

# China Securities Depository and Clearing Corporation Limited

# Disclosure Report Under the Principles for Financial Market Infrastructures

December 2018

Institution: China Securities Depository and Clearing Corporation Limited Jurisdiction of FMI: People's Republic of China FMI regulator/supervisor: China Securities Regulatory Commission

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#### I. Executive Summary

China Securities Depository and Clearing Corporation Limited ("CSDC" or the "Company") is the central securities registration and settlement organization for Chinese stock exchanges. It was founded on March 30, 2001 with the approval of the State Council and the China Securities Regulatory Commission (CSRC) in accordance with the *Securities Law* and the *Company Law*. Under the *Securities Law*, the supervisory authority for CSDC is CSRC. Shanghai Stock Exchange (SZSE) and Shenzhen Stock Exchange (SZSE) are shareholders of CSDC, each holding 50% equities.

The legal basis for the operation of CSDC includes laws, juridical interpretations, administrative regulations, ministerial rules and CSDC's business rules and agreements. The Securities Law is the uniform law for the securities registration and settlement in China. Other laws governing the securities registration and settlement business include the Company Law, the Property Law and the Contract Law. Juridical interpretations are special institutional arrangements made by the Supreme People's Court for the inquiry, freeze and deduction of securities and securities transaction settlement funds within the designated jurisdiction of CSDC. Administrative regulations and ministerial rules applicable to the activities of CSDC mainly include the Provisional Regulations on the Administration of Stock Issuance and Trading, the Regulations on the Supervision and Administration of Securities Companies and the Measures for the Administration of Securities Registration and Settlement. In addition, CSDC has in place a sound, enforceable, cohesive, clear and effective system of business rules for securities account management, securities registration, securities custody and depository services, securities settlement, and management of settlement participants. In practice, the above laws and regulations have all been well implemented and observed to provide a high degree of legal certainty for business activities of CSDC. CSDC is the central securities registrar, central securities depository (CSD), securities settlement system (SSS) and central counterparty (CCP) of the Chinese exchange market. It is mainly responsible for providing registration, depository, clearing, settlement and other relevant services for all securities and financial derivative instruments traded or listed on SSE, SZSE and National Equities Exchange and Quotations (NEEQ).

CSDC has in place a sound risk management framework led by the Board of Directors, with specific duties assigned to each management level so as to effectively identify, monitor and manage risks faced in various activities, including legal risk, credit risk, liquidity risk, operational risk, general business risk and custody and investment risks.

This Report represents a self-assessment conducted by CSDC based on the *Principles for Financial Market Infrastructures* issued by the Committee on Payments and Settlement Systems (CPSS) of the Bank for International Settlements and the International Organization of Securities Commissions (IOSCO). The self-assessment employs methods set forth in the *Principles for Financial Market Infrastructures*:

*Disclosure Framework and Assessment Methodology*. The assessment reference date is December 31, 2018.

## II. Summary of Changes to Last Disclosure

This disclosure is CSDC's first self-assessment report on its level of compliance with the *Principles for Financial Market Infrastructures*.

#### **III. General Background of CSDC**

#### i. An overview of CSDC and its services

CSDC is established to create a central securities registration and settlement system that meets regulatory, market-based and international requirements. Characterized by openness and scalability, CSDC aims to prevent market risks while boost efficiency so as to better serve the future development of China's securities market.

CSDC is a central securities registrar, central securities depository (CSD), securities settlement system (SSS) and central counterparty (CCP) of the Chinese exchange market. It is mainly responsible for providing registration, depository, clearing, settlement and other relevant services for all securities and financial derivative instruments traded or listed on SSE, SZSE and NEEQ. Its services cover the following products: A-shares, B-shares, treasury bonds, company bonds, corporate bonds, ETFs, LOFs, closed-end funds, securitization products, warrants and stock options, among other financial spots and derivatives, as well as securities listed on NEEQ. Relevant business information is listed below:

	2017	2018	Absolute value increased from	Increased rate from
			2017 to 2018	2017 to 2018
Total number of investors, end of year (Unit:10,000)	13, 398. 30	14, 650. 44	1, 252. 14	9.35
Number of new investors (Unit:10,000)	1, 587. 26	1, 252. 14	-335.12	-21.11
Number of securities in deposit	15, 449	17, 344	1,895	12.27
Par value of securities in deposit (RMB100Mil.)	150, 345. 43	167, 278. 25	16, 932. 82	11. 26
Market value of securities in deposit (RMB100Mil.)	663, 339. 21	543, 774. 06	-119, 565. 15	-18.02
Market value of non-restricted negotiable shares (RMB100Mil.)	560, 579. 66	475, 082. 09	-85, 497. 57	-15.25
Number of transfers (Unit:10,000)	1, 279, 882. 17	1, 237, 965. 93	-41, 889. 76	-3.28
Transfer value (RMB100Mil.)	12, 202, 891. 94	10, 444, 320. 62	-1, 760, 979. 59	-14.41
Gross settlement value (RMB100Mil.)	12, 894, 753. 17	11, 320, 935. 72	-1, 573, 817. 45	-12.21
Net settlement value (RMB100Mil.)	407, 547. 04	448, 047. 58	40, 500. 54	9.94

Table 1: Securities Depository, Clearing and settlement Business Data of CSDC
in 2018

Notes: (1) Total number of investors, end of year means the number of UAP accounts for A-shares, B-shares, credit accounts and derivatives contract accounts, neither closed nor dormant, held by investors. (2) Number of new investors = total number of investors by the end of this year - total number of investors by the end of last year =  $3 \times GB3$  (3) The number, par value or market value of securities in deposit, consists of securities already registered with CSDC for issuance but not yet traded on the exchange and securities already delisted from the exchange but not yet registered as delisted. The par value or market value excludes non-tradable shares of listed companies with B-shares only. (4) Market value of non-restricted negotiable shares is calculated at the closing

price as at the end of the reporting period. (5) Number of transfers or transfer value consists of centralized transactional transfer and decentralized transactional transfer of all registered securities in both directions; the transfer value of bonds is on a dirty price basis. (6) Exchange rate is the weekly average exchange rate published by the State Administration Foreign Exchange (SAFE) in December of the year. (7) Data in this table are aggregate figures for SSE and SZSE. (8) Securities include A-shares, B-shares, warrants, treasury bonds, listed company bonds, convertible bonds, detachable convertible bonds, privately placed bonds of small and medium-sized enterprises, closed-end funds, ETFs, LOFs and securitization products, excluding open-ended funds and bond repurchases.

#### ii. An overview of the organization

According to the *Articles of Association* of CSDC, the General Meeting of Shareholders is the highest authority of CSDC. Under the General Meeting of Shareholders are the Board of Directors and the Board of Supervisors. A Board Risk Committee operates under the Board of Directors. The management headed by General Manager is directly responsible for the day-to-day operation of CSDC, including a Risk Management Committee responsible for deliberating on the Company's risk management policies and procedures and other major issues.

Headquartered in Beijing, CSDC has 16 functional departments, including the Executive Office and IT Strategy & Planning Team, etc. It has three branches in Shanghai, Shenzhen and Beijing to provide registration, depository, clearing and

settlement services for SSE, SZSE and NEEQ, respectively<sup>1</sup>. In addition, CSDC has

two wholly-owned subsidiaries, namely, Hong Kong Subsidiary and China Securities and Futures Information Base Development and Construction Co., Ltd. The chart below shows the organizational structure.

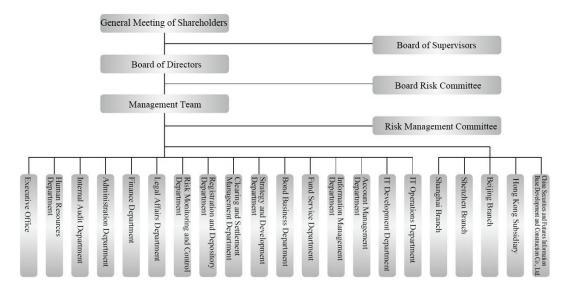


Fig. 1: Organizational Chart of CSDC

<sup>&</sup>lt;sup>1</sup>The term "settlement" as referred to in this Report includes both "clearing" and "settlement", which is different from some practices in that "clearing" is used as an equivalent to "settlement."

#### iii. Legal and regulatory framework

The legal framework for the operation of CSDC includes laws, judicial interpretations, administrative regulations, ministerial rules and CSDC's business acts and agreements. Specifically, laws, regulations and ministerial rules include the Securities Law, the *Company Law*, the *Property Law*, the *Contract Law*, the *Enterprise Bankruptcy Law*, the Regulations on the Supervision and Administration of Securities Companies, the Regulations on Risk Disposal of Securities Companies, the Provisional Regulations on the Administration of Stock Issuance and Trading and the Measures for the Administration of Securities Registration and Settlement. Business rules include the Securities Registration Rules, the Securities Account Management Rules, the Rules for Management of Settlement Participants, the Implementation Rules for Securities Pledge Registration, the Measures for Management of Settlement Reserves and the Measures for Management of Securities Settlement Margin. Agreements include the Securities Registration and Service Agreement, the Agency Securities Account Business Agreement, the Securities Fund Settlement Agreement for Class A Settlement Participants and the Securities Funds Settlement Agreement for Class B Settlement Participants. CSDC strictly follows the above-mentioned legal framework in carrying out all business activities and makes the relevant regulatory information fully understandable by market participants by issuing explanatory notes regarding formulation or revision of rules and by organizing training and symposiums, thereby continuously strengthening the enforceability of rules.

Under the *Securities Law*, the business activities of CSDC are subject to the regulation and supervision by CSRC. The securities settlement risk fund is established in accordance with the *Securities Law*. The rules for raising and management of the fund are jointly formulated by CSRC and the Ministry of Finance. Article 179 of the *Securities Law* provides that CSRC shall supervise and manage the registration, depository and settlement of securities in accordance with the law, supervise and manage the business activities of the securities registration and settlement organizations, formulate rules and regulations on the supervision and administration of the securities market in accordance with the law and exercise the power of examination and approval in accordance with the law. CSRC formulates the *Measures for the Administration of Securities Registration and Settlement* in accordance with the *Securities Law*, which are viewed as the provisions of the *Securities Law* regarding securities registration and settlement.

#### iv. Institutional system design and business operation

CSDC performs the following functions in accordance with relevant provisions of the *Securities Law* and the *Measures for the Administration of Securities Registration and Settlement*: (*a*) setup and management of securities accounts and settlement accounts; (*b*) custody and transfer of securities; (*c*) registration of securities holders and their rights and interests; (*d*) clearing and settlement of securities and funds and related management; (*e*) distribution of rights and interests in securities as entrusted by the issuer; (*f*) provision of inquiry, information, consultation and training services related to securities registration and settlement in accordance with the law; and (*g*) other

businesses approved by CSRC.

CSDC carries out the above-mentioned businesses in accordance with the law and has in place a dematerialized book-entry system for securities registration and settlement. All securities registration and settlement services are provided in a dematerialized environment. A complete securities trading cycle consists of four phases: account opening, trading, registration and depository, and settlement.

### 1. Account opening

Under China's stock exchange market dominated by direct holding, CSDC has set up a unified securities account management system that opens securities accounts for each investor in his/her real name in accordance with the law and provides such services as account information change, account information inquiry and closure of securities accounts. In regard to specific service channels, for ordinary investors (individuals and general institutions), CSDC authorizes an account-opening agency to provide services on its behalf. For securities companies, insurance companies, commercial banks, securities investment funds and other special institutions or product investors, CSDC directly provides services such as opening and alteration of securities accounts.

## 2. Securities trading

After the account is opened, the investor can proceed to the next step, i.e., securities trading. The trading channels and policies for ordinary investors are different from those for special institutions and product investors.

Ordinary investors can declare their trading orders through securities companies to stock exchanges (including SSE, SZSE and NEEQ; the same below). Ordinary investors need to designate a third-party depository bank and deposit the trade margin in the customer's trade margin account opened by the securities company with the bank. The third-party depository bank and the securities company respectively record the details of investors' funds. The third-party depository bank plays a supervisory role. When an ordinary investor declares to buy securities, the securities company will check the balance of the investor's trade margin and freeze the money the investor uses to buy securities. Ordinary investors who declare to sell securities must hold sufficient securities in their securities accounts. The securities company and the stock exchange separately check in the trading system to see if there are sufficient securities in the investor.

