

**Disclosure Report on the Assessment of
Compliance on the CPMI-IOSCO
Principles for Financial Market
Infrastructures**

**(Disclosure for the CBC Interbank Funds
Transfer System as a PS)**

Department of Banking
Central Bank of the Republic of China (Taiwan)

September 2016

Responding FMI: CBC Interbank Funds Transfer System (CIFS)

Jurisdiction in which the FMI operates: R.O.C. (Taiwan)

Authority overseeing the FMI: Central Bank of the R.O.C. (Taiwan)

Date of this disclosure: September, 2016

The website on which the disclosure is posted: <http://www.cbc.gov.tw>.

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I. Executive Summary

In 2012, the Committee on Payments and Market Infrastructures (CPMI) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) published the *Principles for Financial Market Infrastructures* (the *PFMI*, or the *Principles*). This report is prepared and disclosed by the Central Bank of the Republic of China (Taiwan) (hereinafter the CBC) after it conducted assessment on the CBC-operated large value payment system, based on the *PFMI* and the *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology*.

The purpose is to assess the CIFS' observance of the *PFMI*, and, by doing so, to identify potential risks or management deficiencies and inform future improvement. Information taken into account for the assessment included the CIFS' management rules and guidelines, operative procedures, system services and mechanisms, and statistics; assessment reports of large-value payment systems in other countries; assessments by the Bank for International Settlements (BIS); comments from the CBC's inter-departmental task force.

The CIFS has a robust governance mechanism and a comprehensive risk management framework, providing settlement services by using central bank money. The CIFS is a Real-Time Gross Settlement (RTGS) system and offers intraday overdrafts to its participating institutions. Equipped with these capabilities and facilities, the CIFS has effectively

managed relevant risks associated with credits, liquidities, and operations. Clear and transparent operative rules are also in place, stipulating that payments are final and irrevocable once they are executed. Operative drills are held on a regular basis to ensure business continuity. The self-assessment showed that CIFS is largely compliant with the *PFMI*.

II. The Background of the FMI

1. An overview of the FMI and markets it serves

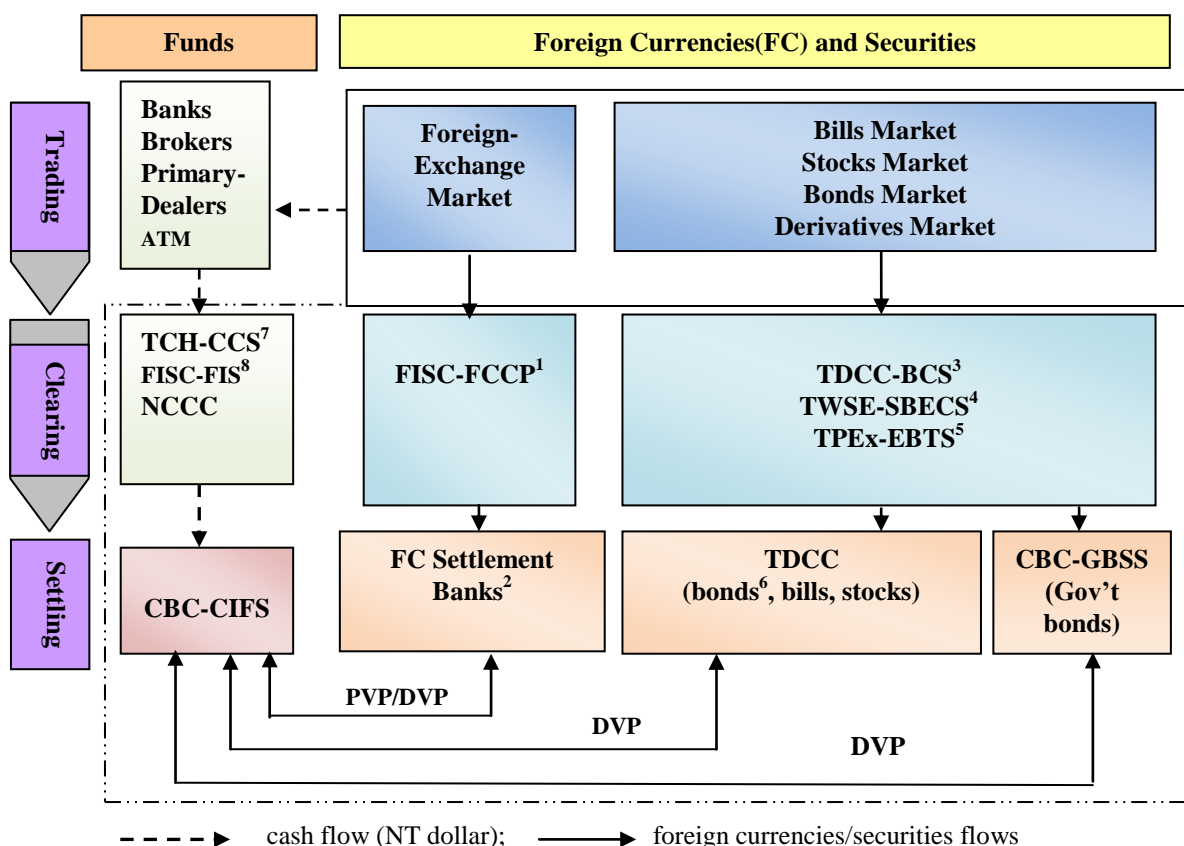
The CBC-operated CIFS is the backbone of Taiwan's payment system, linking the following systems to construct a comprehensive payment and settlement framework: payment systems operated by the Financial Information Service Co., Ltd. (FISC), the Taiwan Clearing House (TCH), and the National Credit Card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

