragraph 2 of Local Agricultural Cooperative Standard Bylaws). This is a regulation that does not exist for banks and other competing financial institutions, making it excessively difficult for the mutual finance sector to compete as financial institutions. NACF in particular is more severely regulated compared to other mutual finance institutions—its business area is narrow, and the associate member system exists but associate membership is difficult to obtain, making business expansion increasingly difficult as farmer member numbers decline.

This regulation clause is not only an excessive regulation for financial institutions but also reduces the utility of financial consumers, as consumers who want to benefit from using mutual finance institution financial services have their choice of desired financial institutions and products restricted. This regulation needs to be relaxed at least from the perspective of guaranteeing financial consumers' right to choose and autonomy to use various products.

Table 5. Comparison of Non-Member Service Usage Restrictions Across Mutual Finance Sectors.

Category	Service Usage (Credit) Standard
NACF	Cannot exceed one-half; associate members are not counted as non-members, but associate membership eligibility is limited to within the business area
Credit Union	Divides the country into 10 regions and applies broad member eligibility; no associate member system
Saemaul Geumgo	No restrictions
Suhyup (Fisheries Cooperative)	Cannot exceed one-third; associate membership possible even outside the area

Source: Reference to standard bylaws of each mutual finance sector.

(2) Per-Person Lending Limit Regulations

Based on Article 42 of the Credit Union Act, Article 16-4 of the Enforcement Decree, and Article 6 of the Mutual Finance Supervision Regulations, cooperatives regulate lending limits per person within a certain range of their own capital. This is also a regulation that exists only in the mutual finance sector, not in banks.

Table 6. Per-Person Lending Limit Regulations.

Category	Per-Person Lending Limit Regulation
Banks	No maximum limit restriction
NACF, Suhyup	Corporate members, corporate associate members: KRW 10 billion (excluding construction and real estate industries)
Saemaul Geumgo, Credit Union	Corporate members: KRW 10 billion
Savings Banks	Maximum KRW 10 billion for corporate loans

Source: Excerpted from NACF Central Federation internal compilation data.

A representative case of regulatory resolution is the agricultural land collateral loan LTV ratio restriction. According to administrative guidance implemented by the Financial Supervisory Service in 2016, non-residential real estate was required to calculate collateral recognition ratios within local and property-specific bid rates. However, as market conditions deteriorated and bid rates on agricultural land related to development projects declined, the collateral recognition ratio for agricultural land collateral loans to farmers also began declining, resulting in relative disadvantages for farmers.

In particular, since agricultural land is mainly traded through sales rather than the auction market, applying a uniform bid rate-based collateral recognition ratio acted as reverse discrimination against farmers. Regional differences were also large, with agricultural land LTV ranging from 50% to 80%, and it is fortunate that the supervisory authorities recently recognized this irrationality and guided regulatory relaxation on this matter.

Table 7. Non-Residential Real Estate Collateral Recognition Ratio Calculation Standards: Mutual Finance Sector vs. Banking Sector.

Category	Collateral Recognition Ratio Application Standard
Banking Sector	No separate regulation; each bank calculates its own collateral recognition ratio
Mutual Finance Sector	Apply weighted average bid rate for 5-year period (weight: 20%), 3-year period (30%), 1-year period (50%) by district; minimum rate: 50%; adjusted within 5%p range if dropping 10%p or more compared to previous period

Source: Financial Supervisory Service Guidance ('16).

When such various regulations are relaxed, farmer members who had difficulty obtaining loans due to relatively low collateral capacity and credit ratings will be able to more easily obtain loans, reducing their management burdens. Additionally, with the relaxation of agricultural land LTV regulations, farmers returning to agriculture can also expect indirect financial benefit support for returning-to-farming activities through reduced personal burden when purchasing agricultural land.

(3) Excessive Provisioning Requirements

While the above content covered regulations specific to the mutual finance sector differentiated from banks, there are also regulations that worsen management conditions for small cooperatives by ignoring the characteristics of the mutual finance sector and applying the same level of regulation as the banking sector.

Currently, the mutual finance sector is experiencing a contraction of credit project foundations due to declining membership. Accordingly, business areas were expanded to corporate lending, and loans in real estate and construction industries grew rapidly. However, as the real estate downturn began amid excessive liquidity easing policies following COVID-19 and the unprecedented rapid interest rate hikes that followed, related loan defaults began to intensify. The financial authorities guided financial institutions to additionally set aside provisions for risk management reinforcement in real estate and construction, and small agricultural cooperatives experienced worsening management situations as their settlement results deteriorated from the provisioning burden.

The financial authorities revised supervisory regulations on February 21, 2024, guiding additional provisioning of 110% of existing standards by June 2024, 120% by year-end 2024, and 130% by June 2025. However, in December 2024, a temporary postponement of provisioning timing to 120% by June 2025 and 130% by year-end 2025 was announced for cooperative management stability. While this provided some relief for agricultural cooperative settlement results, long-term additional provisioning for struggling cooperatives could still be a major management burden.