Special institutions and product investors declare their trading orders to the securities trading venue through their proprietary trading units or leased trading unit of the securities company. CSDC applies front-end risk control of securities trading funds to selected investors, such as proprietary investment of securities companies, asset management of securities companies, asset management of insurance companies and securities investment funds, and imposes a limit on the total declared amount of net buys in a day, which is subject to front-end control by the exchange. In this way, CSDC effectively prevents trade abnormality and settlement risk caused by technical failures or operational errors of the above investors. For the trade declarations within

the above-mentioned investors' limits and for special institutional investors (such as HKSCC Nominees Limited) that are not included in the scope of control, the front-end fund monitoring of trade declarations mainly depends on investors' internal control policies.

## 3. Registration and depository

Under the *Securities Registration Rules*, CSDC is entrusted by the securities issuer to provide securities registration and related services. CSDC has set up an electronic securities registration record and book-entry system to register securities holders according to the records of investors' securities accounts.

Before listing on the stock exchange or any other venue for trading, CSDC handles the initial registration of securities holders upon the application of the securities issuer. The registration of changes in securities includes registration of securities transfer, judicial freezing of securities and pledge of securities. Transfer registration is divided between transfer registration for centralized transactions on the securities trading venue and transfer registration for decentralized transactions. If securities are traded centrally on the securities trading venue, CSDC conducts transfer registration for centralized transactions according to the settlement results of securities transactions. In regard to transfer registration for decentralized transactions, judicial freezing of securities and pledge of securities, CSDC registers changes in accordance with relevant business rules. For delisted securities, CSDC registers the exit of their issuers. In addition, CSDC also provides issuers and/or investors with securities holder register service, rights and interests distribution service, inquiry service, online voting service and other services related to securities registration.

### 4. Settlement of securities

CSDC uses a tiered settlement system for securities and funds. When providing multilateral net settlement services as a CCP, CSDC is responsible for the centralized settlement of securities and funds with settlement participants. If it does not provide settlement services as a CCP, CSDC is entrusted by settlement participants with the settlement of securities and funds between settlement participants. The settlement participants are responsible for settlement with their customers, and the securities settlement part shall be entrusted to CSDC.

For various types of securities and business, CSDC can act as a CCP to provide multilateral net settlement services and guarantee settlement for the non-defaulting party in the settlement process. It can also not act as a CCP and does not provide settlement guarantee.

### (1) Guaranteed multilateral net settlement

As a CCP, CSDC guarantees multilateral net settlement for securities transactions the investors have reached and locked on the securities trading venue. The settlement process can be further subdivided into the clearing stage and the settlement stage.

1.1 Clearing stage

CSDC receives trade data from the securities trading venue at the end of the trading day (T day), and calculates the numbers of securities receivable and payable and the net cash amount receivable or payable by each settlement participant on the settlement day using the multilateral net settlement method.

In order to prevent the credit risks associated with settlement participants, CSDC has set up a series of institutional arrangements, including the minimum settlement reserve, settlement margin, pledged bonds for pledge-style repurchase, treasury bond pre-issue margin, stock option margin, settlement risk fund and general risk reserve. The minimum settlement reserve, for example, refers to the minimum amount of money a settlement participant shall, as required by CSDC in accordance with the *Measures for Management of Settlement Reserves*, deposit in advance with CSDC at a certain percentage of the average daily amount of purchase in the previous month, with the aim of reducing the settlement default risk of settlement participants are deposited in the settlement reserve deposit accounts opened by CSDC with several commercial banks approved by CSDC as eligible settlement banks. The settlement bank transfers funds at the instruction of CSDC.

#### 1.2 Settlement stage

CSDC adopts product-specific settlement arrangements and settlement mechanism according to the characteristics of different products. For A-shares, "non-standard" DVP settlement is adopted, with 16:00 cutoff on T day for securities and 16:00 on T+1 day for funds. For innovative products such as ETF, the "standard" DVP settlement is adopted, with the transfer of securities and transfer of funds conditional upon each other. For B-shares, "standard" DVP settlement is adopted, with a 16:00 cutoff on T+3 for securities and funds. CSDC is pushing steadily forward the A-shares DVP reform, taking into account China's national conditions and securities market actualities.

### (2) Non-guaranteed settlement

CSDC uses a DVP settlement mechanism through bilateral net settlement or on a gross, obligation-by-obligation basis, and does not guarantee settlement. Each settlement takes into account the sufficiency of securities and funds available for settlement. The settlement is successful if both are sufficient; if one of them is insufficient, the settlement fails.

## IV. Descriptive Disclosure under Each Principle

## 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.

	Currently CSDC carries out most of its businesses within the territory of the People's Republic of China. The legal framework for the operation of CSDC includes laws, juridical interpretations, administrative regulations, ministerial rules and business acts, providing a comprehensive, clear, transparent and complete legal basis for all activities of CSDC.			
Summary	Relevant business rules, procedures and contracts formulated by CSDC are clear, understandable, consistent with laws and regulations and well implemented and observed. CSDC's business rules, as concrete requirements derived from relevant laws and regulations, are binding upon and enforceable against all parties participating in the registration and settlement business.			
	Now the legislative authority is pushing for revisions to the <i>Securities Law</i> . The key principles and basic regulations on securities registration and settlement in China will be further strengthened.			
Key consideration 1 The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	CSDC carries out important businesses mainly within the jurisdiction of the People's Republic of China. CSDC is the CSD, SSS and CCP for Chinese stock exchanges and provides central registration and settlement services for the trading and transfer of securities. With the launch of B-to-H Conversion, Shanghai-Hong Kong Stock Connect, Shenzhen-Hong Kong Stock Connect, Mainland-Hong Kong Mutual Recognition of Funds and other cross-border linkage programs, CSDC has been extending its activities to more jurisdictions.			
	China's legal framework for securities registration and settlement has formed a comprehensive, clear, transparent and complete legal basis that includes laws, juridical interpretations, administrative regulations, ministerial rules and business rules. Of them, the <i>Securities Law</i> is the paramount law in the securities registration and settlement field in China. The law prescribes a nationwide centralized approach to securities registration and settlement and provides a high degree of legal certainty for several business activities of CSDC. For example:			
	• Net settlement (Article 167 of the Securities Law and Articles 45 of the Measures for the Administration of Securities Registration and Settlement)			

	• Protection of customer assets (Articles 136, 139 and 168 of the <i>Securities Law</i> and Chapter V of the <i>Regulations on the Supervision and Administration of Securities Companies</i> )
	• DVP mechanism (Article 167 of the Securities Law and Articles 45 of the Measures for the Administration of Securities Registration and Settlement)
	• Settlement finality (Articles 120, 167 and 168 of the Securities Law and Articles 49 and 76 of the Measures for the Administration of Securities Registration and Settlement)
	• Prioritization of settlement assets in performing the contract (Articles 167 and 168 of the <i>Securities Law</i> );
	• Dematerialized (Articles 41 and 160 of the Securities Law).
	Currently the <i>Securities Law</i> is under a well-organized revision, with the draft revision reviewed twice by the Standing Committee of the National People's Congress. The revised <i>Securities Law</i> will further enhance and improve the important principles and basic policies for securities registration and settlement.
Key consideration 2 An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	In the legal system of securities registration and settlement, laws and ministerial rules only provide general principles in the practice. By contrast, business rules are standard rules for each specific securities trading instrument, representing an important basis for explaining each specific securities trading instrument and the legal relationship between the parties involved. To date, CSDC has issued more than 300 sets of business rules (including procedures and contracts). Under the <i>Securities Law</i> and the <i>Measures for the Administration of Securities Registration and Settlement</i> , CSDC reports its business rules to CSRC for approval or record purposes to ensure its business rules, procedures and contracts are consistent with relevant laws and regulations. In addition, to establish and improve its legal foundation and ensure its business operation conform to law and regulations, CSDC has also formulated the <i>Measures for the Formulation of Business Rules of the Company</i> , which clearly specifies the types and hierarchy of business rules, review criteria, approval procedures and sets forth comprehensive normative requirements in drafting business rules. In practice, CSDC strictly abides by all procedural and substantive requirements set forth in the <i>Measures for the Formulation of Business Rules of CSDC</i> in formulating business rules, as well as monitors the formulation and revision of relevant laws and regulations in its business fields to ensure that its business rules are scientific, lawful, clear and understandable.

Key consideration 3 An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.	All effective laws, judicial interpretations, administrative regulations, ministerial rules and business rules applicable to the business of CSDC are available on its website (www.chinaclear.cn). CSDC has set up a dedicated post responsible for maintaining and updating relevant contents in a timely manner. In addition, CSDC also publishes announcements or notices of the rules for relevant business activities on the media outlets designated by the competent authority. CSDC also sends information on relevant business rules to participants through remote platforms. CSDC holds training sessions targeted at general participants and agencies and promotes new businesses and new rules through lectures, symposiums, online video clips, so as to answer queries and help participants gain a better understanding of them. When drafting, maintaining and revising business rules, CSDC values and accepts the opinions and suggestions from competent authorities, participants and participants' clients, and is committed to explaining the legal basis of CSDC's business activities to all parties in a clear and understandable manner. In addition, CSDC keeps improving the accuracy and effectiveness of business rules through regular overhauls to ensure that the business rules available by inquiry to competent authorities, participants and clients of relevant participants are clear and consistent with business
Key consideration 4 An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	practices. The business rules, procedures and contracts of CSDC, which represent the concretization of relevant laws, regulations and ministerial rules, are binding upon and enforceable against all parties involved. CSDC requires its participants strictly abide by its business rules, procedures and contracts. The self-regulatory function of CSDC also assures the enforceability of its relevant rules, procedures and contracts. In addition, before launching an innovative business, CSDC will invite experts and scholars (including judges) to joint panel discussions and conduct analysis and reasoning of legal issues involved or give independent legal opinions. Therefore, as shown by its history of practices, CSDC's business rules, procedures and contracts have always been well enforceable. The actions taken by CSDC under such rules and procedures are backed by laws, thus ensuring a high degree of certainty that these actions will not be voided, reversed, or subject to stays. In practice, however, there are very few judicial authorities that have denied the enforceability of business rules. In amending the <i>Securities</i> <i>Law</i> , the legislature has taken notice of the demand for the enforceability of business rules of securities registration and settlement organizations. The few controversial issues are expected to be well

#### addressed following the amendment of the Securities Law.

Key consideration 5 An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

With B-to-H Conversion, Shanghai-Hong Kong Stock Connect, Shenzhen-Hong Kong Stock Connect, Mainland-Hong Kong Mutual Recognition of Funds and other cross-border linkage programs, CSDC has been extending its activities to more jurisdictions. When carrying out cross-border business with the approval of CSRC, CSDC carefully identifies the policy differences between jurisdictions, selects appropriate principles of application of law, fully communicates and coordinates with relevant parties, signs agreements, hires external lawyers to issue an independent legal opinion, establishes a cross-border regulatory cooperation mechanisms etc., so as to minimize risks caused by potential legal conflicts. In practice, no major conflict of laws has been found in cross-border business.

In addition, CSDC has been carefully studying the possible conflict of laws arising from cross-border business in the future, especially whether the legal basis provides a high degree of certainty when overseas investors conduct business in the mainland China and whether overseas investors are protected adequately. Within the scope of its own duties, CSDC takes the initiative to interpret laws and regulations, enhance the transparency of laws and regulations and ensure the domestic laws and regulations on securities registration and settlement are clear and understandable to overseas investors.

#### **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.

Summary	CSDC is a non-profit self-disciplinary organization subject to the regulation and supervision by CSRC. CSDC has clear governance arrangements that provide clear and direct lines of responsibility and accountability and discloses such arrangements through various channels to the public. To ensure the high priority of the safety and efficiency in all business operations, CSDC explicitly sets the objective of supporting financial stability, other relevant public interest considerations and relevant stakeholders.
	CSDC has clearly specified the roles and responsibilities of its Board of Directors, Board of Supervisors and management team. All members of its leadership team have the experience and skills necessary to discharge their responsibilities. CSDC has a clear risk management framework to enable management of risks and to ensure CSDC is able to fulfill the responsibility for financial stability and other public interests.
	All major decisions of CSDC basically reflect opinions of stakeholders and are disclosed to the public through various channels.
Key consideration 1 An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.	Under the <i>Securities Law</i> , CSDC is a non-profit corporation that provides central registration, depository and settlement services for securities transactions. In accordance with the <i>Articles of Association</i> of CSDC, the Company is to "create a centralized, safe and effective system of securities registration and settlement that meets the standardization and internationalization requirements, features openness and scalability, prevents market risks, boosts market efficiency and better meets the future development needs of China's securities market". CSDC has already established safety, efficiency and explicit support of financial stability and other public interest considerations as its basic goal in every aspect of its operation.
	In its day-to-day operation and major decision making, CSDC gives top priority to the safety and efficiency and the explicit support for financial stability and other relevant public interest considerations. With respect to day-to-day work, CSDC has in place reasonable management and control mechanisms and risk prevention to the maximum extent possible; CSDC also increases the efficiency of work by continuously enhancing risk control and internal management and improving internal workflows. In making major decisions and cooperating in market innovation, CSDC conducts thorough pre-assessment, tests the potential risks of new businesses and develops a contingency plan; CSDC also establishes a mechanism for ex-ante prevention, ongoing monitoring and timely resolution of problems. Also, CSDC is dedicated to preventing and controlling systemic risk and settlement risks, striving to increase market

efficiency and reduce market costs while controlling risks and protecting market safety.