The CIFS, a large-value electronic funds transfer system, commenced service in May 1995 and implemented an RTGS system from 2002. It deals with interbank funding, reserve requirement adjustments, interbank call loans, and transactions involving foreign exchange, bonds, credit cards, and bills. The CIFS also provides final settlement services to clearing institutions (See Figure 1).

The CIFS adopts direct participating arrangement. Each participant of the CIFS, including financial institutions and clearing institutions, maintains an account with the CBC. As of the end of 2015, there were 85 accounts in total, of which 80 accounts were held by financial institutions and 5 by clearing institutions. In 2015, the CIFS processed 749,222 transactions with the value amounting to NT\$524 trillion, which is 31 times of the GDP (See Figure 2). The daily average value of funds

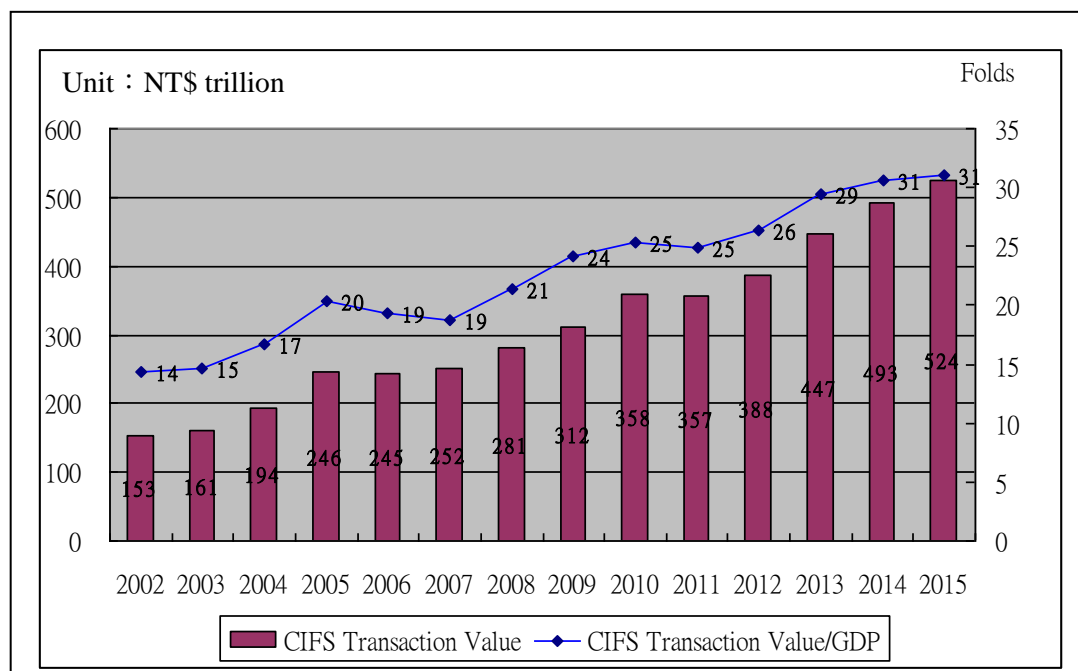
transferred via the CIFS was NT\$2,128.9 billion in 2015, 0.57% less than 2014. The daily average number of transactions reached 2,964, increasing by 8.03% from 2014.

