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Video Report

Emerging financial products driven by innovation, such as virtual assets and simplified payment services, introduce both new conveniences and in-transaction risks to customer funds. Despite regulations on segregating customer funds already in place, full compliance by businesses with these rules is unlikely, especially with insolvency on their horizon. This paper proposes a new protection framework that bolsters the safety of new financial products and reduces funding pressures for the compensation scheme.

Protecting Customer Funds for Emerging Financial Products

Sunjoo Hwang, Fellow at KDI

I. Introduction

New financial products emerging through innovation offer novel benefits but may also expose customers to risks in managing their funds.

Accelerating financial innovation continues to drive the emergence of new financial products. Virtual assets like Bitcoin are emblematic of this trend. Other innovative financial products include simplified payment services, such as Naver Pay, and peer-to-peer (P2P) lending, where individuals loan to each other via digital platforms. While not new, prepaid funeral services represent a noteworthy quasi-financial product, with a marked growth in demand anticipated as the number of deaths increases due to demographic shifts.

New financial products can bring benefits distinct from traditional ones. First, the market prices of virtual assets tend to move differently from conventional assets like stocks and bonds, emerging as a new asset investment class that is either alternative or complementary (Nguyen, 2022). Second, simplified services for payments and remittances enable fast and straightforward payments and fund transfers from mobile devices. Third, P2P lending is financially inclusive. Individual investors can assess credit scores and qualitative data, such as personal stories borrowers share on P2P platforms, enabling distinction between borrowers with sufficient capabilities to pay back despite low credit ratings. Fourth, prepaid funeral contracts relate to end-of-life expenses,[1] usually the third or fourth largest expenditure in a lifetime.[2] In 2015, the average cost of funeral services was 13.8 million won (Korea Consumer Agency, 2015), projected to be even higher today. By entering into these prepaid contracts, individuals can reduce future funeral-related costs by locking in current prices and alleviate the burden on the bereaved families by preselecting necessary goods and services.

However, new financial products may also expose customers to risks during transactions. Virtual assets, digital payment services, and prepaid funeral contracts all involve firms holding customer funds while providing relevant services, with the obligation to return them upon request. Whether these firms can effectively ensure the return of customer funds emerges as an important question. Incidents such as the Mergepoint and TMON cases, alongside numerous failures among funeral service providers and overseas examples, suggest that customer funds may be at risk of loss in times of crisis.

Despite the new conveniences, financial innovation remains a

* Summarized and adapted from Hwang, Sunjoo, *Protection Measures for New Financial Products for Stable Financial Innovation,* Korea Development Institute, 2024 (forthcoming) (in Korean).

1) Funeral expenses cover both the costs of funeral service and those related to burial or cremation procedures.

2) According to Haneman (2022), in the US, funeral expenses are the third-largest lump-sum expenditure in an individual's lifetime, surpassed only by housing acquisition and vehicle purchase.

A protection system for emerging financial products can lay a strong foundation, serving as a key safety net to support reliable financial innovation.

challenging endeavor due to the risks to consumers. Accordingly, a system that effectively protects consumers against harm from new financial products could be a solid foundation for confidently pursuing such an innovation. Recently, the UK has put forward financial innovation as a priority policy objective to enhance national competitiveness, and its Financial Services Compensation Scheme (FSCS) started covering some of the new products. This study presents a reliable and comprehensive protection framework for customer funds for new financial products.

Ⅱ. The Concept and Current Status of Customer Funds in Emerging Financial Products

In this study, new financial products broadly refer to products emerging as part of financial innovation, including simplified payment services and virtual assets. Quasi-financial products like prepaid funeral arrangements, which have recently gained significance due to their increasing scale and growth rate, are also included. Rather than focusing on the products themselves, this study emphasizes customer funds collected by firms during transactions for these new products, such as prepaid balances and virtual asset deposits (Table 1).

Table 1. Customer Funds: Similarities between New and Traditional Financial Products

Type	New Financial Products	Traditional Financial Products	Nature of Funds	Products by Transaction Purpose
Deposit	Prepaid balances	.	On-demand funds	Payment and settlement services
	.	Bank demand deposits		
Security	Virtual asset deposits	.	On-demand funds	Virtual assets
	P2P lending deposits	.		Loan receivables
	.	Securities company deposits		Stocks, bonds, etc.
Insurance	Funeral service prepayments	.	Refundable after subtracting business expenses	Funeral goods and services
	.	Guarantee-based insurance premiums		Insurance payouts

Source: Author's creation.

Customer funds for new financial products include prepaid balances, virtual asset deposits,

First, prepaid balances are customer funds collected by digital payment service providers, such as Kakao Pay, in delivering their services. They include foreign currency prepaid balances, such as those charged to providers like TravelWallet that offer prepaid card services. Prepaid

P2P lending deposits, and funeral service prepayments.

balances are functionally similar to demand deposits in banks, as they can be deposited and withdrawn at any time and are used for settling payments, either for goods or services or for fund transfers. Second, virtual asset deposits refer to funds deposited by customers on virtual asset exchanges to purchase virtual assets like Bitcoin, functioning as demand deposits. Third, P2P lending deposits are funds placed by investors on P2P lending platforms to facilitate P2P loans. Once a loan is executed, these funds convert into loan receivables. Both deposits for virtual assets and P2P lending are comparable to investor deposits held at securities firms for stock or bond transactions, as they are set aside to trade investment products like virtual assets and loan receivables. Fourth, funeral service prepayments are funds customers pay in advance after entering into prepaid funeral contracts. These prepaid contracts involve advance payments in installments, with funeral goods and services provided upon the demise of contract holders.[3] Prepaid funeral contracts are similar to life insurance, where a set amount (premium) is paid in advance, and a substantial benefit (insurance payout) is provided upon the policyholder's death.

The current volume of customer funds associated with new financial products is substantial, at about 18 trillion won, and is expected to grow further, driven by advancements in digital finance and population aging.

