

# The Network Separation Rule in South Korea

Impact, Improvements and Recommendations  
June 2024

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The association works to ensure that the interests of the cloud computing community are effectively represented in the public policy debate. Drawing on subject-matter expertise from member companies, expert working groups, and special interest groups, it develops best practice recommendations and other thought leadership materials.

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## Executive Summary

In 2014, the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS) of South Korea introduced the “Electronic Financial Transactions Act.” This Act mandates network separation for financial institutions, involving the physical division of internal and external networks. Financial institutions are required to ensure that “computers for system operation, development, and security are on separate networks”.<sup>1</sup>

Over the past decade, there have been many discussions and improvements proposed to refine this network separation rule to **ensure that innovation is not stifled in an effort to improve data governance**. Unfortunately, despite these efforts, the rule remains a regulatory obstacle for financial institutions seeking to adopt new technologies and enhance services to reduce operational costs and improve efficiency. Additionally, the rule has reduced South Korea’s competitiveness on a global scale, as it diverges from the global trend toward cloud integration and adoption. It also impedes South Korea’s ability to connect with other digital economies, as countries increasingly promote cross-border data flow to support digital economy development.

This report analyzes the overall impact of the network separation rule, particularly in the context of how cloud technologies, particularly software as a service (SaaS), have positively impacted global financial institutions. With this comprehensive examination, conclude with a number of recommendations for the Financial Sector Network Separation Task Force to consider, particularly around how to adopt a nuanced approach for network separation that balances the need for security against the use of cloud technologies for innovation and growth. Such an approach would create an enabling environment for financial institutions to unlock the benefits brought about by the technological adoption of cloud computing, as well as allow South Korea to thrive and succeed as a digitally advanced economy.

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<sup>1</sup><https://carnegieendowment.org/2021/08/17/korean-policies-of-cybersecurity-and-data-resilience-pub-85164>

# Chapter 1: South Korea has had the network separation rule in the financial sector since 2014, and is now looking to improve regulation to address industry concerns and technological advancements

## 1.1 Background Leading to the Development of the Network Separation Regulation in South Korea

In 2014, the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS) of South Korea announced the “Electronic Financial Transactions Act”. Under this Act, financial institutions are required to enforce network separation- which refers to the physical separation of internal and external networks, and ensure that “computers for system operation, development and security are on separate networks”.<sup>2</sup>The Act was formulated to bolster cybersecurity measures in the financial sector after a large-scale cyberattack in July 2013 which stunted the operations of three major banks in South Korea.<sup>3</sup>

While FSC and the FSS are primarily responsible for introducing and overseeing the network separation regulation, various government entities have been involved in the enactment and enforcement of the network separation regulation.

1. National Assembly: As the legislative body of South Korea, the National Assembly is responsible for discussing and implementing changes to the network separation regulation.
2. President’s Office: The President’s office provides strategic direction and policy guidance concerning network segregation to ensure national security and efficient data management.
3. Financial Services Commission (FSC): The FSC enforces regulatory compliance amongst financial institutions to safeguard financial data and transactional integrity.
4. Financial Supervisory Service (FSS): The FSS monitors financial institutions' compliance with network segregation rules enforced by the FSC.
5. The National Intelligence Service (NIS): The NIS strengthens network segregation protocols for national security and safeguarding sensitive government data.
6. The Ministry of Science and ICT (MSIT): MSIT develops and implements technical standards and guidelines for network segregation.
7. Personal Information Protection Commission (PIPC): PIPC provides guidance concerning privacy rights and personal data protection within the network segregation rules.

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<sup>2</sup><https://carnegieendowment.org/2021/08/17/korean-policies-of-cybersecurity-and-data-resilience-pub-85164>

<sup>3</sup><https://www.nytimes.com/2013/03/21/world/asia/south-korea-computer-network-crashes.html>

## 1.2 Discussions surrounding the impact of the network separation rule

Over the past decade since the implementation of the network separation rule, there have been extensive discussions regarding its impact on the financial sector. In particular, the regulation has created numerous challenges for financial institutions in South Korea. Chief among them is the significant hindrance to adopting digital technologies such as cloud services and SaaS.<sup>4</sup> Furthermore, the regulation appears to impede South Korea's position on promoting cross-border data flows.<sup>5</sup> As the threat landscape becomes more complex, this one-size-fits-all approach of network separation may not effectively counter contemporary threats. Over the past 10 years, network separation has also led to increased operational costs and reduced efficiency.<sup>6</sup> These factors collectively have stifled innovation and contributed to an IT talent drain in the financial sector.<sup>7</sup> The impact of the network separation rule is elaborated in further detail below:

### 1.2.1 Hindrance to the adoption of digital technologies

Despite South Korea's advanced digital infrastructure, regulatory hurdles appear to have slowed the adoption of the cloud services and SaaS amongst financial institutions in South Korea. According to the Asia Cloud Computing Association's "Better on the Cloud: Financial Services in the Asia Pacific 2021" report, South Korea is one of the most challenging markets in the Asia Pacific for financial institutions to leverage cloud services.<sup>8</sup> They note that the country imposes various rules on cloud adoption, including specific terms for cloud contracts between financial institutions and cloud providers, requirements for financial institutions to audit cloud services, and mandatory physical inspections of cloud facilities prior to each implementation.<sup>9</sup> Combined with the network separation rules, these restrictions impact innovation and prevent financial institutions from realizing the benefits of cloud services, such as operational cost savings, enhanced application performance, and faster data processing to improve customer services.<sup>10</sup>

### 1.2.2 Impeding the promotion of cross-border data flows

Network separation impedes the government's efforts to promote the free movement of data, which is crucial for developing a digital economy. The network separation rule mandates financial institutions to separate their internal and external networks, often necessitating that certain data generated within South Korea be stored locally. As noted in the 2018 Amendment to the Electronic Financial Supervisory Regulations, this data localization requirement is applied to data such as unique personal information and personal credit information.<sup>11</sup>

This restriction hinders seamless data exchange both within and outside of South Korea, complicating cross-border data flows. This particularly affects South Korea's efforts to implement digital economy agreements with other countries and regions that advocate for cross-border data flows, including for financial services.

- For instance, in the digital economy agreement signed between Singapore and South Korea in 2021, the agreement emphasized the seamless transfer of information between businesses operating in Singapore and South Korea, including data held by financial institutions, provided that requisite personal data protection safeguards are in place.<sup>12</sup> The agreement also includes clauses

<sup>4</sup><https://www.fsc.go.kr/eng/pr010101/77676>

<sup>5</sup><https://www.pipc.go.kr/np/cop/bbs/selectBoardArticle.do?bbsId=BS074&mCode=C020010000&nttlId=9887#LINK>

<sup>6</sup><https://ps-engage.com/network-separation-rules-pose-problems-for-south-korea/>

<sup>7</sup><https://www.sedaily.com/NewsView/2D80WGAK9S>

<sup>8</sup><https://www.slideshare.net/slideshow/acca-better-on-the-cloud-financial-services-in-asia-pacific-2021/249482710>

<sup>9</sup><https://www.slideshare.net/slideshow/acca-better-on-the-cloud-financial-services-in-asia-pacific-2021/249482710>

<sup>10</sup><https://development.asia/insight/accelerating-cloud-adoption-korean-financial-sector>

<sup>11</sup>[https://www.kimchang.com/en/insights/detail.kc?sch\\_section=4&idx=19121](https://www.kimchang.com/en/insights/detail.kc?sch_section=4&idx=19121)

<sup>12</sup><https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/KSDPA>

that prohibit data localization, specifically stressing that businesses should be allowed to choose where their data is stored, processed, and the cloud technology of their choice.<sup>13</sup>

As South Korea enters into further negotiations to facilitate cross-border data flow with countries such as Japan, the US, and the UK,<sup>14</sup> it is essential for South Korea to reconsider the impact of current regulations, including the network separation rule. This reassessment will ensure that South Korea can ink and implement similar agreements, benefiting the country's digital economy.

### ***1.2.3 Vulnerability against modern threats***

Although network separation aims to isolate networks from cyber threats, contemporary attacks have demonstrated that even physically separated networks could be vulnerable. Advanced malware and sophisticated attack techniques can breach air-gapped systems, proving that network separation alone is insufficient for comprehensive cybersecurity.<sup>15</sup> Moreover, network separation prevents financial institutions from benefiting from the most advanced security capabilities provided by cloud service providers like 24/7 patching and security management, which are more effective against the latest cyber-attacks.<sup>16</sup>

Additionally, the current "Electronic Financial Transactions Act" covers a wide range of stakeholders in the financial sector, each with different risk profiles. According to Article 2, Point 3, the Act includes commercial banks, specialized credit financial companies, postal service agencies, and community credit cooperatives.<sup>17</sup> Applying network separation as a one-size-fits-all approach to cybersecurity restricts stakeholders' ability to customize cybersecurity strategies to suit their specific needs and to develop appropriate measures against financial incidents.

### ***1.2.4 Increased operational costs***

Implementing physical network separation requires additional investment in hardware (routers, switches, firewalls, servers) and software (licenses, management tools). Financial institutions must also invest in custom software solutions, as ready-made tools in the market such as Customer Relationship Management (CRM) or productivity tools are often incompatible with the separated network structure. Maintenance and administration of these multiple network environments further escalates costs.