Figure 1 The Framework and Process of Domestic Financial Payment Systems



1. Foreign Currency Clearing Platform (FCCP) operated by the FISC; currently, USD bills are settled via Mega Bank's USD Clearing System.
2. FC settlement banks refer to Mega Bank (USD, euro), China Bank Taipei Branch (Renminbi), and Mizuho Bank Taipei Branch (yen).
3. The Bill Clearing System (BCS) is operated by the TDCC.
4. The Securities Book-Entry Clearing System (SBECS) is operated by the TWSE.
5. The Electronic Bond Trading System (EBTS) operated by the TPEX.
6. Including all kinds of bonds except government bonds.
7. The Check Clearing System (CCS) is operated by the TCH.
8. The Financial Information System (FIS) is operated by the FISC.

Figure 2 Transaction Values of CIFS



2. General organization of the FMI

The CIFS is operated by the CBC. The CBC, a government bank conducting monetary policy, has independent objectives and responsibilities of public policy. According to *The Central Bank of the Republic of China (Taiwan) Act (The CBC Act)*, the CBC's highest decision-making body is the Board of Directors, which comprises 11 to 15 directors in charge of the review and approval of policies concerning money, credit, foreign exchange, as well as payment systems. The top management consists of the governor and two deputy governors, whose duties are stipulated in Article 10 of *The CBC Act*. Administrative units include departments and offices, whose heads supervise businesses and execute Board decisions including the operation and management of the CIFS.

The objectives of the CBC clearly state a commitment to promoting the public good, including financial stability. The CBC has established a robust and appropriate integrated risk management system and control procedures, supervised by the deputy governor. An internal control unit

conducts an internal audit of all businesses and operations at least once every year to ensure the CIFS runs safely and efficiently. Important policy decision concerning system design and the overall business strategy will be discussed ex ante between the operator and the participants, in order not to undermine the interests of other private payment systems. Decisions made will be disclosed on the CBC's official website as well as in the Annual Reports.

3. Legal and regulatory framework

Activities and services associated with the operation of the CIFS are regulated clearly, transparently, and practicably under the *Directions for the Central Bank of the Republic of China (Taiwan) to Govern Electronic Interbank Funds Transfer and Settlement* (hereinafter the *EFT Directions*) and other relevant rules and policies, which are published on the CBC's website. Prospective participants of the CIFS are asked to sign an agreement in compliance with the *EFT Directions*. The *EFT Directions* stipulates that the CIFS has settlement finality, where funds transfers are irrevocable once transactions are accepted and executed.

The CBC has formulated relevant risk management protocols and standard operative procedures of the CIFS. Risk management policies and internal controls are examined every year and updated when needed. In addition, a business continuity plan is in place, and on-site backup exercises are conducted eight times a year. Through the current risk management arrangements, the CBC has been effectively managing business risks identified for the CIFS.

4. The design and operation of the CIFS

The CIFS adopts an RTGS system with functions of both real-time funds transfer and designated due-date transfer. Once the system completes the settlement, the transaction shall be irrevocable. The CIFS sets up an intraday overdraft facility to satisfy participants with the need of the intraday liquidity in accordance with the *Directions for the*

Conduct of Intraday Overdrafts of the Central Bank of the Republic of China (Taiwan) (hereinafter the *Intraday Overdraft Directions*). Participating institutions can timely obtain the necessary liquidity by pledging collaterals online to enhance the efficiency of funds allocation. Following the first-in-first-out rule for queued funds transfer orders, the overdraft mechanism can assist participants in controlling the liquidity position and thus facilitate the smooth operation of the RTGS system.

