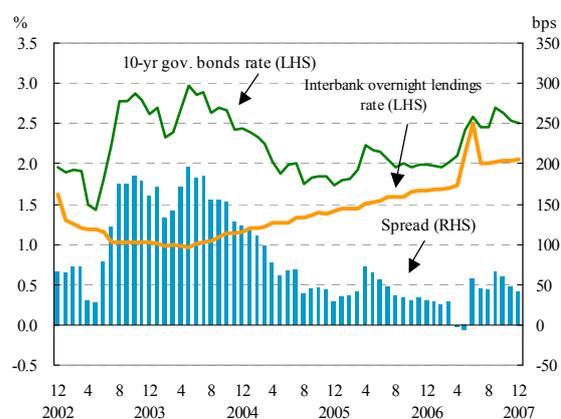


outstanding amount of commercial paper guarantees provided by bills finance companies has also continued to decline, sinking to NT\$373.1 billion at the end of 2007, off 15.78% from the previous year (Chart 4.40). As the fee income from guarantees and underwriting services are a major source of revenues for bills finance companies, the ongoing decline of guarantee business may continue to undermine their future profitability.

Rising short-term interest rates undermined the potential benefit of bond holdings

As the domestic yield curve has turned flatter in recent years and short-term interest rates have gone steadily up in response to the rate hikes by the CBC, the spread between 10-year government bond yields and interbank overnight lending rates continued to shrink and even posted negative figures in May and June of 2007. Shrinking interest rate spread will substantially erode potential benefit of bond holdings. Meanwhile, with the rising bond yields since the beginning of 2007, bills finance companies may be at risk of increasing valuation losses on their bond holdings (Chart 4.41).

Chart 4.41 Yield spread between 10-yr gov. bonds and interbank loans



Source: CBC.

5. Financial infrastructure—payment and settlement systems

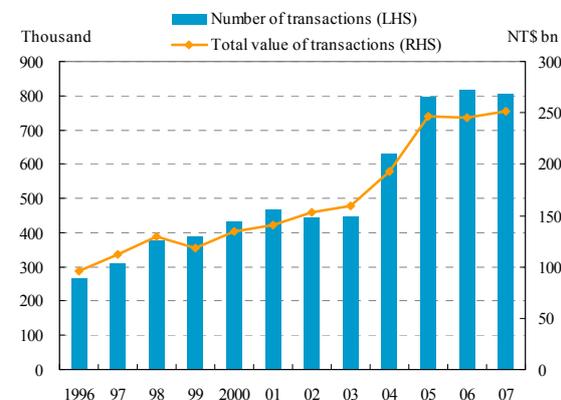
5.1 Measures to improve payment and settlement systems and raise efficiency and safety

The BIS Committee on Payment and Settlement Systems in January 2001 issued the Core Principles for Systemically Important Payment Systems,⁵³ and then in November of the same year, in cooperation with the Technical Committee of the International Organization of Securities Commissions (IOSCO), jointly released the Recommendations for Securities

⁵³ “Core Principles for Systemically Important Payment Systems”, Committee on Payment and Settlement Systems (CPSS), Bank for International Settlements, Jan. 2001. A full-text Chinese translation was completed by the CBC Department of Banking in February 2002.

Settlement Systems.⁵⁴ The purpose of these two documents is to simultaneously ensure both the safety and efficiency of payment and settlement systems. In particular, with regard to the need to strengthen risk management for large-value payment systems,⁵⁵ the Core Principles and the Recommendations call for the use of central bank money for final settlement in order to ensure the safety of settlement assets,⁵⁶ and they also call for use of the Real-Time Gross Settlement (RTGS) mechanism to keep settlement risks from spreading and affecting other systems and markets.

Chart 5.1 Transactions via the CBC Interbank Funds Transfer and Settlement System



Source: CBC.

CBC Interbank Funds-Transfer and Settlement System switched to RTGS

The CBC Interbank Funds-Transfer System (CIFS), an online system for handling large-value electronic payments, lies at the heart of the interbank funds transfer mechanism. It first went into operation in May 1995 and is primarily used to handle interbank funds transfers, reserve account balance adjustments, settlement of interbank loans, NT dollar settlement of foreign exchange transactions, and payments for bond and bills transactions. In 2007, 810,000 transactions worth a total of NT\$252 trillion were processed through the system, making for an average transaction size of NT\$300 million (Chart 5.1).