The current volume of customer funds related to new financial products is not negligible. As of 2023, the combined total of the four types of such customer funds amounts to approximately 18 trillion won (Table 2). Among these, funeral service prepayments constitute the largest share, totaling about 9 trillion won, with virtual asset deposits at around 5 trillion won. Moreover, these four types are attracting a large number of users. In 2023, 8.64 million people—17% of South Korea's population—used prepaid funeral services, meaning that one in every six Koreans prepaid for their end-of-life arrangements. Virtual asset users are also considerable, reaching 6.45 million.

Table 2. User Numbers and Balances by New Financial Product Type in the Second Half of 2023

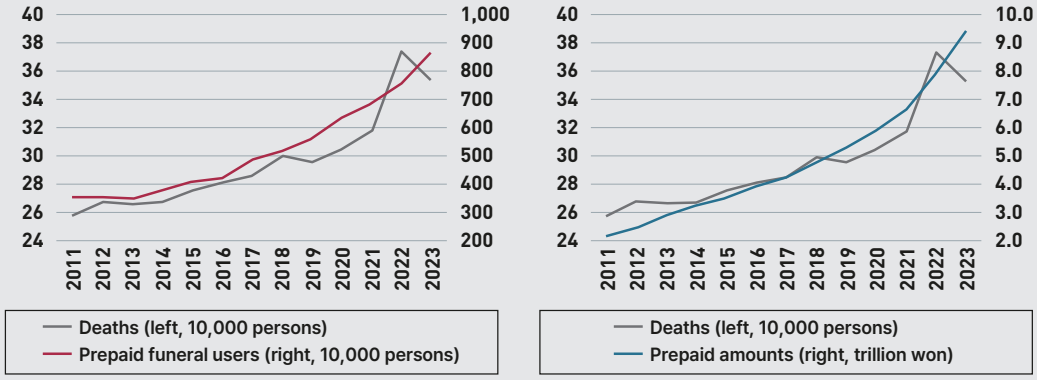
	Prepaid Balances	Virtual Asset Deposits	P2P Lending Deposits	Funeral Service Prepayments	Total
Number of users	160 million[1)]	6.45 million	100,000	8.64 million	.
Balances (won)	2.7 trillion	4.9 trillion	1.1 trillion[2)]	9.4 trillion	18.1 trillion
Amount per person (won)	.	760,000	.	1.09 million	.

Note: 1) The number of users for prepaid balances includes individuals who used the service multiple times during the year.
2) The P2P lending deposits of 1.1 trillion won represent the loan balance, suggesting the actual deposit amount may be lower.
Source: Financial Services Commission (2024a, 2024b); Financial Services Commission·Financial Supervisory Service (2024); Fair Trade Commission (2024).

3) For example, if the contract amount is 6 million won with a 5-year maturity, the contract holder pays 100,000 won monthly for 60 months, totaling 6 million won. Upon the contract holder's demise, the prepaid funeral goods and services are provided. If the contract holder passes away before completing the payments, the bereaved family must settle the remaining balance to receive the agreed goods and services.

Looking ahead, the volume of customer funds is projected to expand further. With the daily average value of simplified payments increasing by 76% annually over the past five years, prepaid balances reached 140.1 billion won in 2023. This upward trend is expected to continue with the advancement of digital finance beyond 2024. Currently, new issuance of virtual assets is prohibited in Korea, and stablecoins remain unregulated. However, global efforts to incorporate virtual assets into legal frameworks are gaining momentum, and Korea is expected to implement relevant regulations soon. Accordingly, deposits for virtual assets are likely to increase over time.

Figure 1. Number of Deaths, Prepaid Funeral Users, Prepaid Amounts



Source: Statistics Korea, *Cause of Death Statistics 2023;* Fair Trade Commission (2023, 2024), processed by the author.

One notable product in terms of growth potential is prepaid funeral contracts. Since the provision of funeral goods and services hinges on the death of the contract holders, mortality trends are a critical factor in shaping demand. In Korea, the number of deaths has been steadily rising, from 260,000 in 2011 to 370,000 in 2022 (Figure 1). Despite a temporary dip in 2023, Statistics Korea's Future Population Projections suggest that its aging population will drive deaths higher, potentially reaching 750,000 by 2060 (Statistics Korea, 2023). Regression analysis shows that for every 10,000 additional deaths, the number of prepaid funeral service users increases by 450,000, while prepaid amounts rise by 600 billion won (Figure 1).[4] Since this analysis focuses on correlation rather than causality and uses the number of deaths as

4) The author conducted a simple regression analysis using annual data from 2011 to 2023 to examine the impact of mortality rates on the number of prepaid funeral plan users and prepayment amounts. The results show that every 10,000 increase in deaths corresponds to increases of approximately 450,000 prepaid funeral service users and 600 billion won in prepayments. Notably, the regression coefficient for deaths was statistically significant at the 1% level.

the sole independent variable, it is insufficient to provide reliable projections. However, given the projected increase of nearly 400,000 deaths, even conservative assumptions about growth in users and prepaid amounts per 10,000 deaths make it difficult to deny that the users could exceed 10 million within a few years, alongside a sharp expansion in prepayments.

III. Risks of New Financial Products and Limitations of Fund Segregation Regulations

There have been numerous cases where businesses misappropriated customer funds for new financial products and later went bankrupt.

However, new financial products carry transaction risks for customers. All four new types involve receiving customer funds during service delivery. Prepaid balances, deposits for virtual assets and P2P lending, and funeral service prepayments are all prepaid and withdrawable as needed.[5] If these funds are not returned in full upon request, customers could face substantial losses, as evidenced by multiple domestic and international cases (Table 3). The 2021 Mergepoint scandal is the primary example of unreturned prepaid balances, resulting in total losses of 75.1 billion won.[6] Similarly, the virtual asset exchange CoinZest in 2018, the P2P lending platform Blue Moon Fund in 2019, and the funeral service provider Han River Life in 2021 either failed to return or misappropriated customer funds, causing significant financial losses for customers.

