

# Headline

---

## Network separation regulatory improvement plan for the financial sector

Chun-bok Park / Financial Consulting Team 2 Senior Consultant

### ■ Overview

The extensive network paralysis on March 20, 2013 caused massive damage on the press and major financial companies. The government presumed that the computer network paralysis resulted from a cyber attack launched by the North Korean Reconnaissance General Bureau, which, according to an analysis, had gradually distributed malicious codes to the victims since June 28, 2012. This incident brought about serious damage including suspension of financial transactions and leakage of customers' personal information. With this as a momentum, the regulation for physical network separation was introduced to the "public sector," and has been in operation for over ten years.

### ■ Network Separation in the Financial Sector

Network separation is a security measure to protect internal computational resources from external invasion. It is to restrict network access by physically separating the internal and external networks. This regulation has been applied to the financial sector since the end of 2014. Financial companies and electronic financial service providers have secured safety against external attacks, such as hacking, by physically separating data processing systems and terminals connected to their internal networks from the external networks. As a result, physical network separation has been established as an important measure to strengthen security by blocking connection between systems and permitting network access only in specific environments. This was anticipated to block external threats to the internal data processing system, and keep damages caused by incidents to a minimum.

## ■ Issues Associated with Network Separation in the Financial Sector

However, it has been continuously pointed out that network separation causes inefficiency for financial companies and electronic financial service providers in performing their operations and difficulties in applying new technologies or conducting R&D activities. In particular, while software market is shifting rapidly to the cloud-based SaaS (software as a service) and the use of generative AI is exerting significant impact on the industrial development as of late, concerns are being raised that network separation may even cause deterioration of domestic financial industry's competitiveness beyond inconvenience in their business activities. Furthermore, although having achieved complete separation from external communication, some financial companies are negligent about introducing advanced security systems or not developing appropriate security measures in line with the changing IT environment. As a result, network separation is taking a toll to hinder security development of the financial sector in Korea.

## Ideal

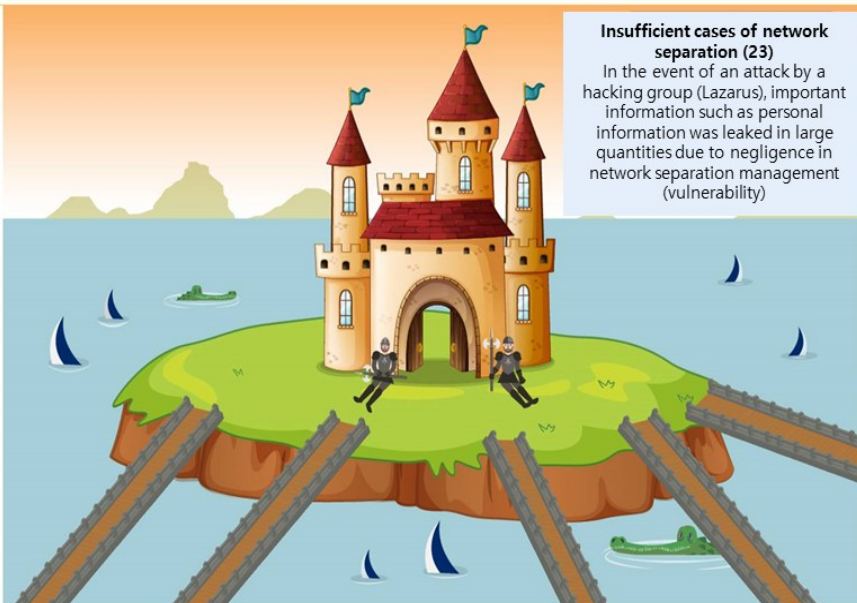


### Best case of network separation (22)

In the event of an attack by a hacking group (Lazarus), even though the Internet network is completely seized, the network separation blocks the penetration of the internal network (no damage)

Network separation is an easy security tool, and the effect of blocking external attacks is very high. However, due to the disconnection from the outside, it is unsuitable for the AI era and its competitiveness has declined significantly

## Reality



### Insufficient cases of network separation (23)

In the event of an attack by a hacking group (Lazarus), important information such as personal information was leaked in large quantities due to negligence in network separation management (vulnerability)

In reality, numerous network separation exceptions are inevitable, and problems remain when management is neglected. Galapagos regulations hinder the development and introduction of security technology

\* Source: Financial Services Commission

Figure 1. The Ideal and Reality of Network Security Management

## ■ Network Separation Regulatory Improvement Plan

On August 13, 2024, the Financial Services Commission announced the Roadmap for Network Separation Improvement in the Financial Sector (the "Roadmap" hereinafter). The gist of the roadmap is to permit the use of generative AI by financial companies, etc., extensively expand the scope of cloud (SaaS) use, and also actively improve the R&D environment. In the mid to long-term, the Financial Services Commission announced a plan to propose the directivity for regulatory advancement under the principle of autonomous security and accountability, and support financial companies, etc. to prepare for the future through internal competency building through complete amendment of the financial security law and systems. In addition, considering that the current financial security system was configured on the premise of an environment that is separated from external communication, such as the Internet, the Financial Services Commission plans to promote a phased improvement rather than drastic deregulation. While addressing regulatory difficulties immediately using sandbox, etc. for the tasks that require swift response due to changes in the IT environment, the Financial Services Commission is seeking to prepare sufficient safety devices including the development of separate security measures in order to prevent security issues because it takes time until the autonomous security system is fully established.