### ***1.2.5 Reduced operational efficiency***

Network separation complicates workflows by requiring employees to switch between networks, which delays processes, reduces productivity, and even risks serious errors by causing deviations from work in-between. This issue is particularly problematic in remote work settings, where employees often lack the necessary infrastructure, introducing unforced errors and leading to further inefficiencies.<sup>18</sup>

### ***1.2.6 Economic impact to financial sector and the overall national GDP***

Cloud adoption is widely recognized for driving efficiency, security, and innovation in the financial services sector—benefits that the financial sector in South Korea could better capitalize on.<sup>19</sup> According to KPMG,

<sup>13</sup><https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/KSDPA>

<sup>14</sup><https://asia.nikkei.com/Business/Technology/Japan-U.S.-and-others-to-ease-cross-border-personal-data-transfers>

<sup>15</sup><https://www.bbc.com/news/technology-37021957>

<sup>16</sup>[https://media.licdn.com/dms/document/media/D561FAQEhP2d9NBFzGQ/feedshare-document-pdfanalyzed/0/1708983814158?e=1716422400&v=beta&t=Ycmlo8sRifxRUdNhxKphxZ061oaa\\_gwoLHvnyEPENQ](https://media.licdn.com/dms/document/media/D561FAQEhP2d9NBFzGQ/feedshare-document-pdfanalyzed/0/1708983814158?e=1716422400&v=beta&t=Ycmlo8sRifxRUdNhxKphxZ061oaa_gwoLHvnyEPENQ)

<sup>17</sup>[https://elaw.klri.re.kr/eng\\_mobile/viewer.do?hseq=44455&type=part&key=8](https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=44455&type=part&key=8)

<sup>18</sup><https://www.mk.co.kr/en/economy/10989209>

<sup>19</sup><https://www.euromoney.com/article/2bst0r6t4j82jwpi2eygw/sponsored-content/how-cloud-computing-in-banking-can-drive-efficiency-security-and-innovation>

moving to the cloud could create organizational savings between 10-20% of their annual IT budget,<sup>20</sup> which is significant.

Apart from benefiting the financial sector, cloud adoption could also unlock greater economic value for South Korea. According to Access Partnership, digital transformation, including the adoption of cloud computing, could unlock KRW 281 trillion in annual economic value by 2030, which is approximately 13% of South Korea's GDP in 2020.<sup>21</sup> This growth is projected to be driven by the adoption of SaaS, IaaS, and advanced technologies such as AI and big data analytics across various sectors, enhancing productivity and innovation.<sup>22</sup>

Despite the economic benefits for the financial industry and to the national economy, cloud adoption in South Korea remains slow. According to the Asian Development Bank's (ADB) 2023 report on Cloud Computing Policies and Economic Impacts in Asia and the Pacific, South Korea's spend on cloud services in 2023 was only 0.29% of its GDP, trailing behind counterparts like Singapore and New Zealand, whose total cloud spend was 0.8% of their GDP,<sup>23</sup> and similarly, Australia and Japan dedicated 0.3%-0.5% of their GDP to cloud services.<sup>24</sup>

With network separation limitations on the use of cloud technologies, South Korean financial institutions appear not to be leveraging the potential economic advantages of cloud adoption, such as operational cost reduction and operational efficiency. Moreover, the country fails to capitalize on the potential GDP contribution from increased spending on cloud services by financial institutions, and spillover effects from new product development and incubation of new startups and enterprises which focus on designing and delivering cloud services.<sup>25</sup>

### 1.3 Recent Developments in Reviewing the Network Separation Regulation

In April 2024, the FSC organized a first meeting with the Financial Sector Network Separation Task Force (the Task Force) to review the network separation regulation and discuss approaches which could be adopted to improve the enforcement of the rule.<sup>26</sup> The Task Force is considering rationalizing the network separation requirement for information systems that handle non-financial transactions i.e., those that do not involve core activities such as loan, deposit, transaction, remittance, financial information inquiry, and currency exchange.<sup>27</sup> Together with the FSC and FSS, the Task Force plans to compile a "Financial Sector Network Separation Regulation Rationalization Plan" to address above issues resulting from the network separation rule and provide recommendations on follow-up measures.<sup>28</sup>

Furthermore, the NIS is managing the Public-Private Joint Network Security Policy Enhancement Task Force, which includes representatives from industry, academia, and key government stakeholders from the Presidential Office, the Presidential Committee on the Digital Platform Government, and the PIPC. This Task Force is reviewing the network separation requirement from a whole-of-society perspective and preparing to introduce the concepts of multi-level security (MLS) and zero trust as partial alternatives for network separation in information systems of lower security importance.<sup>29</sup> In concert with these efforts, the NIS launched a new MLS Task Force to prepare a roadmap to classify data into three levels of information

<sup>20</sup><https://assets.kpmg.com/content/dam/kpmg/pdf/2015/11/cloud-economics.pdf>

<sup>21</sup>[https://cdn.accesspartnership.com/wp-content/uploads/2023/01/unlocking-south-koreas-digital-potential\\_english.pdf](https://cdn.accesspartnership.com/wp-content/uploads/2023/01/unlocking-south-koreas-digital-potential_english.pdf)

<sup>22</sup>[https://cdn.accesspartnership.com/wp-content/uploads/2023/01/unlocking-south-koreas-digital-potential\\_english.pdf](https://cdn.accesspartnership.com/wp-content/uploads/2023/01/unlocking-south-koreas-digital-potential_english.pdf)

<sup>23</sup><https://www.adb.org/sites/default/files/publication/940926/adb-cloud-computing-policies-and-their-economic-impacts-asia-and-pacific-2nd-rev.pdf>