Table 3. Reported Cases of Customer Fund Losses for New Financial Products

Type	Company	Year	Loss (won)
Prepaid balances	Mergepoint	2021	7.51 billion
Virtual asset deposits	CoinZest	2018	6.8 billion
P2P lending deposits	Blue Moon Fund	2019	17.7 billion
Funeral service prepayments	Han River Life	2021	5.4 billion

Source: Fair Trade Commission (2021); Newsis (2024); The Hankyoreh (2023); The Korea Economic Daily (2024)

In light of the potential risks, new financial products are subject to fund segregation regulations,[7] which require firms to separate

5) For For funeral service prepayments, the amount remaining after deducting management fees and collection commissions is refundable per the Fair Trade Commission's standard terms and conditions (Fair Trade Commission, 2014).

6) While Mergemoney of Mergepoint was not a registered prepaid balance—i.e., a prepaid electronic payment method—under the Electronic Financial Transactions Act, its economic essence categorizes it as a prepaid balance.

7) Prepaid balances are governed by fund segregation regulations under the Electronic Financial Transactions Act, virtual asset deposits under the Act on the Protection of Virtual Asset Users, P2P lending deposits under the Act on Online Investment-linked Financial Business and Protection of Users, and funeral service prepayments under the Installment Transactions Act.

Although fund segregation regulations for customer funds are in place, firms on the verge of bankruptcy are highly likely to violate them, and several other limitations persist.

customer funds from their proprietary assets by depositing or entrusting them with third-party banks or subscribing to payment guarantee insurance policies from insurers. Despite being a crucial protective measure,[8] several conditions must be met to thoroughly shield customer funds: 100% of customer funds must be segregated, obligations must be upheld even in facing bankruptcy, and institutions holding these funds, such as banks, must never fail (Table 4).[9]

Table 4. Limitations of Fund Segregation Regulations

1. Is the fund segregation ratio set at 100%?
- The current law only requires 50% of funeral service prepayments to be segregated.
2. Are segregation obligations upheld during bankruptcy or liquidity crises?
- During urgent management crises, businesses are prone to misappropriate customer funds to address the challenge.
- Facing bankruptcy, back-office operations may collapse, increasing the likelihood of non-compliance with segregation obligations.
3. Are institutions holding segregated funds immune to failure?
- While entrusted funds are expected to be invested in safe assets, such as government bonds, these may still incur losses during financial crises.
- Institutions managing these funds—such as banks, insurers, and savings banks—are also vulnerable to collapse.

Source: Author's creation.

The issue lies in the fact that not all conditions are fully met. First, unlike 100% segregation of prepaid balances, virtual asset deposits, and P2P lending deposits, only 50% is required for funeral service prepayments under the current regulations. Consequently, most funeral service providers adhere to the rules but manage the unsegregated 50% with discretion, treating it as part of their own capital. In other words, if they default, customers risk losing half of their funds.

Second, nearing insolvency amid a management crisis, firms may find it highly tempting to misuse customer funds—even by violating segregation rules—to avert collapse. This unethical lure is the greatest limitation of fund segregation. Examining nearly all funeral service providers registered since the 2010 legislation of prepaid funeral

8) Incidents such as Mergepoint, CoinZest, and Blue Moon Fund occurred before the implementation of fund segregation regulations. While these regulations have reduced the likelihood of similar occurrences, this study acknowledges the possibility that companies may still violate regulations in extreme situations, such as impending bankruptcy, as evidenced by the core cause of the Mergepoint incident.

9) Another issue with the segregation of customer funds is that they may not be promptly returned during litigation after business failure. It can take several years for the final ruling to be issued and the segregated funds to be returned. Customers needing living expenses may face financial hardship during this period. KDIC's post-incident protection system addresses this issue by offering provisional payments upon business bankruptcy. After the final ruling, if the provisional payment exceeds the confirmed amount, the excess is reclaimed, and if it falls short, the deficit is paid through additional compensation.

contracts (Table 5) reveals that 46% of them whose registrations were canceled had violated the requirements just before their licenses were revoked.[10] It is observed that half of these providers in crisis breached this obligation. On average, they only segregated 37% of customer funds, indicating that if a provider fails, up to two-thirds of customer funds might have been lost.

Table 5. Fund Segregation in Prepaid Funeral Service Providers (as of April 2024)

(Number, %)

	In Operation	Registration Revoked	Closed	Total
Total number of firms	67	52	131	250
Number of non-compliant firms	2	24	36	62
Proportion of non-compliant firms (%)	3.0	46.2	27.5	24.8
Average segregation rate (%)	51.0	37.1	47.0	46.0

Note: 1) The sample consists of 250 companies registered with the Fair Trade Commission as prepaid installment transaction business entities from 2010 to April 2024. These companies operated in the prepaid funeral service sector, received prepayments exceeding 0 won, and presented no explicit errors in their financial statements.
2) The sample includes both currently operational companies and those whose registration has been revoked or have closed.
3) For companies with revoked registration or that have closed, the data reflects the status from the preceding quarter.
Source: Author's calculations using the Fair Trade Commission's *Prepaid Installment Business Operators Database* (2024).

Such violations during times of crisis are not unique to Korea. In the UK, from 2018 to 2021, six payment service providers went bankrupt, and five of them were noncompliant with prepaid balances, resulting in customer losses (K&L Gates LLP, 2021). Segregation rules also apply to securities deposits, functionally analogous to virtual asset deposits, and during the 2008 financial crisis, the collapse of Lehman Brothers' UK subsidiary uncovered a shortfall of over 100 million dollars in segregated funds (UK Supreme Court, 2012). Additionally, in the US, a large securities firm, MF Global, defaulted in 2011 due to liquidity shortages,[11] later revealing that it had misappropriated customer deposits to secure liquidity (Giddens, 2011). Even heavily regulated financial firms with well-established business models, like securities companies, have violated segregation rules when on the brink of collapse. It would be imprudent to underestimate the risk of segregation violations by businesses delivering new financial products,

10) Registration revocation is an administrative sanction for regulatory violations. In contrast, closure refers to voluntary business cessation, regardless of regulatory compliance. Thus, firms with revoked registrations are more likely to have violated fund segregation regulations than those that closed voluntarily, a finding supported by the analysis results.