## ■ Detailed Promotion Tasks by Phase of the Network Separation Regulatory Improvement Plan

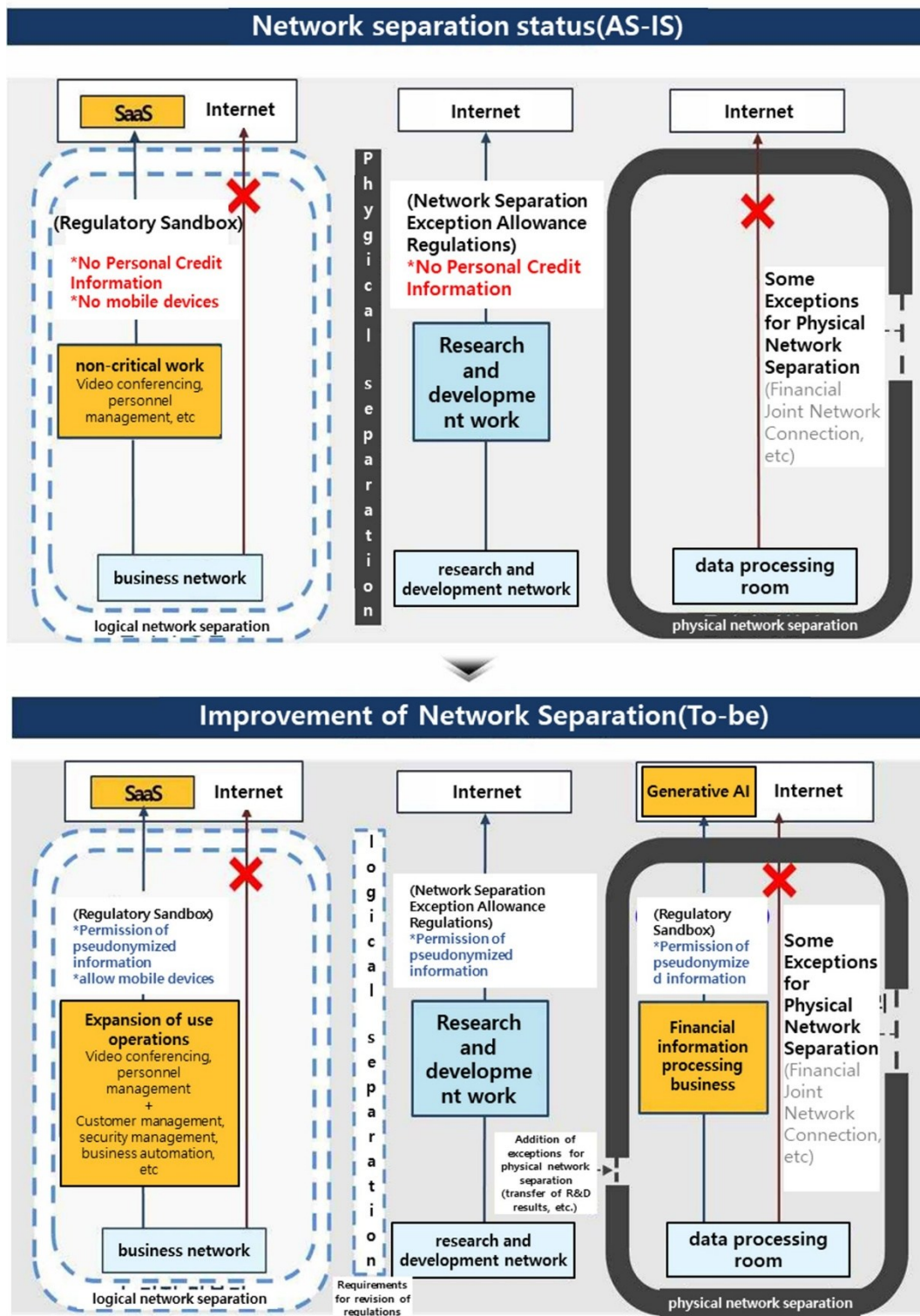
Phase 1			Phase 2	Phase 3
<b>1) Permitting the Use of Generative AI</b> (Regulatory Sandbox) : Permitting regulatory exceptions to also process pseudonym information using generative AI * Personal credit information pseudonymized to prevent the identification of specific credit data subjects without the use of additional information			<b>4) Institutionalizing Regulatory Exceptions up to Phase 1</b> : Tasks of which performances have been verified* through sandbox → Promoting institutionalization including regulatory revision * Until the First Half of 2025: Verifying sandbox operation performances	<b>7) Enacting the Digital Financial Security Act (Provisional Title)</b>  * Promoting preparation within the year following research (3Q, 2024) and public hearing (4Q, 2024) - Establishing security system consisting of the two pillars of autonomous security and accountability : Regulatory transition to center around goals and principles - Reinforcing responsibility of the financial sector : Reinforcing liability, promoting effective fine imposition, etc. : Expanding authority of CISO, imposing obligation of report to the CEO and BOD - Inspection, order of performance, etc. by financial authorities supporting security level improvement in the financial sector
<b>2) Expanding Cloud Use</b> (Regulatory Sandbox)			<b>5) Expanding and Upgrading Regulatory Exceptions</b> : Increase in the risk due to personal credit information processing, etc. Operation → Additionally permitted on the premise of strengthened security measures	
	<b>As-Is</b>	<b>To-Be</b>		
<b>Data</b>	Prohibiting personal credit information	<b>Permitting pseudonym information</b>		
<b>Program Type</b>	Permitting non-critical operations, such as collaboration tool, personnel management, etc.	<b>Additionally permitting customer management (CRM), business automation, etc.</b>		
<b>Terminal</b>	Permitting wired computer only	<b>Permitting mobile device</b>		
<b>3) Improving Network Separation for R&amp;D</b> (Supervisory Regulation Revision)			<b>6) Improving Information Processing Outsourcing System to Strengthen Third-party Risk Management, etc.</b>	
	<b>As-Is</b>	<b>Improvement</b>		
<b>Between R&amp;D network and business network</b>	Physical network separation	<b>Logical network separation</b>		
<b>Between R&amp;D network and data processing room</b>		<b>Exceptionally permitting for transfer of development outcome, etc.</b>		
<b>Data</b>	Prohibiting personal credit information	<b>Permitting pseudonym information</b>		