The General Meeting of Shareholders, the Board of Directors, the Board of Supervisors and the management team of CSDC regularly deliberate, execute, assess and supervise the overall business objectives of CSDC within their respective sphere of duties. CSDC has developed relevant medium-term development plans and periodically assess the plan execution to ensure the above objectives are met, so as to support financial stability and other relevant public interest considerations.

Key consideration 2 An FMI should have documented governance arrangements that provide clear and of direct lines responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.

According to the Articles of Association, the governance structure of CSDC is well established. The specific arrangements are as follows: The Company has a General Meeting of Shareholders composed of two shareholders, namely SSE and SZSE. The general meeting of shareholders is held regularly each year to examine and approve the Company's annual budget, business strategy, major investments, asset disposal and other major or key issues. Under the General Meeting of Shareholders is the Board of Directors, which meets regularly or whenever deemed necessary each year to deliberate on major issues regarding management and business development of the Company. In addition, CSDC has a Board of Supervisors, which is an independent supervisory body in charge of internal supervision and risk management. CSDC has a company management team headed by the General Manager in charge of day-to-day management of the Company and collective decision making through such mechanisms as the General Manager's Work Meeting. All governance bodies work independently, perform their respective duties, support one another and provide checks and balances on one another. CSDC has documented Articles of Association and rules of procedure for decision-making meetings, etc.

To formulate any important business rules, CSDC as a self-regulatory organization must go through the procedure of soliciting inputs from market participants and ensure that such inputs are reasonably and fully absorbed. CSDC has a department designated for internal discipline and inspection. In addition, the Company also provides two-way communication channels to manage petition, complaint, consultation, feedback and the opinions of participants any time. In addition, CSDC is effectively supervised by regulatory authorities such as CSRC and can fully assume responsibility in implementing rules.

CSDC regularly holds the general meeting of shareholders to present important information to shareholders and conducts research on major

issues in	n the Comp	any's	operation.	CSDC reports	s in writing o	on the
Compan	y's operat	ion a	and importa	nt matters	that may ha	ave a
systemat	tic effect on	the n	narket regula	rly or when n	eeded.	
CSDC	discloses	its	corporate	governance	framework	and

organizational structure through its website, and announces or updates its senior management appointments/removals in a timely manner. In addition, CSDC discloses documentation via its website of major business decisions or business rules of the Company in a timely manner. Any participant or investor can log onto the Company's website to inquire about relevant information.

Key consideration 3 The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance	The Articles of Association of CSDC specifies the duties of its Board of Directors (the "BoD"). The BoD meetings are divided between regular meetings and special meetings. Regular meetings are held at least once a year, special meetings are held when necessary. Resolutions made at the BoD meeting must be approved by a majority of all directors. General Manager of the Company is responsible for organizing the implementation of the BoD resolutions and updating their progress to Chairman of the BoD in a timely manner. Minutes of BoD meetings shall be kept in writing. The BoD shall report to the shareholders and the securities regulatory authorities. As the supervisory authority for CSDC, CSRC represents the public interests. CSRC examines and approves the Company's appointment of important personnel and supervises the Company's major issues in accordance with the provisions of the Securities Law, the Measures for the Administration of Securities Registration and Settlement and other relevant laws and regulations.
and the performance of its individual board members regularly.	CSDC has established a three-pronged supervision system featuring oversights by regulatory authorities, shareholders and users. The existing corporate governance already forms a regular review mechanism. CSDC will advance the restraint mechanism towards better corporate governance.
Key consideration 4 The board should contain suitable members with the appropriate skills and incentives to fulfill its multiple roles. This typically requires the inclusion of non-executive board member(s).	At present, all BoD members of CSDC are senior experts in the financial field, who have years' experience in the securities/financial sector and served as senior executives of relevant companies or departmental heads of regulatory agencies. Their educational and work backgrounds have been carefully reviewed and kept in their personal files. CSDC grants full authority to its BoD members within the scope specified by its <i>Articles of Association</i> so that they can give full play to their respective skills and abilities. When selecting BoD members, the Company examines their operating philosophy and management ideas,

	especially on the talents that meet the needs of the Company's long-term development strategy.
	The non-executive BoD members are the directors appointed by SSE and SZEX, and do not take part in the Company's day-to-day management. Currently the Company has no independent BoD members. The position of independent BoD member will be set up and held by industry experts according to market needs and the Company's developments.
Key consideration 5 The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the	The <i>Rules of Procedure for the General Manager's Work Meeting</i> of CSDC clearly defines the responsibilities of the Company's management. The BoD of the Company meets each year to learn and assess the performance report of the management. At the end of each year, the securities regulatory authority will send a special assessment team to evaluate the work of the Company's management in the previous year. Under the leadership of the BoD, the management team takes charge of the day-to-day management of the Company.
integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.	All members of the management of CSDC are senior experts in the financial field. All of them have extensive experience in the securities/finance sector and once served as professional managers at securities regulatory agencies, stock exchanges or market institutions. They are familiar with the operation of the securities market and proficient in laws and regulations. They have maintained fairness, impartiality and integrity through their career.
	If it is necessary to replace senior management members, the securities regulatory authority will propose such replacement to the BoD of CSDC for discussion, and replace relevant personnel according to the resolution of the BoD.
Key consideration 6 The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance	The BoD of CSDC attaches great importance to the setup and refinement of its risk management framework. CSDC has formulated the <i>Provisional Measures for Comprehensive Management of Business</i> <i>Risks of the Company</i> and other internal policies and procedures to guide its work. CSDC has in place a risk management hierarchy that consists of the front-office business departments, middle-office business management departments and back-office risk management departments, Risk Management Committee of the Company and Risk Committee of the BoD, and has risk management responsibilities assigned to each hierarchical level. The BoD of the Company has a Board Risk Committee composed of directors representing shareholders and chaired by Chairman of the BoD. The Risk Committee is authorized by the BoD to examine and approve specific matters associated with risks, assist the BoD with its risk management

arrangements should ensure that the	duties and supervise the Company's management in executing risk management decisions.
risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.	The Company's management has a Risk Management Committee, which reports directly to the BoD. The Risk Management Committee is responsible for coordinating the day-to-day risk management work of the Company, and reporting its work on general risk matters and major risk matters to the General Manager's Work Meeting and the Board Risk Committee, respectively. Basically CSDC has a well-established governance framework to ensure that the risk management models it adopts are properly
	managed, and its risk management methods are constantly evaluated for completeness, effectiveness and efficiency.
Key consideration 7 The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.	Before making major decisions, CSDC will conduct thorough market research, organize relevant meetings to hear the opinions of stakeholders such as securities companies, settlement banks, listed companies, investors and exchanges. After the initial draft of documented policies and procedures is issued, the comments of stakeholders will be solicited through public channels such as Internet and paperwork, and the draft will be implemented on a trial basis. Full implementation will not begin until the condition is ripe as shown by trial implementation. Any conflict of interests with stakeholders will be addressed through coordination by CSRC. CSDC promptly discloses its main business rules and major business changes to investors through websites, securities journals and other channels. Investors can also voice their opinions through the Company's hotline.

## 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.

Summary	CSDC as a CSD, SSS and CCP is exposed to legal, credit, liquidity, general business, custody, investment, operational and other risks. CSDC has in place a comprehensive risk management framework. The Company has established a multi-tiered risk management system led by the Board of Directors, with specific duties assigned to each management level. The Company uses internal and external mechanisms to effectively identify, measure, monitor and manage various risks and assesses the risks the Company bears from or poses to other entities on
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	an irregular basis.
	CSDC has developed a business continuity plan. The Company regularly conducts emergency drills and continuously provides key operations and services to minimize losses and the impact of emergencies in order to maintain financial stability. CSDC will develop a more specific plan for recovery or orderly wind-down at the appropriate time.
Key consideration 1 An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be	CSDC is exposed mainly to legal, credit, liquidity, operational, general business, custody and investment risks. At present, CSDC has a sound risk management framework. The Company has established a multi-tiered risk management system led by the Board of Directors, with duties assigned to each management level. The comprehensive risk management framework specifies three lines of defense and the roles and responsibilities of the headquarters and branches, and sets out the management requirements regarding information collection, risk identification, risk assessment, risk monitoring and risk disposal and reporting. With a well-established risk screening mechanism, CSDC has improved its emergency preparedness arrangements and boosted its risk response capabilities. The comprehensive risk management system works well to effectively prevent these risks.
subject to periodic review.	Internally, CSDC maintains and employs an integrated risk monitoring system, which allows for the risk monitoring of settlement participants. It enables as well as calculation and monitoring of liquidity coverage ratio, and real-time dynamic monitoring and analysis of business pressures and trends. CSDC optimizes its IT architecture from time to time to ensure that the IT systems can handle a business volume three times the historical peak. The Company can identify any deficiency in the IT system capacity in advance and upgrade its capacity. In addition, the Company has established a stress testing mechanism and set stress scenarios pursuant to PFMI requirements in order to stress-test liquidity, credit and other risks. Externally, CSDC receives strong technical support for preventing credit risk to settlement participants, which is provided by external mechanisms such as front-end monitoring of securities companies and third-party depository banks for customer funds. The front-end monitoring of securities short-selling guards against default risk for securities delivery, and the third-party depository mechanism for customer funds guards against default risk for settlement policies, procedures and systems has been tested in practice. CSDC adjusts its risk management policies according to changes in the market environment.
Key consideration 2 An FMI should provide incentives to	CSDC provides and gradually improves incentives and disincentives to parties to settlements. As an example of a disincentive, when one party breaches participation requirements (e.g. shortfall of securities, overdraft or failure to meet the minimum reserve requirement), CSDC will take

participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	measures such as a written warning, disciplinary interview, notice of criticism and disqualification from participation, as appropriate. As for positive incentives, if a settlement participant receives a good rating for the settlement's overall assessment, CSDC will support its innovative business to the extent permitted by business rules.
Key consideration 3 An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk management tools to address these risks.	In addition to settlement participants, CSDC has different degrees of business ties with settlement banks, HKSCC Nominees Limited, CDC and CFFEX as a result of interdependencies. For settlement banks, CSDC has formulated the <i>Measures for the Administration of Securities</i> <i>Funds Settlement via Settlement Banks</i> , which provides for the eligibility management, business management, routine management, risk management and annual inspection of settlement banks. CSDC has formulated a series of policies setting forth the rights and obligations of settlement participants. CSDC has established an integrated risk monitoring system to monitor the liquidity and capital adequacy of settlement participants. When linking with other FMIs, CSDC assesses the material risks it bears from or poses to other FMIs. For details, please see the description under Principle 20.
Key consideration 4 An FMI should identify scenarios that may potentially prevent it from being able to provide its	CSDC has developed a comprehensive recovery plan, taking into account the circumstances that may prevent it from providing services (including judicial proceedings, cooperating with law enforcement, violent emergencies, fires, earthquakes, declaration of CSDC bankruptcy by a court, decision by regulatory authorities to dissolve, split up or reorganize CSDC in accordance with the law, or by the General Meeting of Shareholders to dissolve CSDC, etc.).
critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide	CSDC has a well-established contingency plan for various scenarios and conducts regular emergency drills to ensure business continuity, effectively reduce losses and the impact of emergencies, and maintain safe and stable operation of its securities registration and settlement system. In addition, CSDC has provided the relevant information and suggestions to the CSRC for revision of its resolution plan. CSDC sets forth its wind-down scenario and the principles for bankruptcy liquidation upon wind-down in its <i>Articles of Association</i> .
relevant authorities with the information needed for purposes of resolution planning.	