11) At the time of its bankruptcy, MF Global (total assets of 50 trillion won) was approximately three times larger than Mirae Asset Securities (total assets of 18 trillion won), then the largest securities company in South Korea.

especially in high-risk sectors.

Segregation violations can occur unintentionally as back-office operations become incapacitated near bankruptcy. On the verge of liquidation, the paralysis of administrative functions becomes highly likely. In April 1999, Dong Bang Peregrine Securities was declared bankrupt, and a bankruptcy administrator was appointed. During its liquidation procedures, both the company and the administrator inadvertently failed to segregate customer deposits, and this oversight led to customer losses.[12)]

However, even when operating without the danger of bankruptcy, there are still numerous instances of segregation violations. Annual surveys by Korea's Fair Trade Commission (FTC) reveal such rulebreaking every year—six noncompliant companies in June 2024 (FTC, 2024). The UK's Financial Conduct Authority (FCA) discovered multiple noncompliances after investigating 11 prepaid balance service providers in 2019 (FCA, 2021). In June 2023, Korean financial authorities found that approximately 5 trillion won out of 70 trillion won in investor deposits at securities companies were not segregated and had been used for internal operations, with one company temporarily mixing up to 46% of investor deposits with its own funds. Moreover, globally renowned securities firms like JP Morgan and Barclays were fined by UK authorities in 2010 and 2013, respectively, for violating segregation requirements (Morrison, 2014).[13)] In practice, it is difficult for regulatory authorities to monitor and oversee fund segregation compliance as events unfold.

Third, institutions responsible for holding and managing segregated funds, such as banks and savings banks, are not invincible. When companies entrust customer funds, the trustee, usually a bank, is supposed to invest these funds in safe assets such as government bonds or money market funds (MMFs). However, normally safe assets are not necessarily safe during financial crises. For instance, during the 2008 financial crisis, a massive fund run occurred in MMFs in the US, and in 2023, Silicon Valley Bank, which had heavily invested in US Treasury Bonds—widely considered the safest assets—collapsed due to significant valuation losses. Whereas P2P lending deposits can

12) Supreme Court Ruling 2004Da6085, Issued November 25, 2005

13) The most shocking case involves a securities firm named Bernard L. Madoff Securities LLC (BLMIS), founded by Bernard Madoff, infamous for orchestrating a Ponzi scheme. BLMIS held 99.9% of approximately 20 billion dollars in investor deposits in Madoff's personal account, yet the US Securities and Exchange Commission (SEC) failed to detect the fraud for decades (US Bankruptcy Court, 2010).

be segregated in savings banks,[14] they tend to be riskier than regular banks.

IV. Proposals for a Protection System

In essence, fund segregation is a precautionary measure to safeguard customer funds from potential losses.[15] Yet, even with the best preventive efforts, risks cannot be entirely avoided. This underscores the need for post-incident protective measures for more effective safeguarding—a mechanism in which public institutions like the Korea Deposit Insurance Corporation (KDIC) compensate for losses incurred in customer funds after bankruptcy.

While fund segregation regulations serve a preventive function, the best of such precautions cannot eliminate all incidents, necessitating a post-incident protection system.

Other major countries employ a two-track approach of preventive fund segregation and post-incident protection. In the UK, the expanded deposit insurance framework FSCS covers prepaid balances and funeral service prepayments. Similarly, in the US, the Federal Deposit Insurance Corporation (FDIC) provides broad protections for prepaid balances, virtual asset deposits, and funeral service prepayments under certain conditions. For instance, PayPal's prepaid balances and the virtual asset deposits held by Coinbase, the largest virtual asset exchange in the US, are insured under the FDIC scheme.

The rationale behind the adoption of these protective measures is as follows. First, safeguarding customer funds is essential in securing trust in the financial system, a foundation necessary to responsibly foster financial innovation.[16] Second, these customer funds function closely akin to traditional financial products, such as demand deposits, securities accounts, and insurance, all of which are already covered by

14) According to Article 24 Paragraph 1 Subparagraph 7 of the Enforcement Decree of the Act on Online Investment-linked Financial Business and Protection of Users and Article 26 of the Supervisory Regulations, savings banks with assets of at least 1 trillion won in the previous quarter and a capital adequacy ratio of 10% or higher for the past two consecutive years are eligible to serve as segregated fund management institutions for P2P lending deposits.

15) Strictly speaking, subscribing to payment guarantee insurance plans—one of the separation methods—is not considered post-incident segregated fund management but rather a post-incident protection measure. In this arrangement, the firm maintains independent control over the segregated funds, while the insurance provider compensates for losses incurred after an incident. Sole reliance on this method does not effectively prevent firms from misappropriating customer funds in advance.

16) A recent example is the UK's introduction of The Consumer Duty in 2023. This principle-based consumer protection framework replaces the previous rule-based system, which allowed financial companies to fulfill their consumer protection obligations merely by complying with formalities such as disclosure requirements. Under the new system, companies may face sanctions for not actively pursuing good outcomes for consumers. In response to objections from the financial companies, the UK Financial Conduct Authority (FCA, 2021, p.8) argued that prioritizing good outcomes for consumers would enhance trust, thereby fostering financial innovation and competition. This, in turn, would expand benefits for the UK financial industry and strengthen its competitiveness in the global financial system.

KDIC (Table 1).[17] Third, some of them like funeral service prepayments hold significant importance in the national economy given their size, growth rate, and instances of customer harm.[18] Based on the criteria of (1) stable financial innovation, (2) functional similarity with existing products under protection, and (3) economic importance, this paper recognizes prepaid balances, virtual asset deposits, P2P lending deposits, and funeral service prepayments as targets for protection.[19]

In the direct protection scheme, firms pay insurance premiums in advance, and KDIC protects customers in the event of business insolvency.

The following provides context for the protection system proposal.[20] Post-incident schemes are categorized as either direct or indirect (Table 6). In the direct system, KDIC safeguards customer funds in much the same way as they cover bank deposits or securities accounts. If a firm declares bankruptcy and customer funds are lost, KDIC compensates up to a specified amount per person—e.g., 50 million won. To fund compensation, firms pay insurance premiums in advance according to applicable rates per the total amount of customer funds they manage.

