

## 5. Payment and Settlement Systems

Taiwan's payment systems mainly include the Check Clearing House System (CCHS), the Interbank Remittance System (IRS), the CBC Interbank Funds-Transfer System (CIFS), and the Central Government Securities Settlement System (CGSS). Among them, the CCHS and the IRS are retail payment systems, while the CIFS and the CGSS are the two main subsystems operated by the Bank. The Bank plays a key role in Taiwan's payment systems. All these payment systems make use of banks' A reserve accounts with the Bank for final settlement. In addition to operating the CIFS and CGSS, the Bank also monitors major payment systems based on international standards to ensure sound operation of these systems.

### Funds Transfers via the CIFS

The CIFS launched in May 1995 is an on-line, large-value funds transfer system. Since September 2002, the System has been operated based on the real-time gross settlement (RTGS). Under the RTGS, payments are settled on a real-time basis and the banks involved are required to hold sufficient account balances with the Bank. Those who maintain transaction accounts with the Bank may directly use the CIFS to transfer funds. Payment instructions are sent over the CIFS for settling obligations on check clearing, adjusting reserve account balances, or making payments associated with interbank loans, bill transactions, and bond transactions. On January 5, 2007, the Chinese Bank and the Great Chinese Bills Finance Corporation encountered fund shortages at the end of the business day. Fortunately, the RTGS already in place prevented systemic risk and insulated other banks from possible impacts.

At the end of 2007, participants of the CIFS included 72 banks, 12 bills finance companies, and 6 other institutions, including Taiwan Post Co., two investment trust companies, the Taiwan Stock Exchange (TSE), and the GreTai Securities Market (GTSM). For the year as a whole, the daily average value of funds transferred via the CIFS was NT\$1,012 billion, while the daily average number of transactions reached 3,244.

### Transactions via the CGSS

Established in September 1997, the CGSS is an RTGS system for the 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. In October 2001, treasury bills were included in the system and have been issued in book-entry form since then. The registration of central government securities transfers is handled by 16 clearing banks and

their 1,602 branches. A total of 978 thousand transfers with a value of NT\$63,787 billion were processed by the system in 2007, compared to the 510 thousand transfers with a total value of NT\$17,481 billion recorded in 1998. Also, the outstanding balance of the book-entry central government bonds amounted to NT\$3,404 billion, or 99.8 percent of the total outstanding balance of central government bonds at the end of 2007. The total transaction value of the book-entry central government bonds reached NT\$178 trillion, or 91.9 percent of the total transaction value of the entire bond market in 2007.

Currently, the book-entry transactions of central government securities within a clearing bank can be made on a delivery-versus-payment (DVP) basis while those between clearing banks cannot. To reduce the settlement risk in interbank transactions, the Bank plans to link the CGSS with the CIFS to allow clearing banks to handle these settlements on a DVP basis as well. The project is currently underway and is expected to be completed in 2008.

### **Improving and Monitoring Payment Systems**

The Bank and other government agencies implemented a plan to improve payment and clearing processes of the securities market on July 23. Under this plan, the TSE and the GTSM are able to process net payment clearing of stocks and bonds through the CIFS. The Bank also planned to link the CIFS and CGSS by 2008 to allow clearing banks to handle settlements on a DVP basis.

Based on the Core Principles for Systemically Important Payment Systems and Recommendations for Securities Settlement Systems issued by the Bank for International Settlements (BIS), the Bank monitors the payments system to maintain its safety and efficiency as one of its foremost goals. Large-value payment systems monitored by the Bank include the CIFS, the CGSS, the CCHS, and the Depository and Clearing System (DCS). The Bank also monitors interbank settlement and clearing activities involving retail payment and electronic money.

The Bank's monitoring activities include the following:

- (1) To require each payment system operator and payment instrument issuer to provide detailed data and information on a periodic basis regarding their operations and activities.
- (2) To supervise clearing institutions to make contingency plans and business continuity plans in case of emergency.
- (3) To invite the Financial Information Services Co. (FISC), the Taiwan Depository and Clearing Corporation (TDCC), and the Taiwan Clearing House (TCH) to participate in the panel discussions held regularly on promoting sound operation of the payments system. In June, the Bank instructed the FISC to manually conduct an exercise of

interbank remittance batch operation in case of emergency. Also in April and December, the Bank instructed the TDCC and the TCH to conduct remote backup exercises on securities depository, settlement, and trading systems.

- (4) To manage clearing institutions based on the Clearing Institutions section in the Directions for the Central Bank of China (Taiwan) to Govern Electronic Interbank Funds Transfer and Settlement. Certain articles in the Directions were amended to expand the CIFS operation in securities market transaction settlement and allow the TSE and the GTSM to set up accounts in the Bank for settlement.
- (5) To follow the Core Principles for Systemically Important Payment Systems of the BIS as guidance to govern payment systems.