## 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 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 two participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

Summary	As a CCP, CSDC has established policy arrangements for managing six aspects of settlement participant credit risk, namely screening of settlement participants, DVP settlement mechanism, financial resource arrangements, risk monitoring, default by settlement participants and external supervision mechanisms. CSDC uses historical transaction price data to monitor the funds payable by settlement participants, and uses product-specific tools to manage market credit risks. CSDC uses the following financial resources to cover its current exposures and potential future exposures: a minimum settlement reserve, settlement margin, T-bond pre-issue margin, pledge-style repurchase margin, settlement risk fund, general risk reserve and proprietary capital. With the above policy arrangements and financial resources in place, CSDC is able to cover the largest aggregate credit exposure which could potentially be caused by the default of the largest two settlement participants and their affiliates under extreme but plausible market conditions. As an SSS and CSD, CSDC is exposed to no credit risk.
Key consideration 1	I. As a CCP
An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising	CSDC has established a systematic management framework for settlement participant credit risk. The framework is six-pronged: screening of settlement participants, a DVP settlement mechanism, financial resource arrangements, risk monitoring, default by settlement participants and external supervision mechanisms.
credit risks arising from its payment,	i. Screening of settlement participants
clearing, and	CSDC has formulated the Rules for the Management of Settlement
settlement processes.	Participants, which encompasses the eligibility requirements,
Credit exposure may	supervision and inspection and risk management of settlement
arise from current	participants (for details, please see the description under Principle 18).
exposures, potential	With regard to settlement funds, CSDC is theoretically exposed to credit
future exposures, or	risk from settlement banks, albeit at a low level given China's particular

both.	financial management mode and banking system. In addition, CSDC has formulated the <i>Measures for the Administration of Securities Funds</i> <i>Settlement via Settlement Banks</i> and entered into agreements on the management of securities transaction settlements with settlement banks, thus ensuring the safety of settlement funds and keeping CSDC's credit exposure to settlement participants under control.
	ii. DVP Settlement Mechanism: Principal Risk Prevention
	CSDC implements product-specific DVP settlement arrangements. Some products are subject to a non-standard DVP mechanism, while some innovative products are subject to the standard DVP mechanism (for details, please see the description under Principle 12).
	iii. Financial Resource Arrangements: Prevention of Spread Risk and Liquidity Risk
	CSDC has access to the following financial resources for covering default losses: proceeds from disposal of collateral (including proprietary securities) provided by defaulting settlement participants, settlement margins paid by defaulting settlement participants, settlement margins (mutual-guarantee portion) paid by other settlement participants, a settlement risk fund and general risk reserve. If the use of the above financial resources results in deficiency of the settlement margin or settlement risk fund, CSDC will restore them to the required minimum levels. The general risk reserve is gradually replenished according to CSDC's profitability.
	CSDC has access to the following financial resources for addressing liquidity risk: The mutual-guarantee portion of settlement margins, a settlement risk fund, general risk reserve and liquidity support from commercial banks.
	In addition, under the Mainland-Hong Kong Stock Connect program, CSDC's Shanghai and Shenzhen branches collect the marks and margin from domestic settlement participants respectively according to their outstanding settlement positions, pursuant to the risk management requirements of HKSCC Nominees Limited. Marks mean, with respect to market risk, a risk management measure whereby the unsettled stock position under the continuous net settlement (CNS) system is computed and collected. Margin means the potential risk arising from the market price movements in closing-out of the defaulting settlement participant's position.
	iv. Risk Monitoring
	CSDC continually reworks and improves its integrated risk monitoring system. At present, it has completed the development and launch of the third phase of this system. The project is two-dimensional (market risk and settlement participant risk) and covers multiple aspects, including settlement compliance and bond repurchase.
	v. Default by Settlement Participants

	If a settlement participant defaults, CSDC may take such measures as confiscating securities or disposing of securities to cover the amount of the default in accordance with the procedures set forth in the <i>Measures</i> for the Administration of Securities Registration and Settlement. To address the settlement participant's default in a multilateral net settlement, CSDC has formulated the <i>Rules for Handling Securities</i> Awaiting Disposal in order to standardize the disposal mechanism. (For details, please see the description under Principle 13)
	vi. External Supervision Mechanisms
	CSDC has strengthened external supervision mechanisms. In cooperation with SSE and SZSE, it imposes a limit on the total amount of net buys in one day per relevant trading unit declared by trading participants. The exchanges' front-end monitoring of trading participants prevents trade abnormalities and settlement risks caused by technical failures or the operational errors of trading participants or settlement participants, thereby shifting risk control safeguards toward the front line.
	II. As a SSS and CSD
	CSDC provides DVP settlement on a multilateral net basis and on a gross, obligation-by-obligation basis, as well as free-of-payment (FOP) settlement services, to settlement participants.
Key consideration 2 An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.	CSDC identifies credit risk at two levels of assessment: First, the Company conducts a risk assessment of each product and its settlement model to identify the impact of various models on credit risk exposure. Second, the Company conducts overall credit risk assessments at the settlement participant level.
	In light of the front-end monitoring of securities sales by stock exchanges, CSDC's credit risk exposure to settlement participants is centered on fund settlement when CSDC acts as a CCP. The Company manages both principal risk and spread risk of A-shares and closed-end funds, and mainly manages spread risk of businesses (such as ETF) covered by the standard DVP mechanism. Pledge-style bond repurchases are secured by bonds pledged as collateral. CSDC calculates the above credit risks on each trading day.
	According to the daily clearing and pre-settlement results, CSDC determines the amount of funds payable by each settlement participant according to the historical transaction price. However, CSDC has not yet created a mechanism for re-evaluating the credit risk exposure according to the current or future market conditions.
	Currently, CSDC controls the above credit risks mainly through financial resource arrangements and external mechanisms. In terms of financial resources, CSDC requires settlement participants to provide the settlement reserve collateral and margin (specific requirements vary by product), etc., and maintains a settlement risk fund to cover losses that could potentially be caused by the default of settlement participants. In

	terms of external mechanisms, customer funds are fully deposited in third-party commercial banks to ensure their safety, and customer transactions are subject to full margining. But there is no third-party depository system for institutional investors, such as proprietary trading by securities companies. CSDC has established front-end risk monitoring for securities transaction funds, which imposes a limit on the total amount of net buys declared in one day with respect to such institutions' settlement funds. The exchange will issue a warning against and restrict over-limit buys, thereby shifting settlement risk control safeguards toward the front line and reducing the impact of spread risk and credit risk.
	For settlement of A-share transactions, CSDC largely relies on external risk management systems such as front-end monitoring of securities and third-party depositories for customer funds. CSDC has established its own credit risk measurement methods for measuring risk exposure on a regular basis.
Key consideration 3 A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest	As an SSS, CSDC provides neither credit nor a guarantee of settlement to participants during the settlement stage. Therefore, CSDC bears no credit risk from counterparties to settlement.

aggregate		credit
exposure	in	the
system.		

#### Key consideration 4

A CCP should cover its current and future potential exposures to each participant fully with a high degree of confidence using margin other and financial prefunded resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important multiple in should jurisdictions additional maintain financial resources 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 largest cause the credit aggregate exposure for 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

As a CCP, CSDC faces settlement risk arising from the open positions of counterparties (settlement participants). The credit risk exposure of settlement participants is mainly covered by financial resources, including a minimum settlement reserve, settlement margin, stock option margin, pledge repo transaction margin, T-bond pre-issue margin, general risk fund and settlement risk fund.

Of the above financial resources, the minimum settlement reserve, settlement margin, stock option margin and general risk fund are either directly held or controlled by CSDC, or deposited with banks in the name of CSDC, and can be used by CSDC in accordance with established rules. The settlement risk fund can only be used upon approval by regulatory authorities (CSRC and the Ministry of Finance), subject to a minimum payment limit of RMB20 million.

At present, CSDC has established a stress testing mechanism to track the risk exposure to settlement participants.

CSDC is systemically important only within the jurisdiction of the People's Republic of China, and is not "involved in activities with a more-complex risk profile." According to the 2018 annual monitoring results of CSDC's integrated settlement risk monitoring system, the financial resources are able to cover the risk exposure resulting from a default by two participants and their affiliates that would generate the largest aggregate obligation to CSDC under extreme but plausible market conditions. The integrated risk monitoring system forecasts the scale on a daily basis.

limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.	
Key consideration 5 A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and	CSDC's integrated risk monitoring system forecasts the risk exposure resulting from default by the largest settlement participant or participants on a daily basis, calculates financial resources according to the results of the daily stress test and assesses the adequacy of financial resources. The stress test results are provided to the Company's management to provide support for its decision making. CSRC conducts stress tests using standard and predetermined parameters and assumptions. CSDC reviews, summarizes and analyzes stress test results on a monthly basis. In the event of violent market fluctuations, CSDC conducts stress tests more frequently. CSDC verifies the effectiveness of the risk management model year-on-year.

assumptions. On at	
least a monthly basis,	
a CCP should perform	
a comprehensive and	
thorough analysis of	
stress testing	
scenarios, models, and	
underlying parameters	
and assumptions used	
to ensure they are	
appropriate for	
determining the CCP's	
required level of	
1	
default protection in	
light of current and	
evolving market	
conditions. A CCP	
should perform this	
analysis of stress	
testing more	
frequently when the	
products cleared or	
markets served	
display high volatility,	
become less liquid, or	
when the size or	
concentration of	
positions held by a	
CCP's participants	
increases significantly.	
A full validation of a	
CCP's	
risk-management	
model should be	
performed at least	
annually.	
unnun y.	
Key consideration 6	In conducting stress testing, CSDC will consider whether the Company's
	financial resources are sufficient to ensure successful settlement in the
In conducting stress	event of defaults under extreme market conditions, such as the default of
testing, a CCP should	
consider the effect of	the largest, largest two or largest five net settlement participants. In
a wide range of	regards to such testing, CSDC also assesses whether the liquidity
relevant stress	resources are sufficient to cover risk exposure during extreme price
scenarios in terms of	movements or that caused by price changes during the bond disposal
both defaulters'	period. Stress scenarios are designed to include market factors such as
positions and possible	peak historic price volatilities.
price changes in	
liquidation periods. Scenarios should	
Scenarios should	

include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.	
Key consideration 7 An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue	According to CSRC's <i>Measures for the Administration of Securities</i> <i>Registration and Settlement</i> , if the defaulting settlement participant fails to replenish funds and securities within the specified period, the securities registration and settlement organization may dispose of the collateral provided by the defaulting settlement participant and securities pledged for repurchase in the collateral depository, and sell the securities in the special recourse account. If securities or funds cannot be recovered within the prescribed time limit, the securities registration and settlement organization may use the settlement margin and settlement risk fund to cover the loss. In the case of settlement default, the loss incurred is generally covered by the following financial resources, in descending order of priority: (1) the cash component of collateral provided by the defaulting settlement participant; (2) the portion of the settlement margin paid by the defaulting settlement participant; (3) the portion of the settlement margin paid by other settlement participants; (4) the settlement risk fund; (5) others. CSRC sets forth the rules and procedures for replenishing exhausted financial resources during a stress event in its <i>Measures for Management</i> <i>of the Securities Settlement Risk Fund</i> and <i>Measures for Management of</i> <i>the Securities Settlement Margin</i> .

to operate in a safe
1
and sound manner.