\* Source: Financial Services Commission

Table 1. Detailed Promotion Tasks by Phase

### **1) Permitting the Use of Generative AI in Financial Companies, etc.**

- While generative AI is mostly provided in the cloud-based Internet environment, the financial sector in Korea has limitations in the generative AI introduction due to restrictions in external communication use, such as the Internet, etc.
- Accordingly, regulatory exceptions apply to the Internet use through the sandbox.
- At the same time, sufficient devices will be prepared, such as to impose the condition of security measures for the expected risks and for the Financial Supervisory Service and the Financial Security Institute to conduct security inspections and provide consulting to each requesting company.



\* Source: Financial Services Commission

Figure 2. Comprehensive Configuration of Short-term Promotional Tasks for Network Separation Improvement

## **2) Extensively Expanding Scope of Cloud-based Application Program (SaaS) Use**

- In the past, the use of SaaS was permitted only for non-critical operations, such as document and personnel management, and not for processing customers' credit information. Due to the strict additional sandbox conditions, SaaS use has been limited.
- The scope of SaaS use, however, will be expanded to include security management and customer management (CRM), and the use of SaaS will be increased, such as for pseudonym information processing and in mobile devices.
- Likewise, in response to the security issues that can result from the expansion of regulatory exceptions, development of security measures will be imposed as a condition for the sandbox designation.

## **3) Improving R&D Environment of Financial Companies, etc.**

- In November 2022, the regulation was improved to allow free use of the Internet in R&D environment. However, due to the physical separation of R&D environment, prohibition of personal credit information use, etc., it is being continuously pointed out that innovative service R&D according to customer characteristics and demands is considerably limited.
- To this end, the Electronic Financial Supervisory Regulation will be amended to alleviate the physical limitations so that financial companies, etc. can more conveniently transfer their R&D outcomes. In addition, an environment where financial companies can develop innovative financial products will be provided by permitting the use of pseudonym information, etc.

## **4) Institutionalizing Regulatory Exceptions up to Phase 1**

- With respect to the regulatory exceptions up to phase 1 of generative AI and SaaS use in the Intranet, the regulatory exceptions will be institutionalized and the sandbox will be additionally expanded by the end of 2025 through effectiveness evaluation and security verification.
- (3Q, 2024) Sandbox registration and permission\* → (first half of 2025) commencement of service use → (until 3Q, 2025) effectiveness evaluation and security verification → (4Q, 2025) promotion of institutionalization by amending the Supervisory Regulation, etc.