<sup>24</sup><https://www.adb.org/sites/default/files/publication/940926/adb-cloud-computing-policies-and-their-economic-impacts-asia-and-pacific-2nd-rev.pdf>

<sup>25</sup><https://www.adb.org/sites/default/files/publication/940926/adb-cloud-computing-policies-and-their-economic-impacts-asia-and-pacific-2nd-rev.pdf>

<sup>26</sup><https://www.fsc.go.kr/no010101/82108>

<sup>27</sup>[https://www.kita.net/board/totalTradeNewsDetail.do;JSESSIONID\\_KITA=A2233090479A64D08A47A7EE15AC8264.Hyper?no=83077&siteId=1](https://www.kita.net/board/totalTradeNewsDetail.do;JSESSIONID_KITA=A2233090479A64D08A47A7EE15AC8264.Hyper?no=83077&siteId=1)

<sup>28</sup><https://www.fnnews.com/news/202401111819275347>

<sup>29</sup><https://www.etnews.com/20240124000238>

systems with differential security requirements: 1) Classified (C); 2) Sensitive (S); and 3) Open (O). The roadmap is slated for release in September 2024, signalling a transition towards more reasonable and technologically advanced security systems for all public data.<sup>30</sup>

Given recent developments, the report proposes that the Financial Sector Network Separation Task Force take a nuanced approach to network separation regulation. This strategy would empower financial institutions to capitalize on the numerous advantages stemming from the adoption of technologies, notably cloud and SaaS, all while maintaining robust cybersecurity measures. Moreover, such an approach would drive forward South Korea's digital economy by fostering technological advancements in the financial sector and facilitating seamless cross-border data flow with other nations.

This report will further provide recommendations on changes which can be adopted to fulfill the objectives of the regulation while creating an enabling environment for financial institutions, as well as vendors and businesses involved to seamlessly operate in South Korea.

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<sup>30</sup><https://www.etnews.com/20240401000299>

## Chapter 2: The network separation regulation does not optimize the benefits offered by cloud services, particularly SaaS, leading to inefficiencies in business operations and diminished competitiveness

### 2.1 SaaS is widely used in the financial sector globally, effectively meeting various industry needs

In contrast to the restrictions on cloud technology use that the financial sector in South Korea faced with the network separation regulation, the financial sector worldwide is being revolutionized by the global adoption of cloud services. Capgemini's World Cloud Report – Financial Services 2023 showed that more than 91% of financial institutions surveyed reported to have partially or completed cloud adoption,<sup>31</sup> including integration with SaaS. This demonstrates that cloud and SaaS have become indispensable tools for financial institutions, offering numerous advantages such as enhanced efficiency, cost savings, improved security, and higher customer service standards.

In this section, the report will outline different types of SaaS available, and the multifaceted benefits that they offer to the financial institutions using a matrix of cloud technologies, such as:

- **Customer Relationship Management (CRM)** systems play a critical role in financial institutions by streamlining customer data management, automating sales processes, and enabling sophisticated marketing campaigns. Financial institutions can manage customer information efficiently, gaining a comprehensive view of customer interactions which helps in delivering personalized services. Sales automation and marketing tools within CRMs aid in tracking leads, managing pipelines, and analyzing campaign performance, ultimately enhancing customer engagement. For customers, CRM systems translate to personalized financial advice, tailored offers, and quicker resolution of service issues through integrated support tools like chatbots, ticketing systems, and instant communication access to support and advisory services.
- **Cloud storage solutions** offer secure and scalable data storage for financial institutions, ensuring that vast amounts of data are stored with robust encryption and compliance with regulatory standards. This scalability is essential for handling the ever-increasing volumes of financial data without significant investments in physical infrastructure, resulting in cost efficiencies. Customers benefit from these storage solutions through secure and convenient access to their financial documents and statements, as well as reliable data backup services that protect against data loss.
- **Collaboration tools** support financial institutions by enhancing project management, secure document sharing, and fostering remote work environments. These tools ensure that projects and workflows are managed efficiently, with real-time collaboration among team members, leading to timely project completion and increased productivity. Examples of such tools include messenger, videoconferencing, and office software.
- **Enterprise Resource Planning (ERP)** allows financial institutions to better manage their internal business functions by allowing employees to have access to a single shared database. Financial institutions can then utilize the database for various activities, including human resources management, finance accounting, contract management, performance management, amongst others. This system enables financial institutions to enhance collaboration, improve business insights and increase compliance with improved data integrity.

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<sup>31</sup><https://www.etnews.com/20240401000299>

- **Other internal services** enable financial institutions to have a range of SaaS functions that enable financial institutions to better deliver different services. These include marketing analysis to support marketing campaigns, internal training management software, survey tools, amongst others.
- **Security management** tools allow financial institutions to enhance their data security and manage system security health. These tools include data encryption, data classification, data restoration, permissions, and controls management.
- **IT development and operation** enable financial institutions to create custom applications to fulfil internal business needs and development. Financial institutions can use such tools for prototyping, testing, and deploying applications.
- **Artificial Intelligence (AI) and Machine Learning (ML) platforms** are increasingly utilized by financial institutions to offer predictive analytics, process automation, and personalized financial services. AI helps in predicting market trends and customer behaviors, which can guide strategic decisions and product offerings. Portfolio optimization and robo-advisor are some of the new areas in which financial institutions seek to build new capabilities. For customers, AI-driven services provide more tailored financial products and an enhanced overall experience, making interactions with financial institutions more intuitive and efficient.