## **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.

	CSDC has formulated clear rules to ensure that routinely accepted collateral is low risk in terms of credit, liquidity, and the market, and takes appropriate measures to monitor and ensure the collateral meets standards.
	For pledge-style bond repurchase, CSDC manages acceptance of collateral by setting and adjusting "repo eligibility" to ensure that only bonds with low credit, liquidity, and market risks are accepted as collateral.
Summary	CSDC determines the applicable valuation level of a bond pledged as collateral by taking into account the latest market price of the bond, external third-party valuation and internal valuation, and prudently determining which is the lowest. In addition, CSDC makes continual improvements to the dynamic adjustment mechanism for the valuation of collateral bonds.
	At present, as an integral part of CSDC's registration and settlement system, the collateral bond management system for pledge-style repurchase spans a comprehensive set of functions and performs effectively.
Key consideration 1 An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.	CSDC determines the scope of eligible collateral and accepts relevant collateral pursuant to established business rules in order to ensure that the assets it accepts as collateral pose low credit, liquidity, and market risks.
	For pledge-style bond repurchase, CSDC manages collateral acceptance by setting and adjusting "repo eligibility" and endows Government bonds, Policy financial bonds and high-rating credit bonds with "repo eligibility" in order to deem them acceptable as collateral for pledge-style bond repurchase. in terms of credit bonds, CSDC currently accepts credit bonds with an issuer rating of AA and a facility rating of AAA or above as collateral for pledge-style bond repurchase according to the rating information available from rating agencies designated by the issuer.
	In addition, CSDC continues to improve the dynamic management mechanism for the valuation of collateral bonds. The Company adjusts the haircut applicable to bonds in a timely manner in accordance with

	the Administrative Measures for Bond Haircuts, taking into account the market implied rating mechanism, internal credit rating mechanism, regulatory linkage mechanism and risk monitoring and screening results. Collateral bonds with serious risks will be removed in a timely manner. In designing the formula for calculating the haircut of standard bonds, CSDC assesses the haircut's appropriateness by using historical data, in order to demonstrate the adequacy of the relevant haircut. As for settlement collateral, CSDC accepts securities such as stocks as collateral, including "securities that are publicly traded on stock exchanges with good performance, good liquidity and appropriate float size," as set forth in the second paragraph of Article 3 of the Measures
Key consideration 2 An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.	At present, the valuation of securities collateral. At present, the valuation of securities collateral mainly involves pledge-style bond repurchase. CSDC determines the applicable valuation level of a bond pledged as collateral by taking into account the latest market prices, external third-party valuation accepted in market and internal valuation, and prudently determining which is the lowest.
	In recent years, CSDC has researched, established and improved the internal valuation system from the perspective of CCP risk management. Risk-adjusted valuation is determined by applying a haircut to a simple valuation based on internal credit risk assessment, historical extreme value fluctuations and adequacy of market-based pricing. It will be phased in as a valuation standard for the management of collateral for pledge-style bond repurchase that ensures quick and full liquidation in most risk circumstances.
Key consideration 3 In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.	CSDC prudently assesses the potential procyclicality of haircuts on collateral bonds in pledge-style repurchases. CSDC has established a dynamic adjustment mechanism for collateral bonds. The Company regularly assesses the procyclical risks of collateral bonds and takes preemptive counter-cyclical management measures to adjust the haircut level of collateral bonds with potential pro-cyclical risks.
Key consideration 4 An FMI should avoid concentrated holdings of certain assets where this would significantly impair	Securities are pledged as collateral mainly in pledge-style bond repurchase. CSDC regularly checks the market concentration of collateral bonds, pays extra attention to any overconcentration of collateral bonds and adjusts the applicable haircut as appropriate, according to the concentration of collateral bonds. In addition, CSDC responsibly manages the concentration of collateral bonds held by the

the ability to liquidate such assets quickly without significant adverse price effects.	repo borrower in the name of the settlement participant. In addition, settlement collateral is applicable to the collateral provided by the settlement participant in case of settlement default. The concentration level is primarily dependent on the participant's proprietary securities trading.
Key consideration 5 An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.	CSDC currently accepts no cross-border collateral.
Key consideration 6 An FMI should use a collateral management system that is well-designed and operationally flexible.	For pledge-style bond repurchases, the collateral bond management system is part of CSDC's settlement registration and settlement system, and mainly provides settlement participants with remote submission, transfer-out and collateral bond replacement services. In addition, CSDC has in place an independent collateral management system with assigned full-time and stand-by duties. It provides participants with third-party collateral management services, including collateral deposits, withdrawals, replacements, trading, returns, mark-to-market calls, rights and interests handling, default disposal, inquiry and statistics.

## 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.

	CSDC has established a margin system that is based on risks, specific businesses, investment portfolios and the markets it serves. The Company assesses and adjusts models and related systems from time to time to ensure that margins can cover its credit exposures to participants for each type of product with a high degree of confidence.
Summary	CSDC requires settlement participants to pay the minimum settlement reserve, settlement margin, margin for T-bond pre-issue and stock option margin for stock option trading. In estimating the key parameters and inputs of the margin model, CSDC takes into account the market risk, price fluctuations, trading cycle and other factors of equity and fixed income products. Different ratios are used in the calculation to effectively cover relevant risks. CSDC has established clear margin call period arrangements and mark-to-market policies, and has applied back testing, sensitivity analysis and other methods to routine risk

management.

Before making any material adjustments to the margin system, CSDC follows the procedures for major business changes, including internal special discussions, solicitation of market participant opinions and examination and approval by regulatory authorities.

### Key consideration 1

A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves. CSDC has established a margin system that is based on risks, certain services it provides, investment portfolios and the markets it serves. Specifically, it includes a minimum settlement reserve, settlement margin, T-bond pre-issue margin and stock option margin.

### I. Minimum Settlement Reserve

The securities settlement reserve is the money deposited for settlement purposes by a settlement participant in their settlement reserve account with CSDC. CSDC determines the minimum settlement reserve ratio applicable to each settlement participant on a monthly basis according to their risk level. It also determines the limit on each settlement participant's minimum settlement reserve according to their average daily amount of securities purchases in the previous month and their minimum settlement reserve ratio.

### **II. Settlement Margin**

The securities settlement margin is the money paid by a settlement participant and allocated by CSDC pursuant to regulations, in order to advance the liquidity of the settlement system, cover the default losses incurred by the overdraft settlement participant (self-guarantee) and those of other settlement participants (mutual guarantee). Settlement margining focuses on spread risks posed by different types of products and services. The settlement margin is calculated separately for proprietary transactions and customers' transactions and paid on a monthly basis.

### **III. T-Bond Pre-Issue Margins**

In its T-bond pre-issue business, CSDC collects performance bonds and spread margins from settlement participants to guarantee the performance of future contractual obligations in T-bond pre-issue transactions. The T-bond pre-issue margin is calculated and collected on a daily basis according to positions and historical transaction prices.

### **IV. Stock Option Margin**

In its stock option business, CSDC collects option margins from settlement participants. In option trading, the minimum settlement reserve must be paid pursuant to certain rules in order to open an option position. At the end of each day, CSDC calculates the maintenance margin for investors in an obligor open position, on a mark-to-market basis according to price fluctuations and the end-of-day position.

All the above business policies set forth relevant margin methods, including the formula for calculating the margin amount and the

Key consideration 2 A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available	<ul> <li>collection procedure. For products subject to CSDC's multilateral net settlement, the credit risk exposure to the settlement participant is mainly determined by the size of the net amount payable by the participant, amounts of settlement reserve deposited, the settlement margin paid, and the price fluctuations of securities receivable during the disposal period.</li> <li>In addition, under the Mainland-Hong Kong Stock Connect program, CSDC's Shanghai and Shenzhen branches collect the marks and margins from domestic settlement participants according to their respective outstanding settlement positions pursuant to the risk management requirements of HKSCC Nominees Limited. For details, please refer to the relevant business rules of CSDC.</li> <li>The price data used in CSDC's settlement margin model come from stock exchanges.</li> <li>To ensure timely and reliable data, CSDC has signed memoranda with the stock exchanges specifying the content, time and other aspects of data exchange, which sets the level for abnormalities and establishes relevant countermeasures.</li> </ul>
or reliable. Key consideration 3 A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should	The estimation of the key parameters and inputs of the minimum settlement reserve model only involves the spread risk of the securities purchased by the defaulting participant. Assuming that default disposal is completed within two trading days, the maximum risk exposure will be the sum of the largest possible drops in price in two trading days. Therefore, the minimum settlement reserve ratio is set at 10% for bonds and 20% for other securities.
	The key parameters and inputs of the settlement margin model are estimated by covering the spread risk during the period from the conclusion of the transaction to completion of the disposal with a high level of probability. Therefore, with reference to the historical simulation method and according to the historical movements in the representative securities market price indices, the maximum disposal spread ratio during the disposal period is determined at a 99% confidence level. At present, the disposal spread ratios for equities in Beijing, Shanghai and Shenzhen markets are 15%, 13% and 15% respectively. The spread ratios for fixed income are 1.5%, 3.5% and 1.5% respectively.
meet an established single-tailed confidence level of at least 99 percent with	Regarding the estimation of key parameters and inputs of the T-bonds pre-issue model, the performance bond ratios of T-bonds pre-issue are set at 1%, 2%, 3%, 4% and 5% for the key terms of 1 year, 3 years, 5

respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilizing, procyclical changes.	years, 7 years and 10 years respectively, which cover the greatest price volatility for T-bond prices for each key term in the past five years. The performance bond for T-bonds pre-issue is not pro-cyclical, however its spread margin is pro-cyclical when the market falls. To support market liquidity and complete risk disposal as soon as possible in order to cover overdrafts, CSDC usually completes liquidation within two trading days and sets the margin level in accordance with relevant risk disposal procedures. In terms of option margins, settlement participants must pay the minimum settlement reserve in accordance with certain rules. In addition, at the end of each day, CSDC adopts a mark-to-market approach to calculating and collecting the maintenance margins for investors with holdings in an obligor open position according to price fluctuations. At present, there are three main principles for calculating the option margin: covering the spread risk of two consecutive trading days with a high probability; considering deduction of the out-of-the-money options when collecting the margin for out-of-the-money options in order to improve the fund efficiency (but the margin after out-of-the-money deduction shall not be lower than the maintenance margin collected at the preset minimum maintenance margin ratio); requiring the settlement participant to collect a margin from investors that is not less than the margin collected by CSDC from settlement participants. Overall, the above-mentioned types of margins are not significantly pro-cyclical. CSDC effectively covers possible risks with a high degree of confidence, using a margin system.
Key consideration 4 A CCP should mark participant positions to market and collect variation margin at least daily to limit the	CSDC has developed business-specific policies to monitor risks. Specifically, the minimum reserve and settlement margins are collected on a monthly basis, without daily marking to market. For T-bond pre-issue, performance bonds are collected at a fixed ratio to the unilateral transaction value, and spread margins are collected in the amount of the closing-out loss. For T-bond pre-issue through interest rate auctions, performance bonds are collected at a fixed ratio to the

build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.	trade par value, and spread bonds are collected at a fixed ratio to the expected closing-out loss. As for option margins, a daily mark-to-market policy is adopted without intraday margin calls.
Key consideration 5 In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorized to offer cross-margining, they must have appropriate safeguards and harmonized overall risk-management systems.	The margin system of CSDC is in its infancy. There are no cross-margining arrangements at present.
Key consideration 6 A CCP should analyze and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment	At present, CSDC applies back testing, sensitivity analysis and other methods to day-to-day risk management. In settlement risk assessment, CSDC conducts stress back testing based on historical data on spot settlements and bond repurchase settlements. In terms of sensitivity analysis, based on a full consideration of various parameters and assumptions, CSDC conducts sensitivity analysis on the performance of various models and overall margin coverage under various scenarios regarding the number of defaulting settlement participants (1, 2, 5, etc.), range of price fluctuations (down 1%, 2%, 5%, etc.), price changes in the underlying instrument of option (5%, 10%, 15%, etc.) and interest rate hikes (up 10 bps, 100 bps, 200 bps, etc.).

of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.	
Key consideration 7 A CCP should regularly review and validate its margin system.	When business innovation or market changes require substantial adjustments to the margin computation and collection methods, CSDC follows the procedures for major business changes, including special internal discussions, solicitation of market participants' opinions and examination and approval by regulatory authorities, before determining such adjustments.

## 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.

Summary	As a CCP, CSDC has established a relatively sound liquidity risk management framework to manage liquidity risks from all settlement participants and settlement banks. CSDC identifies, measures and monitors liquidity risks via its settlement system, fund management system and the integrated risk monitoring system. CSDC holds sufficient liquidity resources to cover the liquidity risks posed to CSDC by default of both participants and their affiliates that would generate the largest aggregate liquidity obligations under extreme but plausible market conditions.
	As an SSS, CSDC does not provide temporary advance service to

	settlement participants, so there is no liquidity risk.
Key consideration 1 An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks,	CSDC has a risk management framework for managing liquidity risks from all relevant entities, including settlement participants and settlement banks. CSDC has formulated the <i>Measures for the</i> <i>Administration of Securities Funds Settlement via Settlement Banks</i> to manage liquidity risks from settlement banks, and has set forth a framework for managing liquidity risks from settlement participants in the <i>Rules for Management of Settlement Participants</i> .
nostro agents, custodian banks, liquidity providers, and other entities.	CSDC's integrated risk monitoring system includes liquidity risk monitoring features. The system quantitatively monitors CSDC's total financial resources and the liquidity risks that may be caused by default of settlement participants and reduction of collateral haircut, and coordinates with its various departments to take measures.
	The fund management systems of CSDC's branches monitor the distribution of CSDC's settlement reserve deposits among banks on a real-time basis and allocate funds accordingly.
	In addition, policy arrangements such as settlement margins, the settlement risk fund, settlement bank credit lines and CSRC's general risk reserve all guard against liquidity risk.
Key consideration 2 An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.	CSDC identifies, measures and monitors settlement and funding flows through its settlement system, fund management system and integrated risk monitoring system. The settlement system is the main source of settlement and funding flow data. The integrated risk monitoring system identifies, measures and monitors settlement and funding flow using a series of risk monitoring indicators. The fund management system monitors and adjusts the distribution of settlement reserves among banks on a real-time basis.
Key consideration 3 A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a	As an SSS, CSDC neither guarantees settlement nor provides temporary advance services to settlement participants, so it is exposed to no liquidity risk.