The CIFS provides the facilities of delivery-versus-payment (DVP) and payment-versus-payment (PVP) to the connected clearing systems of bills, securities, government bonds and foreign currencies. The cash leg shall be transferred when, and only when, the corresponding value leg is transferred, in order to remove the principal risk during the process of the settlement.

The design of the CIFS, including the settlement arrangements, process architecture and technical application, meets the need for efficiency and effectiveness of the participating institutions and the markets it serves. The CBC periodically reviews the system performance and sets various indicators for the minimum service standards. Monthly analysis reports are submitted to managers as a reference to decision-making.

III. A Brief Assessment of Observance of the PFMI for the CIFS

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Description

The CIFS activities are conducted domestically and are thus governed only by the relevant laws and regulations of the R.O.C. (Taiwan). The operations of settlement finality, intraday overdraft facility, and collateral management have been established clearly, transparently, and enforceably as per relevant rules and guidelines governing the CIFS operation.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Description

The CBC, whose governance structure is set out in *The CBC Act*, operates the CIFS and has an independent internal audit system to ensure its safety and efficiency. With regard to critical decisions about the design and the general business strategy and operation of the CIFS, the CBC shall consult the opinions of the participating institutions and consider the interests of the stakeholders prior to any amendments. Relevant information will be timely published on the CBC's website as a reference for the participating institutions and the general public.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Description

The risk management policy for the CIFS is included in the CBC's comprehensive risk management policy and clearly stated in the CBC's *Risk Management Report* and *Internal Control System*, which are reviewed annually with the risk management practices and operative procedures timely updated. The CBC also prescribes its business continuity plan and holds regular drills for backup system operation.

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

Description

The CIFS adopts an RTGS mechanism. The payer bank must have sufficient account balance or available credit line so that the payment order can be executed successfully by the system to protect participants from credit exposures to each other. By taking low risk collaterals and with proper management measures, the credit risk to which the CBC is exposed has been effectively measured, monitored, and controlled.

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Description

According to the *Intraday Overdraft Directions*, the collaterals accepted by the CBC for providing intraday overdrafts are mainly certificates of deposit issued by the CBC, central government bonds, treasury bills and reserves deposited by banks in their B reserve accounts with the CBC. All of them are characterized as low credit, liquidity and market risks.

Principle 6: Margin

A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed

Description

This principle is not relevant to the payment system. No assessments are required.

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

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| Description | The CBC is the system operator of the CIFS and the provider of the New Taiwan dollar liquidity; it also acts as the issuer of the New Taiwan dollar and the lender of last resort. The intraday overdraft facility offered by the CBC to the participating institutions is able to provide sufficient liquidity in New Taiwan dollar. |
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Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

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| Description | The CIFS adopts an RTGS mechanism. According to the <i>EFT Directions</i> , once transactions are accepted and executed, they are final and irrevocable. |
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Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.

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| Description | The CBC operates the CIFS, which uses central bank money as the settlement asset, effectively managing the credit and liquidity risks. |
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| Principle 10: Physical deliveries | |
| An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries. | |
| Description | This principle is not relevant to the payment system. No assessments are required. |

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| Principle 11: Central securities depositories | |
| A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimize and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry. | |
| Description | This principle is not relevant to the payment system. No assessments are required. |

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| Principle 12: Exchange-of-value settlement systems | |
| If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other. | |
| Description | The CIFS connects TDCC-BCS, TWSE-SBECS, CBC-CGSS and FISC-FCCP, and adopts DVP and PVP mechanisms so as to eliminate the principal risk. |

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| Principle 13: Participant-default rules and procedures | |
| An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations. | |
| Description | The CIFS adopts an RTGS mechanism to address the credit risk. For those participating institutions who could not refund the intraday overdrafts by the designated time, the CBC has set up regulations with regard to imposing penalty interest rates, deducting account balances and disposing collaterals to mitigate potential loss. These rules and procedures relating to participant default have been announced by circulars and disclosed on the CBC's website and reviewed regularly. |

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| Principle 14: Segregation and portability | |
| A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions. | |
| Description | This principle is not relevant to the payment system. No assessments are required. |

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Description

The CBC is a government bank with a sound management and control mechanism in respect of business and finance. The CBC also formulates the internal control system and relevant regulations for the CIFS so as to identify, monitor, and manage the general businesses risk.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Description

The CBC has sound and effective supervision mechanism and internal control system. The CIFS uses central bank money as the settlement asset and provides an intraday overdraft facility that participating institutions can pledge and release collaterals online.