## 2.2 Depending on their impact and placement of application, cloud-based services in the financial sector can be categorized into operational optimizers, change catalysts, service streamliners, and experience elevators

The various impacts and relationships of SaaS in the financial sector can be effectively visualized through the following matrix:

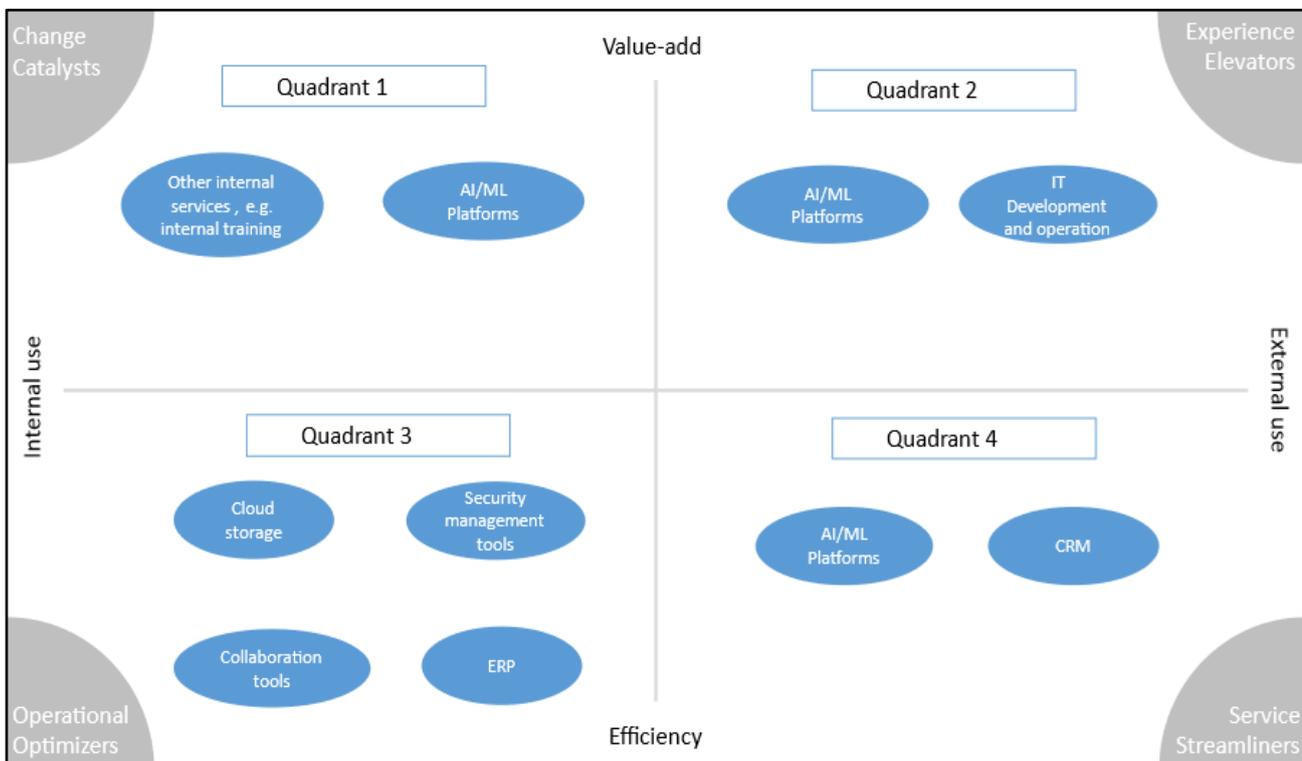


Figure 1: Impact of SaaS on the Financial Sector

- **Horizontal 'Internal use vs. External use' axis:** This axis distinguishes between cloud services used within the organization and those that directly interface with customers. Services for internal use enhance internal operations, such as ERP, collaboration tools, security management tools. On

the other hand, services for external use directly impact customer interactions and experiences, such as CRM, IT development and operation, AI/ML platforms.

- **Vertical ‘Efficiency vs. Value-add’ axis:** This axis differentiates between services that primarily improve operational efficiency and those that add significant value to the business or customer experience. Services that streamline operations, reduce costs, and improve speed and accuracy of processes are categorized as those impacting the overall efficiency of a financial institution and can include cloud storage, automated accounting, and risk management tools. Services that focus on value-add are more aligned to level up the overall value proposition to customers and the business in an innovative manner, whether it be through personalized financial advice, enhanced customer support, and innovative financial products.

Along these axes fall several SaaS based on their primary contribution and benefits to financial institutions.