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 payment obligation in extreme but plausible market conditions.	
Key consideration 4 A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time 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 payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should	According to the annual results of CSDC's integrated risk monitoring system from 2017, the settlement reserve and settlement risk fund can fully cover the liquidity shortfall resulting from default of both settlement participants and their affiliates that would generate the largest aggregate liquidity obligation to the CCP under extreme but plausible market conditions. CSDC maintains sufficient liquid resources to meet debt obligations with a high degree of confidence under potential stress scenarios. The current stress scenarios take into account the risks that CSDC may face under extreme but plausible market conditions. In the Shanghai/Shenzhen-Hong Kong Stock Connect program, CSDC is not a systemically important FMI in the Hong Kong market.

consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.	
Key consideration 5 For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions If an FMI has access to routine credit at the central bank of issue, the FMI	<ul> <li>CSDC's qualifying liquid resources mainly include the following:</li> <li>Cash, including settlement margins, general risk reserves and settlement risk funds.</li> <li>Liquidity support from settlement banks.</li> <li>CSDC maintains sufficient qualifying liquid resources. CSDC established the liquidity coverage ratio (LCR) monitoring indicators in June 2014 (LCR = liquid resources/∑ (net amount of funds payable by settlement participants × expected default rate)), and issues a settlement risk monitoring report on a monthly basis. For example, in the first quarter of 2018, the minimum value of either the LCR or intraday liquidity stress value after default exceeded the preset "watch" level.</li> </ul>

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Key consideration 6

An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form that of assets are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be prearranged reliably guaranteed in or extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take what account of collateral is typically accepted by the relevant central bank, as such assets may be likely to be more liquid in stressed circumstances. An

Supplemental liquid resources currently available to CSDC include securities pledged as collateral by defaulting settlement participants involved in pledge-style repurchase transactions. According to the *Rules for Bond Registration, Custody and Settlement* and other relevant business rules, CSDC has the right to dispose of relevant collateral bonds to cover the overdraft amount if a settlement participant defaults on settlement and fails to remedy the default in a timely manner. CSDC can dispose of collateral bonds through exchange-based trading and over-the-counter inquiry, ensuring quick liquidation with a high degree of reliability.

Historically, under extreme market conditions, CSDC has pledged collected collateral to the central bank for emergency liquidity support, but has not yet created any routine policy arrangements.

FMIshouldnotassumetheavailabilityofemergencycentralbankcreditas a partitsliquidityplan.	
Key consideration 7 An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.	Stock exchanges have a front-end monitoring mechanism to restrict short selling of securities, so CSDC is currently without a securities liquidity provider. In practice, the current providers of cash liquidity for CSDC are mainly CSDC's settlement banks. All of CSDC's settlement banks are large commercial banks that can directly participate in the inter-bank market and are eligible for liquidity support from the central bank. CSDC regularly examines the financial position of settlement banks to ensure that liquidity providers have sufficient information to understand and manage their associated liquidity risks with respect to a particular currency.
Key consideration 8 An FMI with access to central bank accounts, payment services, or	Not applicable. CSDC does not have or has no access to central bank accounts, payment services, securities services or collateral management services.
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securities services	
should use these	
services, where	
practical, to enhance	
its management of	
liquidity risk.	
Key consideration 9	CSDC is able to determine the amount of its liquid resources and
An FMI should	regularly stress-test its LCR, in order to check whether the Company's
determine the amount	liquid resources are sufficient to ensure successful settlement in the
and regularly test the	event of the default of the largest, largest two or largest five net
sufficiency of its	settlement participants. The stress test results are reported to the
liquid resources	manager. For example, in the first quarter of 2018, the minimum of
through rigorous	either the LCR or intraday liquidity stress value after default exceeded
stress testing. An FMI	the preset "watch" level.
should have clear	In conducting stress testing, CSDC considers a wide range of relevant
procedures to report	scenarios, including relevant peak historic price volatilities, shifts in
the results of its stress	other market factors such as price determinants and yield curves,
tests to appropriate	multiple defaults over various time horizons, simultaneous pressures in
decision makers at the	funding and asset markets, and a spectrum of forward-looking stress
FMI and to use these	scenarios under a variety of extreme but plausible market conditions.
results to evaluate the	
adequacy of and	
adjust its liquidity risk	
management	
framework. In	
conducting stress	
testing, an FMI should	
consider a wide range	
of relevant scenarios.	
Scenarios should	
include relevant peak	
historic price	
volatilities, shifts in	
other market factors	
such as price	
determinants and yield	
curves, multiple	
defaults over various time horizons,	
simultaneous	
pressures in funding	
and asset markets, and	
a spectrum of	
forward-looking stress	
scenarios in a variety	
of extreme but	
plausible market	
conditions. Scenarios	

should also take into	
account the design and	
operation of the FMI,	
include all entities that	
might pose material	
liquidity risks to the	
FMI (such as	
settlement banks,	
,	
0,	
,	
liquidity providers,	
and linked FMIs), and	
where appropriate,	
cover a multiday	
period. In all cases, an	
FMI should document	
its supporting	
rationale for, and	
should have	
appropriate	
governance	
arrangements relating	
to, the amount and	
form of total liquid	
resources it maintains.	
Key consideration 10	The Securities Law, Measures for the Administration of Securities
Rey consideration 10	Registration and Settlement and CSRC's relevant rules and procedures
An FMI should	enable CSDC to promptly effect same-day and, where appropriate,
establish explicit rules	intraday and multiday settlement of payment obligations, following any
and procedures that	
enable the FMI to	individual or combined default among its settlement participants.
effect same-day and,	
	In case of a settlement participant's default on money settlement.
where appropriate.	In case of a settlement participant's default on money settlement, Measures for the Administration of Securities Registration and
where appropriate,	Measures for the Administration of Securities Registration and
intraday and multiday	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC
intraday and multiday settlement of payment	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for
intraday and multiday settlement of payment obligations on time	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine
intraday and multiday settlement of payment obligations on time following any	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity
intraday and multiday settlement of payment obligations on time following any individual or	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure
intraday and multiday settlement of payment obligations on time following any individual or combined default	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants.	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants. The Liquidity Contingency Plan sets forth certain monitoring indicators
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants. The Liquidity Contingency Plan sets forth certain monitoring indicators
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity	Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants. The Liquidity Contingency Plan sets forth certain monitoring indicators to detect unpredictable potential liquidity risks.
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially	<ul> <li>Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.</li> <li>The Liquidity Contingency Plan sets forth certain monitoring indicators to detect unpredictable potential liquidity risks.</li> <li>In addition, Measures for Management of Securities Settlement Margin,</li> </ul>
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity	<ul> <li>Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.</li> <li>The Liquidity Contingency Plan sets forth certain monitoring indicators to detect unpredictable potential liquidity risks.</li> <li>In addition, Measures for Management of Securities Settlement Margin, Measures for Management of the Securities Settlement Risk Fund and</li> </ul>
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should	<ul> <li>Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.</li> <li>The Liquidity Contingency Plan sets forth certain monitoring indicators to detect unpredictable potential liquidity risks.</li> <li>In addition, Measures for Management of Securities Settlement Margin, Measures for Management of General Risk Reserves for Securities</li> </ul>
intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid	<ul> <li>Measures for the Administration of Securities Registration and Settlement clearly specifies the liquidity resources available to CSDC and their order of priority. CSDC has formulated a Contingency Plan for Defaults on Fund Settlement by Settlement Participants to further refine the requirements for management, dispatch and use of relevant liquidity resources in case of default by settlement participants, so as to ensure timely fulfillment of monetary settlement obligations following any individual or combined default by settlement participants.</li> <li>The Liquidity Contingency Plan sets forth certain monitoring indicators to detect unpredictable potential liquidity risks.</li> <li>In addition, Measures for Management of Securities Settlement Margin, Measures for Management of General Risk Reserves for Securities Registration and Settlement clearly set forth the procedures for</li> </ul>

same-day settlement	
of payment	
obligations. These	
rules and procedures	
should also indicate	
the FMI's process to	
replenish any liquidity	
resources it may	
employ during a stress	
event, so that it can	
continue to operate in	
a safe and sound	
manner.	

## **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.

Summary	The Securities Law provides a solid legal basis for CSDC to enforce settlement finality, effectively exempting securities settlements from the "zero-hour rule" defined in the Enterprise Bankruptcy Law. CSDC's business rules specify the points at which settlement is final, and are published on its website. According to the provisions of the Securities Law on the finality of transactions, CSDC organizes clearing and settlement based on trading data from stock exchanges. Investors/settlement participants have no right to cancel trading orders that have been concluded. Any party that fails to complete securities/money settlement on time bears liability for default.
Key consideration 1 An FMI's rules and procedures should clearly define the point at which settlement is final.	In China's securities market, the main legal basis of settlement finality is provided by Article 120 of the <i>Securities Law</i> and Article 49 of the <i>Measures for the Administration of Securities Registration and</i> <i>Settlement</i> , which covers the main implications of settlement finality. Articles 139, 167 and 168 of the <i>Securities Law</i> provide isolation to certain degree from the <i>Enterprise Bankruptcy Law</i> . CSDC's relevant
	business rules and guidelines specify the time points for settlement.
	At present, under the Shanghai/Shenzhen-Hong Kong Stock Connect program, CSDC should be linked with other FMIs (HKSCC Nominees Limited). The two sides agreed in the <i>Central Securities Depository and</i> <i>Settlement Agreement on the Shanghai/Shenzhen-Hong Kong Stock</i> <i>Exchanges Connectivity Mechanisms</i> that CSDC, as a settlement participant in HKSCC Nominees Limited, would not conduct final settlement with domestic settlement participants until HKSCC

	Nominees Limited finished its final settlement, thus ensuring the finality of the settlement. CSDC has fully defined the rights and responsibilities of both parties in relevant agreements with each settlement participant. Each settlement participant has a full and clear understanding of the provisions for the time of final settlement for each product. Clearing and settlement run stably for every product.
Key consideration 2 An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.	According to "standard" DVP practice, securities and funds are ultimately settled simultaneously on the day of settlement. Under the "non-standard" DVP system, CSDC completes the final settlement of securities at 16:00 on T+0 day and the final settlement of funds at 16:00 on T+1 day, and takes relevant steps under supporting policies and procedures to achieve the same effect as the standard DVP does. In practice, CSDC has never postponed the final settlement until the next trading day. CSDC sets forth the arrangements for postponing settlement to the next day in the event of an emergency in its contingency plan. Its branches have also signed memoranda with relevant stock exchanges on postponing settlement to the next day. In order to accommodate the needs of market participants and business development, CSDC utilizes RTGS to settle the privately placed bonds of small and medium-sized enterprises and asset-backed securities.
Key consideration 3 An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.	According to the provisions of Articles 112 and 120 of the <i>Securities Law</i> , once a securities transaction is concluded, settlement responsibility is established and irrevocable. CSDC receives transaction data from stock exchanges and organizes clearing and settlement accordingly in compliance with superior laws. Investors/settlement participants have no right to cancel trading orders that have been concluded. Any investor/settlement participant who fails to complete securities/money settlement on time will be deemed in default and held fully liable. If there is an error in the transaction data sent by an exchange, the exchange may resend the trading data to CSDC. Even if clearing has been completed based on incorrect transaction data, CSDC can roll back to the data backup status immediately before clearing on that day.