In the early years, the CIFS employed net settlement at day end. To better control settlement risks, the CBC adopted RTGS in September 2002, whereby transactions are settled individually as they occur. When paying off individual transactions, financial institutions must have sufficient account balance to cover payment amounts; otherwise the transactions are not processed. This keeps insufficient funds transactions from getting into the system and prevents the occurrence of systemic risk. Additionally, to ensure that financial institutions

⁵⁴ “Recommendations for securities settlement systems”, Committee on Payment and Settlement Systems & International Organization of Securities Commissions (IOSCO), Nov. 2001.

⁵⁵ There are two types of payment transactions – “large value” and “retail”. A large-value payment system is designed to handle payments in connection with financial market transactions (e.g. trading in bonds, bills, stocks, or foreign exchange) or interbank payment transactions that are both large and time-sensitive and if not handled effectively could give rise to systemic risk, thereby affecting the stability of the entire financial system. The system used to process this type of payment is considered extremely important.

⁵⁶ The term “settlement assets” refers to funds that are deposited by participants with a settlement institution, and are transferred among participants to settle interbank payments. The CBC and commercial banks can all act as settlement institutions, therefore central bank money and commercial bank money can both be used as settlement assets. However, international regulatory bodies recommend the use of central bank money as settlement assets because it is safe, efficient, competitively neutral, and can be used for final settlement.

have sufficient funds in their accounts with the CBC, the CBC provides intraday overdraft support to ease intraday liquidity pressure.

In January 2007, the collapse of China Rebar triggered a run on its subsidiary Chinese Bank. However, a systemic crisis was avoided thanks to a well functioning RTGS system, together with the appropriate measures of the CBC, which monitored interbank transactions in real time via the system and injected liquidity as needed.

In addition, in order to promote sound operations by the private system operator, the CBC has provided the Financial Information Service Co. (FISC) with central bank money for final settlements since its establishment, to ensure that FISC keeps its interbank remittance and ATM funds transfers operations functioning smoothly.

Securities⁵⁷ settlement through delivery versus payment

In the early days of the system, settlement of bills market transactions was carried out through either physical delivery or entry in a passbook (“custodial slips”). The system was not only inefficient but also showed several weaknesses, such as lack of professional custodian institutions, difficulty in identifying fake bills, as well as potential settlement default risk arising from the separation between bills settlement and funds settlement.

In order to better control risk, the authorities and the bills finance industry jointly launched a new Bills Central Depository and Clearing System in April 2004. The new system employed centralized custody and book-entry transfer in order to make the settlement of bills transactions safer and more efficient. Also, in order to eliminate settlement default risk, a delivery versus payment (DVP) mechanism was implemented by linking up the Bills Central Depository and Clearing System with the CIFS.

Thereafter, with a view to enabling more efficient clearing and settlement of other fixed income products and providing market participants with one-stop services, the authority for the securities industry merged the Taiwan Securities Central Depository Co. and the Debt Instruments Depository and Clearing Co. in March 2006, renaming it the Taiwan Depository & Clearing Corporation (TDCC). The purposes of the merger were to have a single organization providing depository, clearing, and book-entry transfer services for bonds, bills, and other fixed income products, and to allow market participants to engage in simultaneous DVP via the linkage of the CIFS with the Debt Instruments Depository and Clearing System.

⁵⁷ The term “securities” as used in this report includes bills, bonds, and stocks.

As for central government bonds, the government switched in September 1997 to issuing them in book-entry form⁵⁸ instead of printing physical bond certificates and began using the book-entry Central Government Securities-Settlement System to handle the sale and transfer of bonds as well as interest and redemption payments. In April 2008, the CBC further linked this system to the CIFS and implemented simultaneous DVP mechanism for interbank central government bonds transactions.

Establishing a business continuity plan

In order to ensure business continuity, the authorities have required the main operators of Taiwan's payment and settlement system to set up disaster recovery mechanism and contingency plans, and to carry out regularly scheduled drills. In 2005, the CBC and the competent authorities invited the FISC, the TDCC and other principal operators of the payment and settlement system to take part in a conference to discuss possible measures to promote a sound payment and settlement system. During the conference, system operators were called on to study ways to ensure operational continuity, to formulate risk management measures to address how to respond when a serious accident impedes normal operations, and how to prevent human error in major operations.

5.2 Future plans

To spur operators of settlement and payment systems, especially those of systemic importance to the financial system, to make a strong self-directed effort to ensure sound operations, the CBC required system operators to implement self-assessments in accordance with the aforementioned Core Principles and Recommendations. System operators are expected to study the areas where they do not measure up to international standards and adopt a timetable for improvements that will bring about effective operations and serve as an important tool for the management and assessment of risk in the future.

⁵⁸ "Book-entry form" here means "uncertificated".