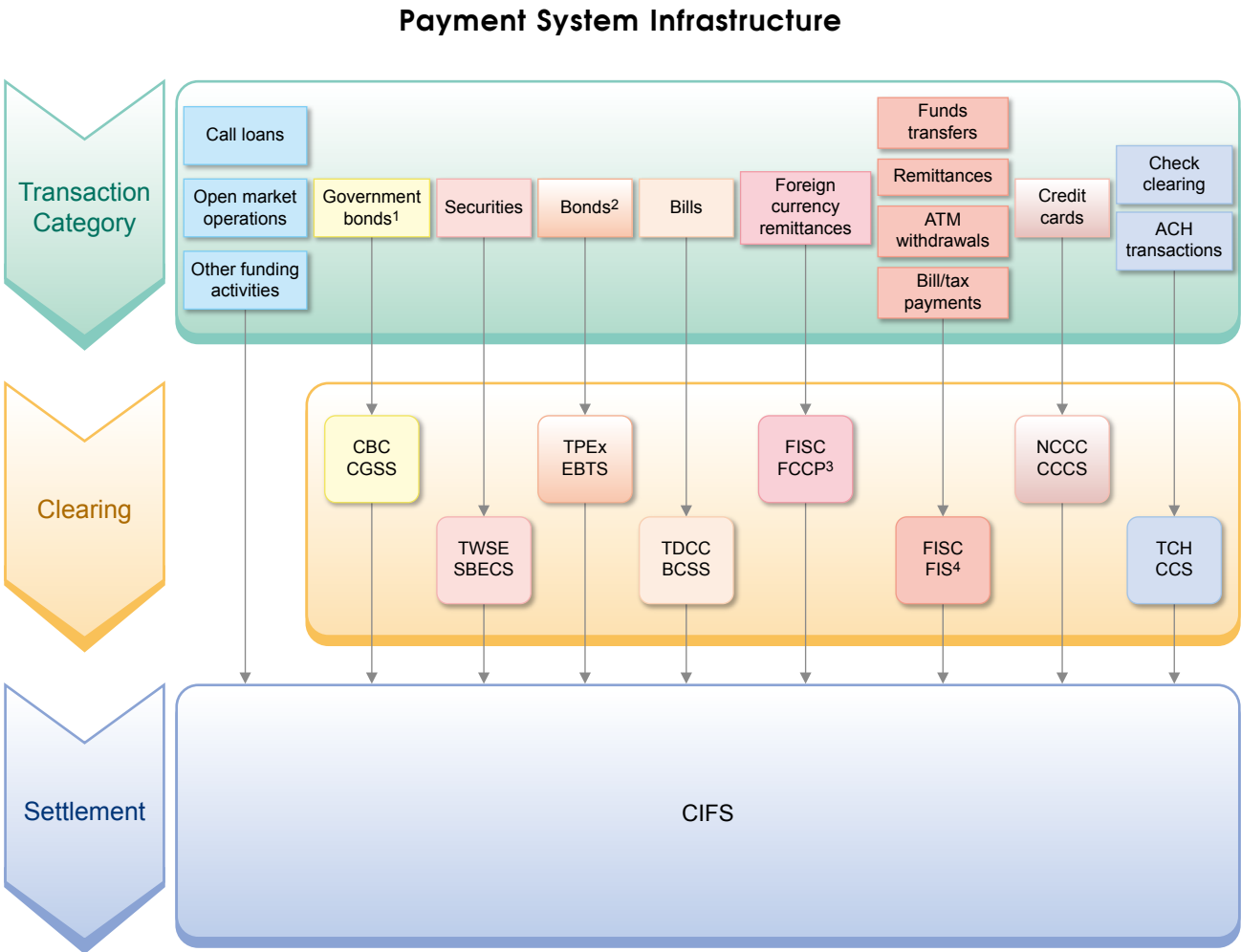


4. Payment and Settlement Systems

The Bank plays a crucial role in the functioning of Taiwan's payment and settlement systems, and operates the CBC Interbank Funds Transfer System (CIFS) and the Central Government Securities Settlement System (CGSS).