### **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.

Summary	CSDC conducts settlement of funds in commercial bank money through
	its own book-entry system. CSDC has formulated the Measures for the

	Administration of Securities Funds Settlement via Settlement Banks and enforces strict access standards and day-to-day management requirements for settlement banks. The Company is able to minimize and strictly manage credit risk or liquidity risk from settlement banks. In order to prevent credit risk and liquidity risk arising from settlement of funds through its own book-entry system, CSDC strictly controls the use of settlement funds within the scope of clearing and settlement and prohibits their use for other purposes such as investment or lending. In addition, the Company is subject to external supervision by, for example, CSRC.
Key consideration 1 An FMI should conduct its money	CSDC conducts settlement of funds through its own book-entry system. Funds are deposited in commercial banks (settlement banks) and are transferred at the instruction of CSDC.
settlements in central bank money, where practical and available, to avoid credit and liquidity risks.	The reasons why CSRC uses central bank money for settlement are as follows: First, CSDC conducting settlement of funds in commercial bank money is a legacy issue. China's central bank had no payment system when SSE and SZSE were established. CSDC has been using the commercial bank monetary settlement system since that time. Now the Company has a fairly mature, sound and fixed landscape for monetary settlement. Second, CSDC and some settlement participants are not connected to the central bank's payment system. Thus, conducting full-scale settlement of funds with central bank money has a significant impact on the settlement efficiency and operations of some settlement participants.
	CSDC uses a monetary settlement system in which settlement of funds is effected by book entry and funds are deposited in and allocated by settlement banks. The system is different from settlement in either central bank money or commercial bank money. It is a full-fledged system that has been running stably for many years. As CSDC completes money settlement within its own system, it faces extremely low external credit and liquidity risks.
Key consideration 2 If central bank money is not used, an FMI	The settlement assets CSDC uses for settlement of funds are mainly settlement participants' settlement reserves deposited in CSDC. The physical cash position is placed in settlement banks.
should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.	As for the credit risk of settlement banks, the existing settlement banks are all financial institutions of high importance in China's financial market. Given the historical track record and current national conditions, CSDC is exposed to minimal credit risk and very unlikely to suffer a loss on settlement money.
	As for the liquidity risk of settlement banks, on the one hand, CSDC implements a reserve fund system and maintains a sufficient reserve level to support the day-to-day liquidity needs of participants. On the other hand, participants use intra-bank transfer for funds from CSD to improve the efficiency of fund transfer.

Key consideration 3	CSDC has formulated the <i>Measures for the Administration of Securitie</i>
If an FMI settles in	<i>Funds Settlement via Settlement Banks</i> , which sets forth stric
commercial bank	requirements for settlement banks. In practice, CSDC monitors th
money, it should	compliance of settlement banks with qualification standards and
monitor, manage, and	manages the credit risk and liquidity risk of settlement banks by
limit its credit and	reviewing and analyzing the contents of the related reports. By
liquidity risks arising	analyzing annual reports, the Company gains an overall pictur
from the commercial	(including assets, net capital, business scale and branch network) of th
settlement banks. In	settlement bank and collects information on its significant events. By
particular, an FMI	analyzing financial and related risk control indicators, the Company
should establish and	tracks the capital adequacy ratio and liquidity level of the settlement
monitor adherence to	bank. By analyzing settlement work reports and internal control audi
strict criteria for its	reports, the Company looks into the reliability of settlement operation
settlement banks that	and the internal control and compliance performance of the settlement
take account of,	bank. With regard to cross-border business, CSDC has formulated the
among other things,	<i>Rules for the Registration, Depository and Settlement unde</i>
their regulation and	Mainland-Hong Kong Stock Exchanges Connectivity Mechanisms
supervision,	setting stricter access standards for settlement banks under the
creditworthiness,	Mainland-Hong Kong Stock Connect program. In addition, fo
capitalization, access	monitoring of credit standing and assessment of settlement banks, CSDC
to liquidity, and	relies on public opinion, interviews with settlement participants and
operational reliability.	other channels.
An FMI should also	CSDC assesses settlement banks annually. Since settlement banks pos-
monitor and manage	minimal credit risk, the Company has not yet created any stress testing
the concentration of	mechanism for default of the largest settlement bank(s). With the deposi
credit and liquidity	insurance system further implemented, it is practically possible fo
exposures to its	commercial banks to go bankrupt, which poses a credit risk. CSDC wilt
commercial settlement	take this factor into account and improve existing measures to furthe
banks.	effectively manage credit risk exposure to settlement banks.
Key consideration 4 If an FMI conducts money settlements on its own books, it should minimize and strictly control its credit and liquidity risks.	To prevent credit risk and liquidity risk, CSDC strictly controls the us of settlement funds within the scope of clearing and settlement procedures, and prohibits their use for other purposes such as investment or lending. In addition, CSDC conducts daily reconciliation betwee commercial bank accounts and its own book-entry accounts to ensur balance between the general ledger and sub-ledgers. In terms of external supervision, on the one hand, CSDC is subject t strict supervision by CSRC, and on the other hand, sends clearing dat (including details of each transfer between commercial bank and reserv fund account) to China Securities Investor Protection Fund Corporatio Limited on a daily basis.
Key consideration 5	CSRC has entered into a Securities Transaction Settlement Fund
An FMI's legal	Management Agreement (Applicable to Settlement Banks) with
agreements with any	settlement banks, which clearly stipulates that transfers are final onc
settlement banks	effected.
should state clearly	Funds received by CSDC are transferable by the end of the day. Article

when transfers on the	
books of individual	Settlement Business of Settlement Banks specify the time limits on the
settlement banks are	placement/withdrawal of settlement funds in/from settlement banks.
expected to occur, that	
transfers are to be	
final when effected,	
and that funds	
received should be	
transferable as soon as	
possible, at a	
minimum by the end	
of the day and ideally	
intraday, in order to	
enable the FMI and its	
participants to manage	
credit and liquidity	
1 4	
risks.	

# **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.

Summary	CSDC registers and delivers securities through electronic book-entry. No financial instruments or commodities are physically stored or delivered during its business transactions. Not applicable.
Key consideration 1 An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.	According to the key considerations under Principle 10 and relevant notes, the "physical deliveries" hereto referred mean the delivery of physical financial instruments (such as paper securities, commercial bills or other debt instruments issued in paper form) or commodities. At present, securities have been fully dematerialized in China's securities market. CSDC's business transactions involve no physical delivery. Therefore, this principle is not applicable to CSDC.
Key consideration 2 An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or	CSDC stores and delivers securities through its electronic book-entry system. Securities are 100% dematerialized. No financial instruments or commodities are physically stored or delivered during its business transactions. Therefore, this principle is not applicable to CSDC.

commodities.	

### **Principle 11: Central securities depositories**

CSD should have appropriate rules and procedures to determine the integrity of securities issuance, minimize and manage risks related to securities custody and transfer. A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry.

Summary	<ul> <li>Securities have been fully dematerialized in China's securities market. CSDC maintains and transfers 100% of securities through its electronic book-entry system.</li> <li>CSDC has business rules and procedures as well as internal and external audit and supervision measures to strictly prevent internal operational risks, prevent unauthorized creation or deletion of securities, ensure the integrity of securities issuance and protect customer securities assets from custody risk. CSDC performs daily reconciliation between CSD records and registration records. In addition, CSDC collaborates with stock exchanges and other organizations to prevent securities accounts from overdraft through a front-end monitoring system.</li> <li>At present, CSDC employs different accounts to segregate its own assets from the securities of settlement participants and their clients. CSDC strictly manages the credit risk and liquidity risk posed by other business activities.</li> </ul>
Key consideration 1 A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorized creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.	under their custody. The above rules, procedures and controls ensure the accuracy of securities holding records and effectively safeguard the rights and interests of securities issuers and holders. CSDC strictly prevents the creation or deletion of unauthorized
	securities by standardizing internal business procedures, reasonably setting posts, controlling operating authority and conducting internal and

	external audits and supervisions.
	At the end of each trading day, CSDC performs internal reconciliation of CSD records and registration records through IT systems.
Key consideration 2 A CSD should prohibit overdrafts and debit balances in securities accounts.	CSDC's business rules prohibit any overdraft of securities accounts. In addition, CSDC collaborates with stock exchanges and other organizations to technically prevent overdraft of securities accounts. Specifically, for exchange-based transactions, CSDC completes securities settlement in its registration and settlement system according to transaction clearing results. Since the stock exchange implements front-end monitoring, securities cannot be sold short. Thus the clearing and settlement of transactions will not result in any overdraft or debit balance of securities accounts. For other securities transfer requests, CSDC does not allow overdraft if the balance of the securities account is insufficient.
Key consideration 3 A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilize or dematerialize securities.	China's securities market has been fully dematerialized. CSDC transfers 100% of securities through its electronic book-entry system.
Key consideration 4 A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.	CSDC has formulated and improved rules and procedures for registration and depository transactions in accordance with the <i>Sureties Law, Property Law, Measures for the Administration of Securities Registration and Settlement</i> , and other relevant laws, regulations and ministerial rules. These rules and procedures specify the business scope, procedures and precautions in order to avoid the risk of registration errors due to omissions in policy arrangements. In addition, CSDC controls business procedures by formulating various manuals that define roles, responsibilities, work flow and key operational elements, so as to prevent risks at the internal operation level.

	securities companies serving as custodians for investor securities. As for the requests for intraday transfers, freezes or other operations for the same securities asset, CSDC has specified the sequence of operations and will relay the results to the securities company serving as its custodian in a timely manner. By taking the above measures, CSDC ensures CSD records are consistent with information on investor securities assets maintained by exchanges and custodians (securities companies).
Key consideration 5	At present, CSDC employs different accounts to segregate its own assets from the securities of settlement participants.
A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and	Under the direct holding mode, CSDC opens securities accounts for securities companies and their customers respectively which record their securities asset holdings, effectively ensuring that the securities of different settlement participants are segregated from each other, and that the securities of settlement participants are segregated from those of their customers.
segregation among the securities of participants. Where supported by the legal framework the CSD	To facilitate the transfer of securities held by customers, CSDC supports custody transfer of securities assets held by customers between settlement participants. A customer may, through the original settlement participant, apply to CSDC for transfer of securities assets held by the customer to another settlement participant for custody.
Key consideration 6 A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.	CSDC, as the statutory registration and settlement organization for China's securities market, functions as a CSD, CCP and SSS in accordance with the <i>Securities Law</i> , <i>Measures for the Administration of</i> <i>Securities Registration and Settlement</i> and other relevant regulations. In addition, CSDC also provides collateral management services. CSDC has established a systematic, comprehensive risk management framework. The framework specifies three lines of defense and the roles and responsibilities of the headquarters and branches, and sets forth management and control requirements regarding information collection, risk assessment, risk monitoring and risk disposal and reporting. CSDC has established and employs an integrated risk monitoring system to effectively identify, measure, monitor and manage risks from activities it may be involved in.

For CCP services it provides, CSDC adopts strict internal isolation measures, arranges independent teams to take charge of CSD and CCP operations and management separately and ensures that any operations must follow established rules and procedures. The Company also repeatedly tests CCP-related IT systems prior to their go-live in order to eliminate deficiencies and isolate CSD errors from CSD operations.
As for its SSS operations, CSDC always follows the principle of acting on the transferor's instructions, that is, the Company examines the true intention behind the transferor's use of business or technical means to ensure that investors have truly and fully authorized CSDC's transfer of their securities. Therefore, CSDC's SSS operations do not pose any additional risk to CSD.
As for collateral management services, CSDC is a third party entrusted to monitor the adequacy of securities collateral. The Company conducts relevant operations such as collateral change and replenishment at the behest of clients. CSDC does not directly engage in financing or securities lending, thus the collateral management service does not pose any potential credit risk or liquidity risk to CSDC. CSDC manages potential operational risks mainly by segregating the handling, preliminary check and review duties, from each other and by controlling business procedures.

#### 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.

Summary	In terms of guaranteed net settlement, CSDC utilizes "non-standard" DVP or "standard" DVP where applicable, according to the specific type of securities or business, thereby effectively eliminating the principal risk of relevant financial products during the settlement stage. In terms of non-guaranteed settlement, CSDC provides non-guaranteed settlement in accordance with the DVP principle on a bilateral net basis or on a gross, obligation-by-obligation basis, thereby eliminating principal risk.
Key consideration 1	I. Guaranteed Multilateral Net Settlement
An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one	"standard" DVP where applicable, according to the specific type of securities or business. It basically eliminates the principal risk of relevant financial products in final settlement. The "non-standard" DVP is somewhat different in form from overseas markets, but it also can

obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.

