

Exploring the Role and Function of TDCC in the Securities Market from the Perspective of Open Finance Trends"

Abstract

I. Research Motivation

The open finance data discussed in this paper refers to financial data accessed and utilized by third-party service providers (TSPs) outside of the financial industry and investors, with the consent of consumers, through application programming interfaces (APIs), and even conducting financial transactions.

With various countries progressively promoting 'open banking' policies, the opening of securities data seems foreseeable. As the backend financial infrastructure of Taiwan's capital market, the TDCC is mandated to enhance the infrastructure and backend services of the securities market to provide diversified and secure innovative services. Therefore, this study intends to explore the role that TDCC can play within the framework of open finance, considering the experiences of open banking initiatives in various countries and the current development status in Taiwan. The feasibility of opening securities data will be discussed to maximize the benefits for the financial industry.

II. Conclusion and Recommendations

The open finance discussed in this paper refers to financial institutions providing financial data to third-party service providers (TSPs) via APIs with the consent of consumers, creating a consumer-centric ecosystem. This integrates diverse consumer needs across various application scenarios. The study concludes with the following conclusions and recommendations:

1. Conclusions on the Current Status and Planning of Development in Taiwan and Internationally:

- (1) The concept of data portability facilitates the promotion of data openness

The development of open finance is predicated on the discourse of consumer empowerment, whereby consumers have the right to take their data away or provide it to other institutions in machine-readable formats. However, there is currently no explicit regulation in Taiwan that establishes consumer empowerment. Banks still have the discretion to decide whether to comply with customer

instructions. If a bank refuses to transfer data to a third party on behalf of a customer, the customer can request the bank to provide the personal data collected and then provide it to another third party by oneself.

However, with the rise in consumer awareness, if consumers have to provide data to third parties themselves, digital financial services may encounter process disruptions and a decline in digital service quality. This could even affect the feasibility of developing new business models and hinder the possibility of financial innovation. Therefore, based on the awakening consumer consciousness, promoting the application scenarios of open finance through market-driven mechanisms may increase the willingness of financial institutions to open up data.

- (2) Whether through 'government mandates' or 'market-driven' open finance has become a prevailing trend

In the UK, the government adopted a "government mandate" approach through the Retail Banking Market Investigation Order, requiring nine major banks to establish the Open Banking Implementation Entity (OBIE) and to develop API rules for providing data to TSPs. This approach involves legislating to compel financial institutions to open customer data. On the other hand, Singapore issued guidance handbooks to serve as the basis for market-driven promotion of open finance. This "market-driven" approach entails financial institutions voluntarily participating based on their business models or consumer demands. Taiwan, Hong Kong, and other Asian countries also adopt this approach for promoting open finance.

Whether through 'government mandates' or 'market-driven' approaches, the promotion of open finance, as evidenced by the achievements in the UK and Singapore, has led to the opening of numerous types of APIs. These APIs provide opportunities for fintech companies to innovate and create diverse application scenarios, benefiting consumers. This indicates that open finance has indeed become a prevailing trend.

- (3) The establishment of common cybersecurity standards contributes to the promotion of open finance

After data is opened, the most crucial aspect is ensuring the security of the data to prevent incidents such as personal data leaks.

Therefore, the establishment of dedicated institutions to set cybersecurity standards that TSPs must adhere to is essential. According to the pioneering countries in open banking as summarized in this study, the UK has established dedicated institutions responsible for setting cybersecurity standards. In contrast, other countries mostly rely on financial institutions to set cybersecurity standards for TSPs to comply with and evaluate whether to collaborate with them. Taking the current development of open banking in Taiwan as an example, financial institutions are also responsible for setting cybersecurity standards that TSPs must comply with. Therefore, financial institutions tend to adopt a more cautious attitude when selecting TSP partners, which can also increase the cooperation threshold for TSPs.