However, the direct scheme applies uniform insurance rates regardless of fund segregation in contrast to the fundamental insurance principle of premiums proportional to risk.

However, this direct approach has one crucial flaw: applying uniform premium rates for both safer funds segregated in banks and riskier funds internally managed by firms goes against the principle of risk-proportional premium rates. Firms may find it difficult to accept premiums on already safely segregated funds. If the rate exceeds the actual risks of these segregated funds, their burden could grow larger and may be passed on to customers.[20]

17) The European Banking Authority (EBA) has recommended that various customer funds separately deposited with banks be classified as deposits and covered by deposit insurance schemes (EBA, 2021). In Korea, similar fund segregation regulations and protections under the Korea Deposit Insurance Corporation (KDIC) are applied to investor deposits held by securities firms, which are functionally analogous to virtual asset deposits.

18) The UK reversed its prior stance of excluding funeral service prepayments from financial regulation and, in 2022, introduced fund segregation regulations along with a public protection scheme under the Financial Services Compensation Scheme (FSCS). According to the UK government, this shift was prompted by the rapid growth of the funeral services market, a significant increase in prepaid amounts, and a rising number of customer harm cases (UK HM Treasury, 2018).

19) Even if not all three criteria are fulfilled, customer funds for new financial products may still qualify for protection if two or more criteria are substantially met.

Table 6. Comparison of Customer Protection Systems

		Direct	Indirect	Hybrid	
Whether companies pay insurance premiums		O	X	Segregated funds	X
				Other funds	O
Protection target in case of bankruptcy		Company	Bank	Segregated funds	Bank
				Other funds	Company
Protection limit (per customer)		Customer funds in full	Customer funds in separate accounts	Customer funds in full	
Effectiveness of protection		High	Low	High	
Insurance premiums at a rate proportional to the risk level		X	.	O	
Insurance premium burden on businesses and customers		High	None	Low	
International cases	UK	Funeral service prepayments	Prepaid balances	.	
	US	.	Prepaid balances, Virtual asset deposits, Funeral service prepayments	.	

Source: Author's creation.

The other type of post-incident protection is indirect. Under this scheme, KDIC does not directly safeguard customer funds in new financial products. Consequently, firms are not obligated to pay insurance premiums to KDIC, nor does KDIC compensate customers in the event of business failure. Instead, customer funds separately deposited in a bank are treated as customer-owned deposits, subject to the standard deposit insurance system. Recognizing these segregated funds as pass-through deposits, the customer, as the

20) Both public and private protection mechanisms can be considered when adopting a protection system. Private protection includes subscribing to payment guarantee insurance plans through insurance companies or mutual aid associations. A prime example of public protection is KDIC, which safeguards customer funds, similar to systems in the US and UK. Public protection offers several advantages over private options. First, the insurance premiums required to secure resources for compensation are lower in public protection. Compensation resources are pooled through collecting premiums in advance. Driven by profit, insurance companies tend to set higher premiums. While mutual aid associations are not for profit, their cost of raising funds is still higher than that of public institutions, resulting in higher premiums. By contrast, KDIC operates without a profit motive and benefits from a significantly lower cost of raising funds, as its credit rating aligns with the nation's, enabling it to maintain lower premiums. Second, public protection enjoys greater stability among protecting entities compared to private options. Insurance companies or mutual aid associations may become insolvent if their financial condition deteriorates or during a financial crisis, leaving them unable to fulfill compensation obligations. However, KDIC, as a public entity, can guarantee payouts through the nation's payment guarantee and financial support, even in times of crisis. Third, public protection systems manage the resolution of failed companies at a lower social cost. There are two approaches to resolving failed firms: (i) reimbursing customers through the protection entity following liquidation, and (ii) facilitating the acquisition, merger, or transfer of customer contracts to another company. The latter approach is often more cost-effective, reducing the need for fund injections while preserving existing contracts. KDIC can employ either approach and, as part of the financial authorities, has accumulated experience and expertise by leading the resolution of financial companies using the latter. In contrast, insurance companies or mutual aid associations may struggle to actively pursue this method as effectively as public institutions.

In the indirect framework, firms do not pay insurance premiums, and KDIC safeguards only the funds segregated in banks in the event of bank failure.

beneficial owner irrespective of the account holder's name, holds these deposits indirectly through the firm acting as an intermediary. As a result, if the bank holding the funds defaults, KDIC will recoup customer losses up to the deposit insurance limit per person—50 million won in Korea. In short, rather than directly covering customer funds for new financial products, the indirect scheme merely extends the scope of protected bank deposits to include funds segregated in banks. The firm's role within this indirect framework is limited to recording and managing customer identification data and submitting them to KDIC as needed.

The indirect approach only protects segregated funds, leaving customers unprotected from violations of segregation rules, resulting in reduced protection effectiveness.

In the indirect scheme, firms are relieved from the financial burden of paying insurance premiums, so there is no burden to pass on to customers. However, a grave defect arises regarding compensation effectiveness: only customer funds held in segregated bank accounts are protected, leaving the unsegregated portion unprotected. The primary goal of post-incident protection is to shield customers from the risks associated with firms' noncompliance with segregation rules, and indirect protection falls short of this objective, limiting its efficacy as a protective measure.[21)]

The proposed hybrid scheme indirectly protects customer funds segregated in banks while directly safeguarding all other customer funds.