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| <p>Principle 17: Operational risk</p> <p>An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI’s obligations, including in the event of a wide-scale or major disruption.</p> | |
| <p>Description</p> | <p>According to the <i>EFT Directions</i>, the <i>Intraday Overdrafts Directions</i>, <i>Good Practice of Information Business</i>, and other relevant regulations and standard operating procedures, the CBC has been managing the operational risk of the CIFS, implementing an assessment of risks, defining a bearable degree of risk tolerance, and programming an appropriate risk management plan. The CBC has set up a business continuity plan for the CIFS and holds drills regularly. To prevent from possible cyber attacks, the CBC has taken appropriate defensive measures to ensure that emergency responses and recovery capability of the system are in place.</p> |

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| <p>Principle 18: Access and participation requirements</p> <p>An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.</p> | |
| <p>Description</p> | <p>The <i>EFT Directions</i> clearly stipulates the access criteria as well as related security control mechanism for the CIFS. Participating institutions are allowed to access the system fairly and openly. Relevant criteria and qualification requirements have been publicly disclosed.</p> |

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| Principle 19: Tiered participation arrangements | |
| An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements. | |
| Description | The CIFS does not adopt a tiered participation arrangement, and financial institutions are all direct participants. Therefore, the principle is not applicable to the CIFS. |

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| Principle 20: FMI links | |
| An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks. | |
| Description | This principle is not relevant to the payment system. No assessments are required. |

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| Principle 21: Efficiency and effectiveness | |
| An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves. | |
| Description | The design and operation of the CIFS meet the need for efficiency and effectiveness of the participating institutions and the markets it serves. The CBC periodically reviews the system operating conditions and the performance of the delay control, and sets various indicators for the minimum service standards. Monthly analysis reports are submitted to managers as a reference of decision-making. |

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| Principle 22: Communication procedures and standards | |
| An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording. | |
| Description | The linkage between the CBC and financial institutions within the CIFS adopts the TCP/IP communication protocol which is in line with international message standards. Standard operating procedures for the communication are in place for financial institutions and clearing institutions to follow through when establishing or altering connections with the CBC. |

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| Principle 23: Disclosure of rules, key procedures, and market data | |
| An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed. | |
| Description | The CIFS has clear and comprehensive regulation rules stipulating operating regulations and fee schedules for participating institutions carrying out the CIFS businesses. All relevant rules and operating conditions are publicly disclosed on the CBC's website. |

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| Principle 24: Disclosure of market data by trade repositories | |
| A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs. | |
| Description | This principle is not relevant to the payment system. No assessments are required. |

IV. List of Publicly Available Resources

1. Laws and regulations

- (1) *The Central Bank of the Republic of China (Taiwan) Act*
- (2) *Directions for the Central Bank of the Republic of China (Taiwan) to Govern Electronic Interbank Funds Transfer and Settlement*
- (3) *Procedures for Applying for Extensions by Online Institutions of the CBC Interbank Funds Transfer System*
- (4) *Directions on the Operation of Disc Transactions for CBC Interbank Funds Transfer and Settlement System*
- (5) *Directions for the Central Bank of the Republic of China (Taiwan) Accommodations to Banks*
- (6) *Directions for the Conduct of Intraday Overdrafts of the Central Bank of the Republic of China (Taiwan)*

2. Publications

- (1) *CPMI-IOSCO Principles for Financial Market Infrastructures*
- (2) *Financial Stability Report, Central Bank of the Republic of China (Taiwan)*
- (3) *Annual Report, Central Bank of the Republic of China (Taiwan)*
- (4) *Monetary Policy Decision of the Board Meeting, Central Bank of the Republic of China (Taiwan) (held quarterly)*