- (4) The robustness of digital infrastructure will serve as the foundation for the development of open finance

Open finance involves the release of consumer data from financial institutions to various entities within the ecosystem, including data providers (financial institutions), data recipients (TSPs, SMEs), and data owners, all interconnected to exchange data. Therefore, there is a need for common API specifications and other technical standards for data providers and recipients to follow, improving operational efficiency and reducing implementation costs. In Taiwan, the Financial Information Service Co., Ltd. (FISC) has established the "Open API Management Platform" to facilitate information transmission between banks and TSPs, enhancing cooperation efficiency and reducing integration costs and information security maintenance.

- (5) The management mechanism of TSPs is crucial to the success or failure of the open finance ecosystem

The management mechanism of TSPs has indeed become a critical factor in the success or failure of open finance initiatives. However, if the qualification criteria and security management standards for TSPs are overly stringent, it could raise the cost threshold for collaboration between TSPs and banks, making it difficult for TSPs to operate and innovate in the financial environment. On the other hand, if the review standards are too lax, it could increase the risk of personal data leaks. Therefore, striking the right balance in the review standards is crucial to fostering a healthy and innovative

open finance ecosystem while also safeguarding data security and privacy.

2. In response to the aforementioned challenges, this study proposes the following recommendations:

(1) The establishment of secure and convenient online identity verification is a top priority

The identity verification method proposed in this paper involves securities firms connecting to the Taiwan Depository & Clearing Corporation (TDCC) through APIs when their clients open accounts online. This connection would enable the securities firms to confirm whether the client has previously opened a securities account with the TDCC. This could serve as an option to assist securities firms in conducting identity verification for account opening. However, the feasibility of such a plan, including the legal framework and operational procedures, would need to be further discussed and researched in collaboration with relevant authorities.

(2) Enhancing information disclosure through collaboration between financial institutions and TSPs

The current open banking system in Taiwan does not have a mechanism for tiered management of TSPs. Instead, individual banks negotiate cooperation with TSPs and submit proposals for approval on a case-by-case basis. If Taiwan could strengthen the transparency of information between financial institutions and TSPs and disclose details regarding business structures, data scope, information security, and personal data protection, it could accelerate the matching opportunities between financial institutions and TSPs. It would also assist consumers in choosing services provided by compliant TSPs more easily. In line with the FSC's roadmap for fintech development, future disclosures will include basic information about TSPs and financial institutions, as well as details about collaborative business projects. This is expected to facilitate the promotion of open finance in Taiwan and enhance information transparency.

(3) The promotion of open finance should proceed gradually

The development of open finance aims to enhance market efficiency. However, throughout the development process, it's essential to consider whether related technological innovations have any adverse effects on consumers, the overall market, and participants'

stability and risk management. For example, issues related to identity verification and anti-money laundering mechanisms should be managed appropriately. Additionally, fintech services often involve data utilization, and various types of data may have different attributes. Therefore, it may be advisable to study the feasibility of data classification and tiered management before establishing appropriate standard procedures and regulations for data openness. This approach would help gradually promote data openness in open finance while addressing potential risks and ensuring stability.

Therefore, in promoting open finance in Taiwan, it is advisable to carefully consider issues such as participant roles, data categories, and risk management. Afterward, feasible steps, processes, and standards should be established, taking into account factors such as the impact on consumers or market competition. Subsequently, the promotion should proceed gradually and systematically, ensuring that potential risks are addressed while fostering innovation and efficiency in the financial sector.

(4) Harnessing collective wisdom to create business models

Observing that many current TSPs are small startup teams, their service models primarily focus on providing financial data integration and comparison. These models tend to be relatively simplistic. If non-financial data from consumer lifestyle, healthcare, and other industries could be integrated into the open finance ecosystem, it could potentially stimulate diverse and enriched business models, leading to higher efficiency and benefits.

Therefore, if experienced, creative, and innovative representatives from various industries could be gathered to brainstorm and discuss data utilization, it could lead to the creation of unexpected business models. The government has also launched various hackathon events, including the PRESIDENTIAL HACKATHON and EDUATHON. By harnessing collective intelligence through these events, we can expect the emergence of more diverse business models in the future.