- **Quadrant 1 Change Catalysts:** Financial institutions can utilize internal SaaS to derive deep insights for strategic decision-making. For example, financial institutions can make use of analytics provided by AI/ML platforms to guide product offerings. Further, internal services tools, such as training platforms, can help employees acquire new skills and knowledge to adapt to changes in the financial market.
- **Quadrant 2 Experience Elevators:** Cloud-based services such as IT development and operations tools, as well as AI/ML platforms can help financial institutions to elevate their product and service offerings to customers, thereby elevating their experience. For instance, financial institutions can use IT development and operational tools to prototype, develop and test customized applications to better service the needs of customers.
- **Quadrant 3 Operational Optimizers:** Internal collaboration tools such as cloud storage, collaboration tools, ERP and security management all serve to lower operational costs and improve operational efficiency. For instance, ERP enables financial institutions to have a holistic view of their internal data, and manage business functions such as human resources, accounting and financial planning based on a “single source of truth” without referring to multiple databases.
- **Quadrant 4 Service Streamliners:** Service streamliners include tools such as AI/ML platforms and CRM. These tools serve as essential platforms to improve services provided to customers by financial institutions. For instance, CRM can help financial institutions manage customer data, automate sales processes, and customize financial products and services based on customer data. As such, among various SaaS services, CRM is often the most frequently mentioned as the primary focus of cloud adoption by financial institutions, due to its consumer-focused purpose that directly impacts customer service, which leads to a better retention rate and greater sales.<sup>32</sup>

## 2.3 The network separation regulation leads to weakened incentives for innovation and diminished competitiveness

Although the preceding section illustrates the availability of various SaaS services and the significant benefits that financial institutions can derive from their adoption, they are nonetheless restricted from utilizing SaaS due to the network separation regulation.<sup>33</sup>

In June 2023, we note that the FSC introduced a regulatory sandbox to enable financial institutions to use SaaS offered by cloud service providers. However, participating financial institutions were only allowed to

<sup>32</sup><https://www.aba.com/-/media/documents/industry-insights/2021-endorsed-crowe-cloud-survey.pdf?rev=a6abbefe8b2543ba9d10fc70519816bb>

<sup>33</sup><https://www.lawtimes.co.kr/LawFirm-NewsLetter/189769>

use SaaS for non-critical services, excluding those that process “customers’ personal information, credit information and transaction information”.<sup>34</sup>

The following summarizes the list of SaaS services for use by financial institutions:<sup>35</sup>

Classification	SaaS
Allowed	Collaboration tools
	ERP
	Other internal services
Not allowed	Security management
	IT development and operation
	CRM

Table 1: List of permissible SaaS to for use by financial institutions under the regulatory sandbox introduced by the FSC

We note that with the restrictions around the network separation regulation, South Korea’s financial sector appears to be disadvantaging itself and missing out on the opportunities and benefits promised by Service Streamliner- and Experience Elevator-type SaaS. While the current regulatory sandbox is a first step in opening the door to a select few services that operate at the back end of financial institutions, it excludes a host of cloud and SaaS services that could directly impact the level and quality of services provided to and experienced by South Korean citizens, such as those highlighted in green in the following matrix:

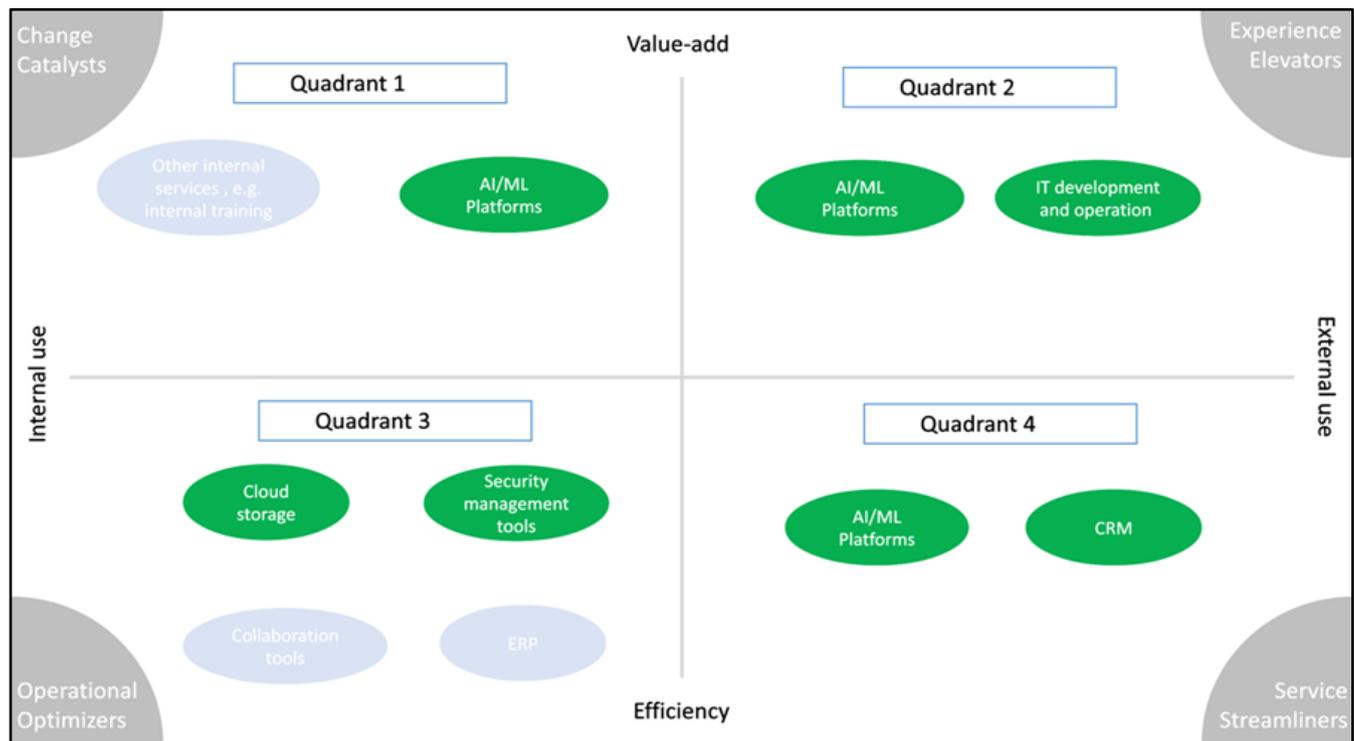


Figure 2: South Korea SaaS Impact on the Financial Sector

As noted earlier, cloud computing and particularly SaaS offers numerous benefits to both financial institutions and their customers. For example, Accenture’s Banking Cloud Altimeter 2022 noted that approximately 79% of surveyed banks have partially migrated their enterprise applications to the cloud, encompassing systems for IT management and operations, collaboration, CRM, and ERP.<sup>36</sup> The adoption

<sup>34</sup><https://www.lawtimes.co.kr/LawFirm-NewsLetter/189769>

<sup>35</sup><https://www.lawtimes.co.kr/LawFirm-NewsLetter/189769>

<sup>36</sup><https://www.accenture.com/content/dam/accenture/final/industry/banking/document/Accenture-Banking-Cloud-Altimeter-Volume-6.pdf>

and migration to the cloud enabled financial institutions to reduce IT infrastructure costs by up to 30% and app development and maintenance costs by 50%.<sup>37</sup> Furthermore, a study found that almost half of the companies that leveraged CRM and its advanced data analytics saw a decrease in fraud cases.<sup>38</sup> Enhanced security, in combination with personalized experiences, facilitates greater customer satisfaction and bolsters customer loyalty.

South Korea's current network separation rule reduces the financial institution's ability to access such benefits and efficiencies. It imposes a one-size-fits-all approach, and inadvertently restricts the innovative use of a host of cloud technologies particularly SaaS applications due to ambiguous classifications. Without a more nuanced approach towards regulation, financial institutions will continue to encounter obstacles in their digital transformation efforts, impacting South Korea's competitiveness as more institutions worldwide transition to the cloud.

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<sup>37</sup><https://www.bankingly.com/news/how-can-cloud-computing-save-banks-billions/>

<sup>38</sup><https://www.businessnext.com/blogs/saas-crm-in-the-financial-sector/>

## Chapter 3: Recommendations for a more nuanced approach to network separation, balancing security with growth and innovation using cloud technologies

### 3.1 Introduce risk-based network separation regulation

In order to ensure that the existing network separation regulation can balance between security and growth and innovation, we propose that the Financial Sector Network Separation Task Force could consider adopting a **risk-based approach to enforce network separation on information systems that handle material and sensitive data**. This will allow financial institutions to integrate SaaS to systems that are not restricted by the network separation rule.

In addition, the Taskforce can also consider formulating guidelines and requirements to ensure that SaaS used by financial institutions align with the FSC's security, compliance and operational requirements. Some suggested approaches include:

#### 3.1.1 Risk assessment and identification

The FSC can empower financial institutions to conduct risk assessments on SaaS and enforce effective risk management procedures through formulating relevant requirements and guidelines. For example, in the Hong Kong Monetary Authority's Guidance on Cloud Computing, financial institutions are advised to identify, monitor and mitigate specific risks posed by cloud computing and third-party service providers.<sup>39</sup>

#### 3.1.2 Service level agreements (SLA) and contracts

The FSC can develop provisions in SLAs and contracts for financial institutions to ensure that they include terms that address pertinent issues such as data protection, privacy, audits and security assessments. For instance, in Japan's Security Guidelines on Computer Systems for Financial Institutions by the Center for Financial Industry Information Systems (FISC Guidelines), the Financial Services Agency (FSA) included provisions which require cloud service providers to disclose information to financial institutions in the event of increased risk of information leakage, and in the event that cloud service providers' internal controls have weakened.<sup>40</sup>

### 3.2 Implement regulatory agility

Moreover, the Financial Sector Network Separation Task Force could contemplate implementing regulatory agility into the network separation rule through periodic reviews and updates. This approach can help the FSC and the Taskforce regularly solicit feedback from industry players, including cloud service providers, and prevent the regulation from being overly prescriptive. It would also facilitate a balance in accommodating new innovations necessary for financial institutions.