Additionally, the 'Real Estate PF Business Feasibility Assessment' conducted as part of resolving insolvent real estate project financing also makes cooperative management increasingly difficult. Supervisory authorities expanded the assessment target to land collateral loans of mutual finance cooperatives that were not previously subject to assessment, and simultaneously created an assessment structure where business feasibility automatically declines if term extension continues—meaning that even for projects paying interest normally, if project progress has stopped, business feasibility declines. Financial institutions holding such project sites must classify soundness according to business feasibility and additionally set aside provisions, greatly and suddenly increasing provisioning burdens for mutual finance cooperatives holding many related project sites.

Of course, the institutional intent from a preventive standpoint against cooperative insolvency is fully understood, and soundness assurance is absolutely necessary. However, if such proactive additional provisioning guidance were implemented during economic recovery periods rather than the current real estate downturn, more efficient soft-landing could be induced in terms of risk management for cooperative soundness preparedness.

Table 8. Real Estate PF Business Feasibility Assessment Standards.

Category	Soundness Classification	Post-Management Principles	Provisioning Rate
Good	Normal	Normal progress	1%
Average	Precautionary	Project support	10%
Cautionary	Substandard and below	Restructuring, voluntary sale	20–55%
Distressed	Substandard and below	Write-off, auction, etc.	20–55%

Source: Financial Supervisory Service, *Best Practice Standards for Cooperative Loan Risk Management* ('24).

Just as financial authorities in the past supported internet-only banks to expand middle-rate credit loans between high-credit and low-credit borrowers, legal and institutional regulatory relaxation as mentioned is absolutely necessary for mutual finance institutions to grow further as people's financial institutions, in order to strengthen the roles that each mutual finance sector plays in local communities.

5. Conclusions and Implications

Cooperative banking, which started from mutual financial support based on mutual bonds among members, has

maintained its presence as a community-friendly people's financial institution. However, cooperative banking is now in crisis due to worsening financial environments and increasing new competitors. This study examined what is needed for Korean cooperative banking to develop, centered on the case of NACF mutual finance—Korea's representative cooperative banking institution.

NACF mutual finance developed alongside Korea's rural areas while resolving the high-interest private lending prevalent in the 1960s. It continues to perform its role by legally limiting members' service usage to stably provide financial services and focusing on small-amount loans for members. It also contributes to local communities by providing financial education to members and continuously supporting its essential economic and guidance projects.

NACF mutual finance grew rapidly with institutional support from the state when agriculture was a national foundation industry. And it earned customer support by fulfilling its role as a local people's financial institution based on offline branches throughout local communities, developing into Korea's representative cooperative banking institution.

However, NACF mutual finance is now experiencing many crises as it faces drastically changed financial environmental conditions and intensified competition. First, management burdens on individual agricultural cooperatives have greatly increased due to strengthened soundness regulations. Additionally, difficulties arising from not being a single corporation—such as each cooperative holding customer information independently making utilization difficult—also exist.

Aging of farmers and population decline trends are also major crisis factors. This problem also exacerbates imbalances between urban and rural cooperatives, acting as another growth obstacle. Furthermore, continuously emerging new competitors such as fintech companies, intensified digital technology competition, and decreased national support for the agricultural sector amid the national low-growth trend are all crises facing NACF mutual finance.

To find solutions for these problems, domestic and overseas success cases were analyzed in this study. As a result, three core recovery strategies were derived.

The first recovery strategy is discovering a business model suitable for the digital environment that is unique to NACF mutual finance. The non-face-to-face app should be continuously developed as an agricultural-related lifestyle financial platform, and to achieve this, utilization of customer data accumulated by NACF is essential. As each agricultural cooperative is an independent legal entity currently holding information separately, institutional improvement and national support are needed so that data held individually by cooperatives can be analyzed and utilized by NACF Central Federation.

The second recovery strategy is strengthening identity as a local people's financial institution. Both Rabobank and Crédit Agricole successfully maintained their cooperative identity while also deepening it, enabling both banks to maintain close relationships with local communities and build positive customer images by emphasizing sustainable agriculture. NACF mutual finance also needs to strengthen and develop around the foundation built thus far as a local people's financial institution. For NACF to develop further, active support from government or local governments is needed—if local governments can invest in local infrastructure development projects through mutual finance institutions, mutual finance institutions can more easily earn profits, and these profits will naturally be returned to local residents and cooperative members (shareholders of mutual finance institutions), contributing to developing local communities.

Finally, there is the relaxation of regulations currently hindering the development of the mutual finance sector. Restrictions more stringently applied to the mutual finance sector compared to banks conducting the same financial business—such as limiting non-member service usage and regulating per-person lending limits—need to be somewhat relaxed. Also, regulations that worsen management bases of small cooperatives by applying the same regulations as other sectors without considering mutual finance sector characteristics—such as additional provisioning for real estate and construction loans and real estate PF business feasibility assessments—should also be relaxed in application, considering sector specificity and cooperatives' positions in local communities.

When these restrictions are resolved and the above recovery strategies are smoothly realized, reduction of management burdens for farmer members and indirect financial benefit support effects for returning-to-farming activities can be expected. This will greatly contribute not only to overcoming the mutual finance sector's crisis of excessively declining credit project foundations due to decreasing membership, but also to revitalizing local communities based on rural areas.

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