The CIFS serves as the hub of Taiwan's payment and settlement systems, linking the interbank clearing systems operated by the FISC, the Taiwan Clearing House (TCH), the National Credit Card Center of R.O.C. (NCCC), the Taiwan Depository and Clearing Corporation (TDCC), the TPEX, and the TWSE, as well as the CGSS, together to construct a comprehensive system.



Notes: 1. Including DVP settlements for interbank transactions of central government bonds and treasury bills.
2. Including netting settlements for outright trades of government bonds, corporate bonds, and bank debentures.
3. The CIFS is responsible for settlements involving NT dollars, while settlements involving foreign currencies are performed by designated commercial banks.
4. The FISC's Financial Information System (FIS) has successively provided fast payment services on a 24/7/365 basis since 1991.
Source: Department of Banking, CBC.

Among Taiwan's payment and settlement systems, the Financial Information System (FIS), operated by the FISC, serves as Taiwan's retail fast payment system. Through the CIFS, financial institutions may pre-allocate funds from their A reserve accounts held with the Bank to the Interbank Funds Transfer Guarantee Special Account,⁷ providing a guarantee for the real-time, transaction-by-transaction clearing and settlement of interbank payment transactions processed via the FIS.

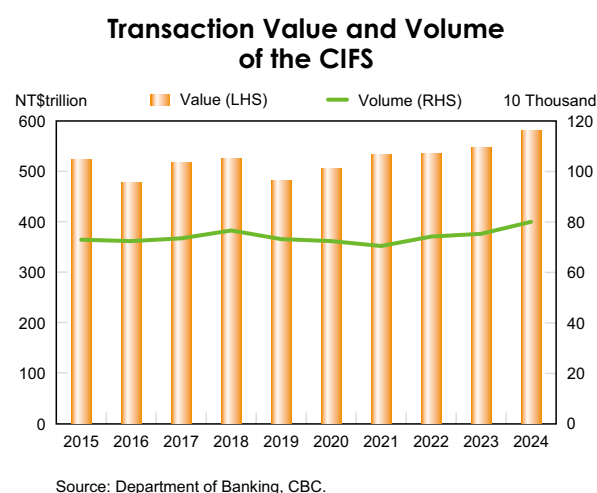
In addition, the Bank monitors major payment systems based on the *Principles for Financial Market Infrastructures* released by the Bank for International Settlements (BIS) to ensure sound operation of these systems and to promote stability of the financial system.

Operation of Payment and Settlement Systems

(1) Funds Transfers via the CIFS

As a large-value electronic funds transfer system, the CIFS not only deals with interbank funding, open market operations, and funds settlements in financial markets, but also provides interbank final settlement services for each clearing institution.

At the end of 2024, there were 85 participants of the CIFS, which included 70 banks, eight bills finance companies, Chunghwa Post, and six clearing institutions, namely the FISC, the TCH, the TDCC, the TWSE, the TPEx, and the NCCC. In 2024, the number of transactions via the CIFS was 803,008, and the amount of funds transferred totaled NT\$582 trillion. Meanwhile, the daily average number of transactions via the CIFS was 3,278, increasing by 7.51% over the previous year, and the daily average amount of funds transferred was around NT\$2.4 trillion, rising by 7.28% from a year before.



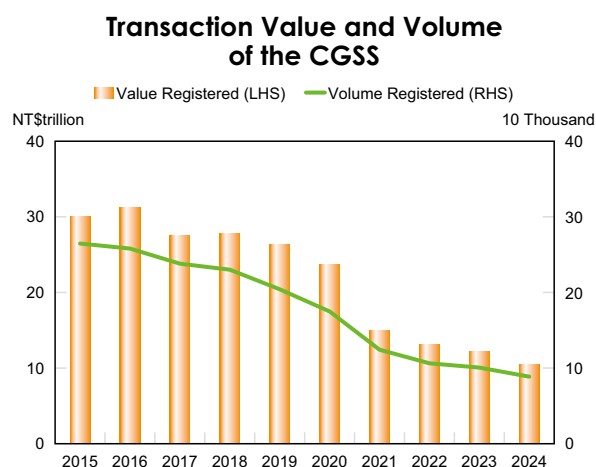
(2) Transactions via the CGSS

Established in September 1997, the CGSS is a system for issuance, transfer, redemption, and interest payment of book-entry central government securities. Since its inception, central government bonds have been issued in book-entry form. Treasury bills were included in this system in October 2001 and have been issued in book-entry form ever since.