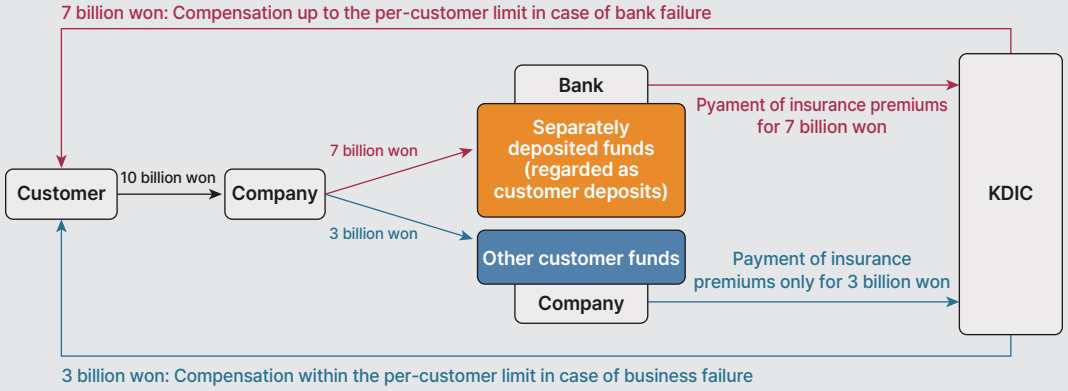
Building on international practices as well as the strengths and weaknesses of direct and indirect protection schemes, this study proposes a new framework—a "hybrid protection system"—designed to enhance protection effectiveness, adhere to the fundamental principle of premiums in proportion to risks, and reduce financial burdens for both sides (Table 6, Figure 2). At its core, this hybrid system offers indirect protection for customer funds segregated into banks while directly safeguarding all other customer funds. This hybrid system operates as follows: Companies are directly integrated into the KDIC protection framework, and as a rule, required to pay insurance premiums on the entirety of customer funds they manage, ensuring customer compensation in case of their default ("primary direct protection").[22)] An exception applies to customer funds separately deposited in banks. Provided that companies submit customer identification details, these funds are recognized as customers'

21) The UK adopts direct protection for funeral prepayments and indirect protection for prepaid balances. In the US, prepaid balances, virtual asset deposits, and funeral prepayments are subject to indirect protection, contingent on clear records of customer identification data and their management, together with explicit documentation showing that the company has segregated funds on behalf of customers as an agent.

22) In Korea, the deposit insurance rate is currently set at 80,000 won per 100 million won for banks and 400,000 won for savings banks. Firms offering new financial products generally carry a higher risk of bankruptcy than banks. Therefore, it would be reasonable to apply a higher insurance rate to these firms than the deposit insurance rate for banks, considering the rate imposed on savings banks.

own bank deposits, exempting companies from paying insurance premiums. Customers are then compensated if the bank fails, rather than in the case of company bankruptcy ("conditional indirect protection for bank segregated funds").[23]

Figure 2. Hybrid Protection System: Illustrative Flow of of Fund Segregation



Note: The red line represents the indirect protection for segregated customer funds, while the blue line shows the direct protection for other customer funds.
Source: Author's creation.

Suppose a company managing 10 billion won in customer funds deposits 7 billion won in a bank (Figure 2). The company only pays insurance premiums for the remaining 3 billion won, and customers are protected regardless of the company or the bank that defaults. Three scenarios are possible. First, if the company fails but the bank remains solvent, KDIC compensates clients up to the per-customer limit for 3 billion won not set aside, and 7 billion won held in the bank remains intact and accessible to customers as needed. Second, conversely, if the bank fails but the company remains operational, KDIC compensates for 7 billion won held in the bank, and the company returns the remaining 3 billion won to customers. Third, if both fail, KDIC pays back the full 10 billion won within the coverage limit.

This hybrid protection system ensures high effectiveness by safeguarding all customer funds and keeps

This hybrid system offers several key advantages. First, all customer funds—whether segregated or not—are comprehensively protected within the per-customer limit. Second, it aligns with the principle of premiums proportional to risk, exempting segregated funds from premiums and applying them only to unsegregated funds. Third, the premium burden is low for both businesses and customers. Companies

23) Among the three primary fund segregation methods—bank deposit, guarantee insurance subscription, and trust—funds managed through guarantee insurance or trust arrangements are subject to direct protection, as they do not qualify as bank deposits.

insurance premium burdens low for firms and customers, as firms are incentivized to deposit most customer funds in banks.

are incentivized to deposit most customer funds in banks to benefit from the premium exemption (Table 6, Figure 2).[24] With reduced costs, companies are less likely to pass that burden onto customers. This raises the question of who finances the compensation. Banks assume this responsibility since customer funds placed under their care are treated as bank deposits. Under the current deposit insurance framework, banks pay deposit insurance premiums proportional to their total deposit balances.[25][26][27][28]

However, prepaid funeral service providers that currently manage only half of their customer funds separately may face increased pressure, as the other half—often used as operating capital—needs to be deposited in banks to qualify for the premium exemption. Characteristic of funeral service prepayments, frequent criticism has been directed at large shareholders for embezzlement and misappropriation of customer funds (Dong-A Ilbo, 2024), with financial losses from such cases continuing to be reported. Unlike other customer funds, such

24) Calculating deposit insurance premiums based on the quarter-end balance could incentivize firms to deposit customer funds only at the end of each quarter and misappropriate them during the interim. However, under KDIC's current guidelines, premiums are calculated using the average balance over the quarter (KDIC, 2016). Depositing funds solely at the end of the quarter would lower the average balance and increase the premium liability, encouraging firms to maintain customer funds segregated throughout the entire quarter.

25) Deposit insurance premiums for banks are levied on the total deposit balance, not only on amounts within the protection limit of 50 million won (KDIC, 2016).

26) With the introduction of the hybrid protection system, banks are unlikely to face higher premiums for deposit insurance. When companies receive customer funds, a portion will be placed in dedicated separate accounts, with the remainder held in operational accounts for use as working capital. Regardless of the segregation ratio, all customer funds ultimately become bank deposits. While the new system may alter the proportion of segregated deposits, the total amount of customer funds—and thus the overall deposit balance—will remain constant. As deposit insurance premiums are calculated based on the total deposit balance, the burden on banks remains unchanged. However, if the protection system enhances the stability of new financial products, customers may feel more confident in investing in them, leading to an increase in total customer funds and, subsequently, higher deposit insurance premiums for banks. Nevertheless, the expanded deposit base would enable banks to offer more loans and improve net profitability, meaning the hybrid system could be potentially advantageous for banks.