- For example, the Monetary Authority of Singapore (MAS) has established various collaborative mechanisms to gather input from key industry players in both financial and technology sectors. These efforts aim to assess the implications and risks of new technologies on financial institutions. For instance, the Veritas initiative, launched in 2019, involves collaboration with stakeholders to develop toolkits and approaches that financial institutions can use to adopt MAS's Fairness, Ethics, Accountability and Transparency (FEAT) principles when using AI and data analytics.<sup>41</sup> MAS also

<sup>39</sup><https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2022/20220831e1.pdf>

<sup>40</sup><https://www.fisc.or.jp/english/>

<sup>41</sup><https://www.mas.gov.sg/-/media/mas/news/media-releases/2023/executive-summary---emerging-risks-and-opportunities-of-generative-ai-for-banks.pdf>

initiated an industry-led whitepaper which sets out the private sector’s perspective of the risks of generative AI, and key decisions about “architecture and infrastructure” that financial institutions need to consider when adopting generative AI.<sup>42</sup>

### **3.3 Allow flexibility in cybersecurity management that adopt international cybersecurity standards**

Furthermore, the Financial Sector Network Separation Task Force can collaborate with the Presidential Committee on Digital Platform Government, and the Public-Private Joint Network Security Policy Enhancement Task Force, overseen by NIS, to jointly reassess the network separation requirement. They could also explore alternative cybersecurity management approaches for information systems with lower security priorities, such as those that do not handle material or sensitive data. The Public-Private Joint Network Security Policy Enhancement Task Force has suggested various alternative approaches, such as multi-level security (MLS) and zero trust.<sup>43</sup>

The Financial Sector Network Separation Task Force can also advocate for the adoption of international cybersecurity best practices commonly employed by cloud service providers and SaaS providers. These practices may include standards such as:

- ISO 27001, which offers guidance for organizations in establishing, implementing, maintaining, and improving information security systems,<sup>44</sup>
- ISO 27017, which provides guidelines for information security controls in the provision and use of cloud services,<sup>45</sup>
- NIST Privacy Framework and Cybersecurity Framework to NIST Special Publication 800-53, Revision 5 Crosswalk.<sup>46</sup>

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<sup>42</sup><https://www.mas.gov.sg/-/media/mas/news/media-releases/2023/executive-summary---emerging-risks-and-opportunities-of-generative-ai-for-banks.pdf>

<sup>43</sup><https://m.etnews.com/20240124000238>

<sup>44</sup><https://www.iso.org/standard/27001>

<sup>45</sup><https://www.iso.org/standard/43757.html>

<sup>46</sup><https://www.nist.gov/privacy-framework/nist-privacy-framework-and-cybersecurity-framework-nist-special-publication-800-53>

## Chapter 4: Conclusion

The "Financial Sector Network Separation Regulation Rationalization Plan" to be announced in June 2024 by the Financial Sector Network Separation Task Force<sup>47</sup> signifies a positive proactive move by the South Korean government to evaluate the enforcement of the network separation regulation.

As previously discussed, over the past decade since the implementation of the network separation rule, financial institutions have observed that the regulation poses a significant regulatory obstacle for the industry to leverage the advantages of technologies. Furthermore, the rule has affected the competitiveness of South Korea's financial sector - and their clients - by hindering the pace of technological adoption and presenting challenges in aligning with the global push for cross-border data flow.

To strike a balance between innovation, growth, and security, **it is important that the Financial Sector Network Separation Task Force, alongside other related stakeholders, adopt a more *nuanced approach* to enforcing network separation.** Some recommendations outlined above include

- developing a risk-based approach to network separation,
- implement regulatory agility to factor in industry feedback and technological advancements, and
- adopting cybersecurity practices and standards that can supplement or replace the network separation regulation for information systems that do not handle sensitive or material data.

The ACCA and our members welcome opportunities for direct engagements with the FSC, the Financial Sector Network Separation Task Force and other relevant stakeholders to discuss our position and recommendations.

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<sup>47</sup><https://www.mk.co.kr/en/economy/10989209>

The ACCA is the apex industry association representing the stakeholders of the cloud computing ecosystem in Asia Pacific. Its mission is to accelerate adoption of cloud computing in Asia by creating a trusted and compelling market environment and a safe and consistent regulatory environment for cloud computing products and services.

The association works to ensure that the interests of the cloud computing community are effectively represented in the public policy debate. Drawing on subject-matter expertise from member companies, expert working groups, and special interest groups, it develops best practice recommendations and other thought leadership materials.

To find out more on how to join us, email [secretariat@asiacloudcomputing.org](mailto:secretariat@asiacloudcomputing.org), or visit our website at [www.asiacloudcomputing.org](http://www.asiacloudcomputing.org)

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