⁷ To deal with the clearing and settlement of retail interbank payment transactions, the Bank agrees that all banks shall jointly open an Interbank Funds Transfer Guarantee Special Account at the Bank. It is a collective account consisting of individual sub-accounts designated for each participating bank.

Since April 2008, when the CGSS linked up with the CIFS, fund settlements, principal redemptions, and interest payments have been handled through the CIFS using a DVP mode. The DVP mode, promoted by the BIS, is an arrangement in a securities settlement system to ensure that securities delivery occurs at the same time as the funds transfer, effectively eliminating potential principal risk during the transaction process.

As of the end of 2024, there were 20 clearing banks with 1,666 branches that handled the registration of central government securities transfers. Transaction value and volume of the CGSS in 2024 were NT\$10.3 trillion and 89 thousand transfers, respectively.



Oversight of Payment and Settlement Systems

To ensure sound operation of domestic payment and settlement systems, the Bank conducted the following oversight activities in 2024:

(1) Monitoring the Operation of the Large-Value Payment Systems

The Bank continued to monitor the operation of the large-value payment systems in 2024, and required improvement by those participating institutions which applied for the CIFS operation time extensions because of system malfunctions or other contingencies.

(2) Requiring Payment Institutions to Submit Information on Payment Business

Payment system operators and electronic payment institutions were required by the Bank to submit information about their operations and activities on a regular basis. The Bank also kept close watch on the progress of innovative services in the payment industry, and assisted in providing sound retail payment infrastructure.

(3) Supervising Contingency Drills Performed by Clearing Institutions

To ensure business continuity of payment and settlement systems, the Bank supervised clearing institutions enhancing measures for sustaining core business operations under disaster scenarios, including implementing manual backup mechanisms when system malfunctions occur. Furthermore, the Bank, together with participants of the CIFS, conducted drills for maintaining clearing and

settlement operations in the event of network disruptions, ensuring that the backup systems would be activated promptly and that relevant personnel are familiar with contingency procedures.

(4) Performing Backup Drills with Clearing Banks

Since 2019, the Bank has supervised all clearing banks performing backup drills in the event of malfunction or line interruption of a CGSS participant's mainframe system. In October 2024, this drill was conducted successfully with all clearing banks.

(5) Urging Bills Market Participants to Develop Contingency Mechanisms

The Bank urged participating institutions in the bills market to establish contingency mechanisms for disaster scenarios and enhance their capacity to cope with surges in short-term bill transactions resulting from unscheduled holidays, such as typhoon days off. In addition, the Bank instructed the TDCC and the R.O.C. Bills Finance Association to explore and implement institutional improvements, including promoting the automation of certain processes such as the registration of commercial paper for financing purposes (often referred to as CP2), contract note revisions, and deferred transaction processing, in order to improve settlement efficiency.

(6) Organizing Conferences to Enhance Payment System Operation

The Bank invites the FSC and clearing institutions to jointly hold two conferences on "Promoting Sound Operation of the Payment Systems" every year. The conferences are convened separately by type of clearing institution. In 2024, the May conference was held for securities clearing institutions such as the TDCC, the TPEX, and the TWSE, while the one in November was attended by payment clearing institutions including the FISC, the TCH, and the NCCC. During the conferences, the Bank urged clearing institutions to continuously reinforce the resilience of payment systems, conduct drills for manual backup procedures under extreme scenarios, and actively fulfill their role as financial market infrastructure by working with financial institutions to promote sustainable finance.