27) If a bank fails after the protection scope extends to customer funds related to new financial products, with KDIC paying out more compensation than it has collected in deposit insurance premiums, KDIC may partially raise deposit insurance premiums to recover the shortfall. However, given that customer funds for new financial products amount to less than 20 trillion won—compared to bank deposits exceeding several thousand trillion won—the impact of raising premiums is expected to be minimal.

28) Among the three primary methods of fund segregation—bank deposits, payment guarantee insurance, and trust—this study primarily focuses on bank deposits for ease of analysis. However, the hybrid protection system does not necessarily increase the burden on banks with respect to deposit insurance premiums in the other two methods. (1) Suppose that before the hybrid protection system is introduced, a company subscribes to payment guarantee insurance for 7 billion won out of 10 billion won in customer funds, leaving the remaining 3 billion won unsegregated. In this case, the entire 10 billion won appears in the company's deposit account. After the introduction, if the company separately deposits 7 billion won or more in banks to qualify for premium exemptions and holds the remainder in its own account, the deposit balance under the company's name remains 10 billion won. Since the total deposit balance stays the same, the bank's deposit insurance premium burden does not change. (2) Suppose the company entrusted 7 billion won in a trust account before the introduction. Since trust accounts are not considered deposit accounts, the company's deposit balance was 3 billion won beforehand. After the introduction, if the company deposits 7 billion won or more in banks to benefit from premium exemptions and retains the remainder in its operational account, the deposit balance under the company's name increases to 10 billion won. As a result, the increase from 3 billion won to 10 billion won raises the bank's deposit insurance premiums accordingly. However, banks can leverage the increased deposits to expand lending, which could benefit them.

as prepaid balances, there are no asset management regulations requiring the use of safe assets like government bonds, leaving prepaid funeral service customers more vulnerable. With the anticipated surge in the number of deaths, the risk exposure is projected to grow significantly, potentially affecting over 10 million individuals and involving prepaid funds exceeding 10 trillion won. To address these risks, several US states and the UK require 100% of prepayments to be separately managed. The proposed hybrid system—without raising the segregation requirement from 50% to 100%—places a lighter burden on businesses relative to stricter foreign systems.

The hybrid protection system addresses risk transfer, in which a bank's failure can trigger a firm's insolvency.

In addition, there are other advantages to this hybrid system. First, it mitigates the issue of risk transfer, where bank failure could trigger a chain reaction of insolvency among firms. Under the direct protection system, when a bank fails but a firm remains operational,[29] KDIC does not compensate for customer funds lost in the collapse.[30] In such cases, firms must repay customers using their own assets. In Korea, where major banks dominate the market, multiple firms are likely to use the same bank to segregate customer funds. Put differently, the failure of one bank could cause cascading failures across a spate of industries and firms. In contrast, under the hybrid scheme, even if a bank fails while a firm remains operational, KDIC compensates customers for losses on behalf of the firm, preventing the spread of risk.[31]

Early detection of firms facing liquidity risks is enabled by the hybrid proposal.

Second, the hybrid proposal facilitates early risk detection. Given the premium exemption, firms would commonsensically segregate their customer funds. Failure to do so, despite the clear gains, suggests potential liquidity issues or engagement in high-risk and high-return investments. Monitoring such behavior allows regulators to identify and supervise risky firms more effectively, reducing the likelihood of accidents.

Nevertheless, the proposed hybrid system is not free from limitations. First, the process of compensation may incur losses for KDIC. Even so, the risk to KDIC appears limited: The total customer funds for new

29) Generally, the likelihood of a bank's failure is lower than that of a company. However, external shocks primarily affecting banks can occur, creating situations where a bank fails, but the company remains solvent. Specifically, if a bank's failure arises from risks specific to the individual bank, rather than a systemic crisis in the broader economic and financial system, the company may remain solvent.

30) Customer funds separately deposited in a bank that later went bankrupt would be held under the company's name. In such cases, KDIC provides coverage for the company up to the 50 million won limit. However, if the customer funds exceed several billion won, the company can only access a maximum of 50 million won to distribute among customers, effectively leaving customers without adequate protection.

31) The indirect protection system also safeguards customer funds separately deposited in a bank in the event of its bankruptcy, thereby preventing risk transfer from banks to customers. The UK's Prudential Regulation Authority (PRA) notes that addressing this risk transfer problem was among the reasons for adopting the indirect protection system for prepaid balances (PRA, 2022).

KDIC's burden under the hybrid option is not expected to be substantial.

financial products amount to only 18 trillion won—categorically lower than traditional financial products exceeding several thousand trillion won, and per-person amounts for customer funds are low—funeral prepayments at 1.08 million won and virtual asset deposits at 760,000 won (Table 2). Moreover, given the high likelihood of fund segregation for most customer funds, KDIC's compensation burden would be even more limited. Besides, regular premium contributions from banks and businesses will provide an additional buffer against losses.[32)33)34)35)]

While the indirect protection system is easy to implement, the hybrid option requires substantial changes to the existing framework, making immediate implementation challenging.

Second, implementing the hybrid system may present more challenges than the indirect system. The indirect protection is highly feasible as it only requires expanding the definition of deposits under the existing insurance framework. Having applied indirect protection to various financial systems like Individual Savings Accounts (ISAs), KDIS has the know-how. On the other hand, the hybrid protection would require material changes to the current framework, necessitating legal amendments to the Depositor Protection Act and coordination among regulatory bodies to bring in new financial products, currently categorized as non-financial, under KDIC's protection scope.