\* Previously permitted regulatory exceptions, such as M365 and ERP, to be included in the institutionalization Task



## **5) Upgrading Regulatory Exceptions Including Permission of Personal Credit Information Processing**

- Regulatory exceptions to allow direct processing of actual personal credit information rather than pseudonym information will be additionally expanded.
- The processing of actual personal credit information will be permitted on the premise of additional security measures including sufficient performance verification and security evaluation in relation to the phase 1 task.

## **6) Improving Data Processing Outsourcing System by Strengthening Third-party Risk Management, etc.**

- Despite an increase in the outsourcing of data processing operations, such as with respect to cloud service and data centers, effective third-party risk management regulations are absent. Therefore, the data processing outsourcing system will be improved by establishing supervisory and inspection authority on the third party outsourced for data processing by financial companies, etc. through a study on advanced overseas cases.
- To establish a new financial security system, advanced overseas cases will be analyzed through a study project and the direction for introduction, etc. according to domestic environment will be reviewed.

## **7) Enacting the Digital Financial Security Act (Provisional Title)**

- As only the detailed regulatory security measures are listed and the perception that “responsibility is exempted when the regulations are observed” is widespread, financial companies only abide by the minimum criteria and neglect security investment. In addition, the uniform and rigid regulations cause difficulties in flexible response to IT risks.
- Accordingly, to establish a new financial security system based on the principle of autonomous security and accountability, key security principles and goals will be proposed through enactment of the Digital Financial Security Act (provisional title). In addition, for the detailed and technical security control measures, best practices will be presented to set a guideline.
- Moreover, a lawful basis for strengthening responsibilities of financial companies, such as to introduce effective fines and reinforce liability for computational incidents, will be prepared.

## ■ Status of Network Separation Improvement Promotion in the Financial Sector

Information on the regulatory sandbox for generative AI use, etc. is provided by each association and through the SANDBOX KOREA website([sandbox.fintech.or.kr](https://sandbox.fintech.or.kr)). At the regular meeting held on November 27, the Financial Services Commission designated ten innovative financial services of nine financial companies using generative AI for the first time. In relation to the innovative service designation, Chairman Kim Byoung Hwan of the Financial Services Commission stated, "We received as many as 141 applications for innovative financial service designation for generative AI use. This indicates financial companies' yearning for improvement of the regulation for network separation and their strong will for innovation." Chairman Kim urged, "To help financial consumers enjoy the benefits of regulatory improvement in the near future, financial companies must swiftly launch the designated innovative services in the market, and provide services under a solid security system to ensure balance between innovation and security." Meanwhile, according to the Roadmap for Network Separation Improvement in the Financial Sector announced in August 2024, the use of generative AI and SaaS by financial companies has been extensively permitted. Accordingly, it was announced that 141 innovative services of 74 companies applied for network separation regulatory exceptions during the innovation service designation application period between September 16 and 27, 2024.

Institute	Name of Service for Application	Description
Shinhan Bank	Generative AI-based AI bank tellers	Providing natural language-based services including financial consulting and foreign language translation
	Generative AI investment and financial knowledge Q&A service	Providing natural language-based services including news summary, past return rate information, market flow information, etc.
KB Bank	Generative AI financial consulting agent	Providing customer-friendly conversation, consultation, etc. for response to customer inquiries
NH Bank	Generative AI platform-based financial service	Providing AI bank teller service for foreign customers, consulting service for the aged, etc.
Kakao Bank	Conversational financial calculator	Calculating interests, exchange rates, etc. for financial products based on natural language
NH Securities	Generative AI market information service to customers	Providing customized real-time summary of market information
KB Securities	AI integrated financial platform, Cabi	Providing conversational services including currency exchange and asset management
Kyobo Life Insurance	Coverage analysis AI supporter	Providing insurance solicitors with customized scripts based on customers' coverage analysis reports
Hanwha Life	Customized narration creation and virtual conversation training solution using generative AI	Providing insurance solicitors with financial sales narrations based on latest news, etc.
KB Card	Kate credit card service using generative AI	Providing conversational financial services including credit card product comparison, issue, etc. according to customer situations

\* Source: Financial Regulatory Sandbox of the Fintech Center Korea

**Table 2. Descriptions of Innovative Financial Services Designated**

## ■ Conclusion

The deregulation for network separation in the financial sector marks an important turning point to promoting digital financial innovation and creating an efficient business environment. However, sufficient preparation is necessary in response to security risks that can be caused by deregulation and, accordingly, policy-wise stability must be concurrently taken into consideration. To successfully implement the three-phase roadmap (seven sub-phases) and ensure that deregulation develops in a direction to improve both safety and efficiency of the financial systems, continuous monitoring and the establishment of a swift response system are compulsory. Based on the efforts, an environment where growth and security of the financial industry are promoted in harmony must be established.