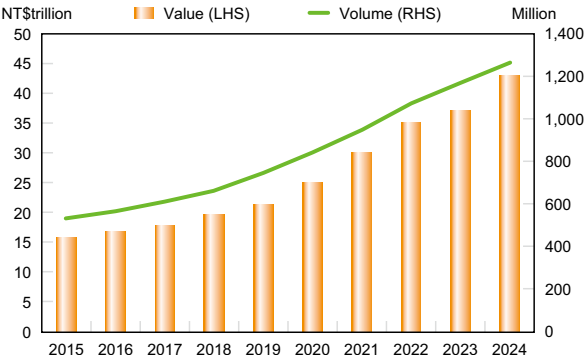
Urging FISC to Strengthen Retail Payment Infrastructure and Collaborate with Payment Service Providers in Promoting New Service Adoption

(1) Taiwan's retail payment system provides services such as interbank remittances, ATM withdrawals and transfers (including internet and mobile banking), shopping payments, and tax and bill payments. Except for the interbank remittance service, most of these services are available 24/7 through fast payment channels. With the widespread use of mobile phones and the internet, demand for instant payments continued to rise, resulting in steady year-on-year growth in

both the value and volume of retail fast payment transactions.

(2) To enhance information transmission and to facilitate transfer of funds between electronic payment institutions, as well as between electronic payment institutions and financial institutions, the Bank urged the FISC to continue promoting the participation of electronic payment institutions in the "Common Inter-Institutional Electronic Payment Platform." The platform currently provides services in four areas including funds transfer, tax e-payment, bill e-payment, and shopping e-payment.⁸

Transaction Value and Volume of Retail Fast Payments



Note: Retail fast payment transactions do not include interbank remittances which are not available on a 24/7 basis.
Source: FISC.

(3) To gradually address the fragmentation of Taiwan's retail payment market, the FISC collaborated with financial institutions and electronic payment institutions to introduce TWQR, a common QR code payment specification, on the "Common Platform for Electronic Payment Platform Institutions" in 2023. With TWQR, merchants and consumers can complete shopping payment by using one common QR code. In addition, to further foster a robust payment ecosystem in Taiwan, the Bank instructed the FISC to expand the application scenarios of TWQR. These efforts included developing a TWQR-based transit QR code for use in the transportation industry, which helps promote cross-sector interoperability and allows the public to pay for transit services via electronic payment or mobile banking apps. Moreover, the FISC worked with its Japanese and South Korean counterparts to roll out a TWQR-based cross-border shopping e-payment service.

Proceeding with the CBDC Research Project

- (1) In response to digital developments, CBDC has become a focus of international research in recent years. The Bank has also conducted relevant studies and experiments, such as completing the "wholesale CBDC technical feasibility study" in 2020 and the "retail CBDC technology experimentation" in 2022, and establishing the "CBDC prototype platform."
- (2) The Bank is currently undertaking three key tasks: continuing extensive communication, strengthening platform technology, and deliberating on the legal framework. Only upon completion of these tasks will the Bank evaluate the feasibility of launching a pilot program.

⁸ The 42 participating financial institutions have provided all four services, whereas electronic payment institutions provide the type(s) of service(s) they see fit. At the end of 2024, all nine electronic payment institutions have provided shopping e-payment services.

- A. Continuing extensive communication: To understand public demand for CBDC and opinions on related designs, a written opinion survey was completed in 2024, and the results were published on the Bank's official website.⁹ In 2025, the Bank plans to hold at least eight in-person engagement events, including public hearings, forums, and briefings, to further gather feedback and enhance public awareness of CBDC.
- B. Strengthening platform technology: To assess the feasibility of future implementation of the "CBDC prototype platform," the Bank is conducting a trial project focused on supporting fund payment and settlement operations involved in the issuance of digital vouchers by government agencies. Leveraging this platform's architecture, the Bank is developing a "digital public infrastructure fund flow platform" and linking it with the Ministry of Digital Affairs' "shared foundational platform for government disbursement" to facilitate the payment, clearing, and settlement of funds under various government disbursement programs. Moreover, in response to the growing trend of asset tokenization, the Bank is collaborating with participating banks to explore the feasibility of using wholesale CBDC to support asset tokenization technologies.
- C. Deliberating on the legal framework: In conjunction with the above initiatives, the Bank continues to monitor legal and regulatory developments in major economies. In addition, legal issues related to CBDC will be discussed with stakeholders during the planned in-person engagement events.

⁹ The results of the opinion survey are available (in Chinese only) at: <https://knowledge.cbc.gov.tw/front/references/inpage/D5766911-2329-EF11-9108-00505694F3B3>.