32) There may be concerns that a company could keep all customer funds in a separate bank account until just before bankruptcy to avoid paying insurance premiums, only to withdraw them all at once and misappropriate the funds at the last moment. In such cases, KDIC would be responsible for compensating customer losses due to the company's bankruptcy, even though KDIC had not collected insurance premiums from the company, raising concerns about potential losses in compensation funds. However, it is not feasible for a company properly adhering to segregation practices to withdraw and misappropriate large amounts just before going bankrupt. Supervisory authorities conduct regular checks to ensure compliance with fund segregation regulations, and strict conditions govern withdrawals of these separately deposited funds. Even when withdrawals are permitted at the request of customers, daily limits often apply. Furthermore, misappropriation of customer funds immediately before bankruptcy would likely result in criminal prosecution for embezzlement. While small-scale embezzlement just before bankruptcy is not impossible, large-scale misappropriation remains highly unlikely. Internationally, there are few, if any, cases where a company maintained full segregation of customer funds until just before bankruptcy and then misappropriated more than 10% of total customer funds. If this risk cannot be entirely dismissed, KDIC could consider introducing an insurance premium exemption limit while maintaining the core structure of the hybrid protection system. Under this system, companies pay insurance premiums on non-segregated funds, while premiums are waived for segregated funds. For example, if the exemption limit is set at 90% of customer funds, companies would be required to pay insurance premiums on the remaining 10%, regardless of whether those funds are segregated. For the remaining 90%, the obligation to pay premiums would depend on whether the funds are separately deposited. In this scenario, even if a company complies with segregation requirements but later withdraws the funds and misappropriates them just before bankruptcy—resulting in losses for KDIC—the prepaid insurance premiums for 10% of customer funds could offset part or all of those losses. The appropriate exemption limit may vary based on the specific new financial product, with KDIC determining the threshold through actuarial calculations of expected loss rates for each product. Some may argue that introducing an insurance premium exemption limit effectively transforms the hybrid protection system into a direct protection system. However, this is not the case. A direct protection system applies uniform premiums to the entirety of customer funds, regardless of segregation status. In contrast, the essence of the hybrid protection system lies in differentiating premium obligations based on segregation status. Since segregated funds carry lower risks than non-segregated ones, this approach aligns more closely with the fundamental insurance principle of setting premiums proportional to risk.

V. Conclusion

Recently, major developed countries have expanded the coverage of deposit insurance institutions beyond traditional deposits to include a wide range of financial and quasi-financial services, aiming to responsibly foster financial innovation.

In recent years, major advanced economies with sophisticated financial industries have expanded the scope of public safety nets beyond traditional deposits to encompass various financial and quasi-financial services, despite the considerable hurdle of modifying existing deposit insurance frameworks. The US has extended the coverage not only to prepaid balances, virtual asset deposits, and funeral prepayments but also to Bitcoin ETFs.[36] In the UK, FSCS, a comprehensive and centralized protection scheme covering the entire financial sector, compensates for prepaid balances and funeral prepayments, as well as for losses caused by the misselling of various financial products and services. Australia has followed suit, launching the Compensation Scheme of Last Resort (CSLR) in April 2024.

This convergence of international financial policies mirrors a shared awareness that fostering public trust through timely and effective compensation for consumer losses from financial innovation is essential for advancing innovation with stability.[37] Between the two pillars of financial policy—prudential regulation and consumer protection, the former has achieved relative maturity since the global financial crisis, driven by the growing adoption of capital regulations such as Basel III. However, the second pillar remains a critical unresolved agenda, contributing to the common perception of its importance. Moreover, the continuous emergence of new financial products throughout the innovation process places increasing emphasis on consumer protection.

Building on these global developments, this study presents a customer protection framework with a focal point on customer funds for new

33) To prevent losses for KDIC, an alternative to an exemption limit in footnote 32 is a post-compensation special insurance premium. This way, insurance premiums are charged in advance for non-segregated customer funds, while separately deposited funds remain fully exempt without a limit. Still, if KDIC incurs losses due to a company's bankruptcy, a special insurance premium is imposed post-compensation to recover the losses. Despite the advantage of lowering the pre-compensation financial burden of the industry, this method raises a fairness issue: the compensation costs would be borne by normally operating companies rather than by the failed ones. However, even when all premiums are collected in advance, compensation costs often exceed the premiums paid by failed companies, meaning healthy companies typically bear the financial burden regardless. Since all insurance systems operate on the principle of mutual aid, this fairness issue is inescapable, irrespective of how to levy premiums. The US also levied special insurance premiums following a series of bank runs, including the collapse of Silicon Valley Bank (SVB).

34) KDIC's public protection system may raise concerns that it could encourage excessive investment in new financial products, thereby increasing KDIC's potential exposure to losses. Customers might invest up to the protection limit, much like how savings bank deposits are typically capped at the depositor protection limit. However, the proposed protection system does not cover valuation losses of the new financial products themselves. Instead, it only safeguards the transaction funds entrusted by customers during transactions. Therefore, it is unlikely to trigger excessive investment in new financial products.

35) Another concern with introducing the public protection system is that the business scope of private protection entities, such as insurance companies and mutual aid associations, could diminish. If such concerns are significant, transferring the direct protection component of the hybrid protection system to the private sector may be worth considering.

This study builds on such global trends to propose protection measures for customer funds in new financial products.

financial products. In conjunction with examining direct and indirect protection systems already in place in major economies, a new hybrid approach is introduced, offering a comparative analysis of their strengths and weaknesses. This study first proposes carrying out the more feasible indirect scheme and addressing shortcomings during implementation. As the significance of new financial products and customer risks grow, selectively pursuing a gradual shift towards the hybrid protection scheme by product category could be considered.

The proposed protection system, with its inclusive nature, can serve as a comprehensive framework to protect and foster future innovation by capturing new financial products within its regulatory scope.

Finally, the inclusive nature of the customer fund protection framework should be stressed. Designed to cover existing products, such as simplified payments, virtual assets, and P2P lending, the proposed framework can also apply to any financial products future innovations may bring as long as businesses collect customer funds through transactions and the need for protection arises. The centralized and integrated schemes in the UK and Australia were introduced with broad applicability, later transitioning to selective regulation based on the significance of individual products. Likewise, the proposed customer protection aims to provide robust and comprehensive regulatory backing, as well as flexibility for selective oversight as new financial products and risks emerge, all the while propelling innovation to proceed confidently. ■

36) In the US, Bitcoin ETFs and other virtual asset ETFs are protected by the Securities Investor Protection Corporation (SIPC), which was established independently of the Federal Deposit Insurance Corporation (FDIC) to safeguard customer deposits and securities held by brokerage firms

37) Refer to Footnote 16.

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