

## 5. Payment and Settlement Systems

The CBC Interbank Funds-Transfer System (CIFS) is the backbone of Taiwan's payment and settlement system, linking payment and remittance systems operated by the Financial Information Service Co., Ltd. (FISC), the Taiwan Clearing House (TCH), the National Credit Card Center of R.O.C. (NCCC), the Taiwan Depository and Clearing Corporation (TDCC), the Taipei Exchange (TPEX), and the Taiwan Stock Exchange Corporation (TWSE), as well as the Central Government Securities Settlement System (CGSS), together to construct a comprehensive system.

In addition, the CBC 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

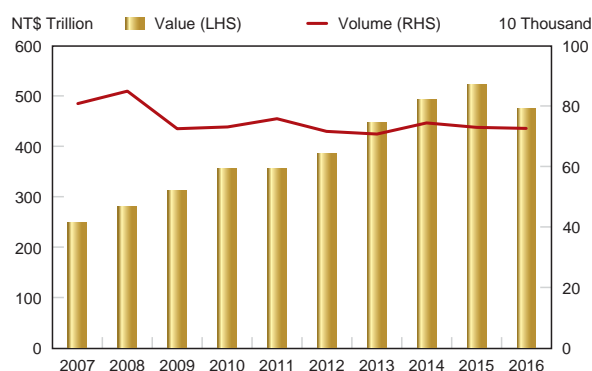
The CIFS is a large-value electronic funds-transfer system. In addition to dealing with interbank funding, reserve requirement adjustments and funds settlements in financial markets, the CIFS also provides interbank final settlement services to each clearing institution.

At the end of 2016, participants of the CIFS included 68 banks, eight bills finance companies, and seven other institutions including Chunghwa Post, Taipei Post Office, the FISC, the TCH, the TWSE, the TPEX, and the NCCC. In the year 2016, the number of transactions via the CIFS was 723,955, and the amount of funds transferred totaled NT\$477 trillion. Meanwhile, the daily average number of transactions via the CIFS reached 2,943, and the daily average amount of funds transferred was NT\$1,939 billion, decreasing by 8.97% over the previous year. The decline was primarily because the CBC reduced the issuance of short-term certificates of deposit (CDs), leading the maturities of CDs to extend.

#### (2) Transactions via the CGSS

The CGSS was established in September 1997. It 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

Transaction Value and Volume of the CIFS



Source: Department of Banking, CBC.

form. In October 2001, treasury bills were included in this system and have been issued in book-entry form ever since.

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

There were 17 clearing banks with 1,690 branches that handled the registration of central government securities transfers at the end of 2016. During 2016, 258,000 transfers with a total amount of NT\$31.2 trillion were processed by this system.

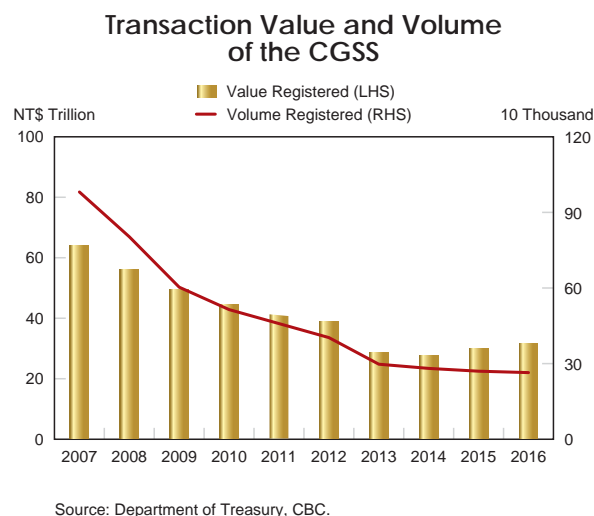
### Monitoring Payment and Settlement Systems

The CBC monitors the payment and settlement systems on a periodic basis to maintain their safety and efficiency. In 2016, the CBC's monitoring activities in this regard included the following:

- (1) Requiring payment system operators and payment instrument issuers to provide detailed information on their operations and activities as a basis for monitoring payment systems.
- (2) Supervising clearing institutions to perform regular drills on operating backup systems and implementing contingency plans in case of emergency to ensure business continuity.
- (3) Inviting the Financial Supervisory Commission and clearing institutions such as the FISC, the TDCC, and the TCH to jointly hold conferences on "Promoting Sound Operation of the Payment Systems" with themes of "How to Respond to the Possible Impacts and Challenges Posed by Financial Technology Development" in May and "Strengthening Information Security Management and Improving System Security and Efficiency" in November, in order to urge clearing institutions to better prepare for the impacts and challenges arising from the development of financial technology.

### Expanding the Foreign Currency Clearing Platform

To further reinforce Taiwan's payment systems, and in line with the establishment of the cross-strait RMB clearing mechanism, the CBC consigned the FISC in 2012 to set up a foreign currency



clearing platform. Domestic and cross-strait remittances in foreign currencies such as the US dollar and the renminbi can be settled directly through the platform, without being transferred to the third country (e.g., European countries, the U.S., or Hong Kong) for settlement.

The foreign currency clearing platform was launched in March 2013, and the functions of the platform were gradually expanded. Up to the end of 2015, remittances of the US dollar, the renminbi, the Japanese yen, and the euro were available on the platform. This platform was connected with offshore clearing systems in Mainland China, Japan, and the euro area to provide cross-border remittances. Furthermore, being linked up with the domestic central depositories and clearing systems enabled the platform to be connected with international depositories such as Euroclear and Clearstream to offer settlement service for international bonds. Progress achieved in the foreign currency clearing platform helped to facilitate the development of Taiwan's financial services industry. In 2016, the platform continued to be expanded with the new services below:

- (1) Domestic remittances of the Australian dollar were launched in October.
- (2) Foreign currency collection services were available from December.

### **Disclosing Results of Payment and Settlement System Assessment in Line with BIS Principles**

In order to ensure that Taiwan's payment and settlement systems comply with international standards, the CBC required the units in charge of operating major payment and settlement systems to conduct self-assessments against the Principles for Financial Market Infrastructures designed by the BIS. In 2016, the CBC started to request all participating units (including the Department of Banking of the CBC, the FISC, and the TCH) to publish assessment reports both in English and Chinese on their respective official websites after the assessments were completed.

### **Keeping Watch on Financial Technology Trends and Assisting Financial Institutions to Develop Innovative Services**

In response to the possible impacts brought about by rapidly developing financial technology on the banking industry and financial supervision in recent years, the CBC continued to keep close watch on the development of financial technology and undertook the following actions:

- (1) Urging the FISC in collaboration with financial institutions to organize the "Financial Blockchain Research and Application Development Committee" in order to plan on establishing an interconnected financial blockchain platform.
- (2) Instructing the TCH to carry out an outsourced research program with a focus on the applications of blockchain technology in financial services.