In addition to front-end monitoring of securities sales by securities companies, the stock exchange also has a front-end monitoring system to technically prevent investors from short-selling securities. Therefore, after a securities transaction is concluded, there will be no case where the seller cannot deliver the securities, and there will also be no principal risk arising from CSDC remitting funds without receiving securities.

Thus, the principal risk that CSDC faces is limited to the principal risk arising from CSDC delivering securities without receiving money. Thus, CSDC implements a "non-standard" DVP for A-shares, closed-end funds, etc. and enforces the "standard" DVP for warrants, ETFs, etc. Either "non-standard" DVP or "standard" DVP can effectively protect CSDC from the "principal risk arising from CSDC delivering securities without receiving money" in relevant transactions.

i. Implementation of "Non-Standard" DVP for A-Shares, Closed-End Funds, etc.

(i) For ordinary investors included in the third-party depository system

The *Regulations on the Supervision and Administration of Securities Companies* and the securities companies' over-the-counter trading systems provide adequate control. Securities companies can prevent principal risk from customers, thus reducing the principal risk posed to the CCP by securities companies due to any factor on the part of customers.

A third-party depository system is implemented for ordinary investor transaction settlement funds. China Securities Investor Protection Fund Corporation Limited has also established a monitoring system for customer transaction settlement funds. These policy arrangements ensure that securities companies effectively abide by the regulatory rule that "securities companies shall not accept the purchase orders of any customer with insufficient funds," and prevent securities companies from misappropriating customer transaction settlement funds. In this way, customer transaction settlement funds run in a closed loop and normally will pose no default risk to CDC, i.e. the "principal risk that CSDC has delivered securities to the buying participant but the buying participant defaults" can be basically eliminated.

Under extremely exceptional circumstances, if the commercial bank's payment system prevents the securities company from effecting timely money transfer and as a result the securities company fails to make payment to CSDC at 16:00 on T+1 day, CSDC will bear occasional principal risk. However, this risk is occasional and can be quickly eliminated. In the event of an occasional default on money settlement, CSDC will take action, such as deducting the proprietary settlement reserve and proprietary securities holdings of the securities company. Practice has proved that CSDC can effectively prevent the principal risk arising from transactions conducted by ordinary investors, including those in the third-party depository system. Since the third-party depository system was launched, CSDC has never suffered a loss due to

the principal risk in such transactions.

(ii) Special institutional and product investors excluded from the third-party depository system

Such investors include the proprietary trading units of securities companies, asset management plans of securities companies, asset management plans of insurance companies, securities investment funds and qualified foreign institutional investors (QFIIs). CSDC applies front-end risk control of securities transaction funds to such investors as proprietary trading units of securities companies, asset management plans of securities companies, and asset management plans of insurance companies and securities investment funds, as well as imposes a limit on the total declared amount of net buys in a day, which is subject to front-end control by the exchange. In this way, CSDC effectively prevents trade abnormalities and settlement risks caused by technical failures or operational errors of the above investors. For trade declarations within the above-mentioned investors' limits and for qualified foreign institutional investors (QFIIs) that are not included in the scope of control, the front-end fund monitoring of trade declarations mainly depends on the internal control policies of relevant institutions. If the prevention and control measures fail, the corresponding settlement participants may default on the monetary settlement with CSDC and pose a principal risk. Therefore, CSDC will take such countermeasures as deducting designated securities and the proprietary securities holdings of settlement participants in accordance with the procedures set forth in Article 62 of the Measures for the Administration of Securities Registration and Settlement. Through the above-mentioned policy arrangements such as deducting designated securities after default, deducting proprietary securities holdings of settlement participants and offsetting sales proceeds against the settlement participant's defaulted amount, CSDC can also effectively prevent the principal risk arising from transactions conducted by special institutional and product investors excluded from the third-party depository system.

(iii) Foreign investors excluded from the third-party depository system

Though foreign investors under the Shanghai/Shenzhen-Hong Kong Stock Connect program have not been included in the third-party depository system, CSDC also guards well against the relevant principal risk. If HKSCC Nominees Limited defaults on a monetary settlement, CSDC will deduct from its account the securities equivalent in value to the default amount in accordance with relevant agreements. CSDC generally regards HKSCC Nominees Limited as a special institutional investor excluded from the third-party depository system and has adopted a similar principal risk prevention system.

ii. Implementation of "standard" DVP for ETF's and other innovative products

CSDC implements the "standard" DVP system for some innovative products, such as ETF's. The delivery of securities and transfer of cash are contingent upon each other: When and only when the participant delivers securities to CSDC, will it make payment to the participant. When and only when the participant makes payment, will CSDC deliver securities to the participant. Relevant policies are consistent with FMI principles in both substance and form.

In December, 2017, the Financial System Stability Assessment was issued on the official websites of IMF and World Bank. It was pointed out in the report that "China should adopt full delivery-versus-payment in the China Securities Depository and Clearing Corporation" and made this suggestion as the highest priority and near-term action. CSDC attaches great importance to FSAP recommendations and is pushing steadily forward the A-shares DVP reform, taking into account China's national conditions and securities market actualities.

## II. Non-Guaranteed Settlement

CSDC provides settlement on a bilateral net or on a gross, obligation-by-obligation basis. The Company provides DVP and does not guarantee settlement. Each settlement takes into account the sufficiency of securities and funds available for settlement. The settlement is successful if both are sufficient. If one of them is insufficient, the settlement fails. CSDC has settled some innovative products pursuant to the DVP principle: DVP mode 1 is employed for privately placed bonds, exchangeable privately placed bonds, subordinated bonds of securities companies, cross-border ETF's with in-cash purchase, cross-market ETF's, etc. DVP mode 3 is employed for bond ETF's with in-kind purchase and redemption and money-market ETF purchase and redemption.

#### 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.

Summary	CSDC has effective and clearly defined rules and procedures to manage participant defaults, including the order of priority for use of relevant financial resources. The Company also employs various internal mechanisms and communication/coordination procedures to ensure CSDC can contain losses and liquidity pressures and continue to meet its obligations should a settlement participant default. CSDC publicly discloses its rules and procedures for management of defaults in its documented policies and agreements. It assesses and revises the relevant plans and IT systems for default handling procedures according to specific risk handling practices.
Key consideration 1	CSDC has clearly defined settlement participant default in terms of
An FMI should have	rules. Any failure to complete settlement by the time of final settlement
default rules and	is deemed a default. Specifically, default on the guaranteed net
procedures that enable	settlement portion is regarded as a default against CSDC, in which case

the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.	CSDC will take relevant risk handling measures. Default on the non-guaranteed settlement portion is deemed a default against the counterparty, in which case the transaction settlement is deemed a failure. When a settlement participant defaults, CSDC may take such measures as withholding securities, deducting proprietary securities, raising the minimum settlement reserve ratio of the defaulting settlement participant, requiring the participant to provide collateral, closing its electronic outgoing transfer channel and restricting custody/designation transfer.
	CSDC has access to the following financial resources to cover default losses: proceeds from disposal of collateral (including proprietary securities) provided by defaulting settlement participants, settlement margins paid by defaulting settlement participants, settlement margins (mutual-guarantee portion) paid by other settlement participants, a settlement risk fund and general risk reserve. If the use of the above financial resources results in deficiency of the settlement margin or settlement risk fund, CSDC will restore them to the required minimum level. The general risk reserve is gradually replenished according to CSDC's profitability. CSDC can use the following financial resources to address liquidity risk: The mutual-guarantee portion of settlement margins, the settlement risk fund, general risk reserve and liquidity support from commercial banks.
Key consideration 2 An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.	CSDC's Risk Management Committee and specific business departments maintain adequate internal preparedness for disposal of defaults, which follow the principles of localized management, hierarchical authorization and timely reporting. Relevant default procedures or contingency plans are formulated and revised by CSDC's settlement business departments, under the guidance of the Company's Risk Management Committee and subject to final approval by the Company's Management Team. CSDC assesses and improves the practical effectiveness of its default rules and procedures at set intervals (every 1 to 2 years).
Key consideration 3 An FMI should publicly disclose key aspects of its default rules and procedures.	CSDC publicly discloses the main content of its procedures for handling default of settlements in its documented policies, contracts and agreements.
Key consideration 4 An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures,	Each year (or when a major risk event occurs or potential vulnerabilities/threats arise), CSDC conducts stress testing of defaults, examines and revises relevant plans for default procedures, and optimizes/upgrades supporting technical systems.

including any
close-out procedures.
Such testing and
review should be
conducted at least
annually or following
material changes to
the rules and
procedures to ensure
that they are practical
and effective.

## 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.

Summary	CSDC is able to effectively protect the positions of participant's customers and related collateral from default or insolvency of said participant. CSDC effectively segregates settlement participant assets from their customers' positions and collateral using the appropriate rules, procedures and account structure, and provides effective protection for customer securities positions and for the collateral provided by customers in the repurchase or covered call business. CSDC has disclosed its rules, policies and procedures for segregation of the positions of settlement participants' customers. At the level of laws and regulations, policy arrangements have been made for the portability of customer positions and collateral in practice. If a securities company is closed down, the trustee securities company will fully assume charge of the customers of the closed securities company, and CSDC will assist in transferring the customers' securities positions and collateral.
Key consideration 1	I. Policy Arrangements for Segregation
A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from default or insolvency of that	The Securities Law, Regulations on the Supervision and Administration of Securities Companies, Measures for the Administration of Securities Registration and Settlement, Securities Account Management Rules, Measures for Management of Settlement Margin and Measures for Management of Settlement Reserves, among other laws and rules, provide clear policy arrangements for segregation. For example, the Securities Law provides that "when a securities company goes into bankruptcy or liquidation, its customers' transaction settlement funds and securities shall be excluded from its bankruptcy assets or liquidation assets. It is not permitted to seize, freeze, deduct or enforce the transaction settlement funds and securities of its customers unless

participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.	necessary to discharge customer debts, or required by laws or regulations". Customer positions and rights to related collateral are protected by laws and regulations. Similarly, the Notice on Issues Concerning Inquiry, Freezing and Deduction of Securities and Securities Transaction Settlement Funds and Regulations on the Supervision and Administration of Securities Companies clearly provide for the protection of customer assets. CSDC actively enforces the policy arrangements for segregation set forth in relevant laws and rules, so as to effectively protect the positions of settlement participants' customers and related collateral from the bankruptcy of said participant.
	II. Policy Arrangements for Portability
	According to the <i>Regulation on Risk Disposal of Securities Companies</i> , a securities company ordered to suspend its securities brokerage business for rectification shall entrust its securities brokerage business to a securities company approved by the securities regulatory department of the State Council for management, or transfer its customers to another securities company within the prescribed time limit. If the securities company fails to entrust its securities brokerage business or transfer its customers within the set time, the securities regulatory department of the State Council shall enforce the transfer of its customers to another other securities company. CSDC will transfer relevant customer positions and related collateral in accordance with the <i>Regulation on Risk Disposal of</i> <i>Securities Companies</i> . Under the current settlement regime, CSDC provides effective protection for customer positions and for the collateral provided by customers in the repurchase or covered call business. In addition, CSDC maintains an account structure sufficient to ensure the effectiveness of relevant protections.
Key consideration 2 A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.	CSDC currently employs different account structure settings to segregate settlement participants' own positions and collateral from those of their customers.
	The Company employs a separate account structure for the securities positions of customers and the collateral provided by customers in the repurchase or covered call business.
	As for customer cash positions and settlement margins, CSDC utilizes an omnibus account structure; that is, customer cash positions and related settlement margins are commingled and respectively held in the customer settlement reserve account and the customer settlement margin account of the settlement participant, without subsidiary accounts. To a certain extent, the customers' money assets face a "fellow-customer risk." However, the "fellow-customer risk" is minimal, as the securities company and the third-party depository bank have cash accounts for each customer and conduct reconciliation on a daily basis, and China Securities Investor Protection Fund Corporation Limited systematically

	monitors the cash accounts of all customers of the securities company on a daily basis.
Key consideration 3 A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.	According to the <i>Regulation on Risk Disposal of Securities Companies</i> , if a securities company is closed down, the trustee securities company will fully assume charge of the customers of the closed securities company, and CSDC will assist in transferring said customer positions and collateral. CSDC will determine which positions and collateral should be transferred according to the securities transfer instructions of the defaulting participant.
Key consideration 4 A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.	CSDC publicly discloses its fund segregation arrangements in the <i>Measures for Management of Settlement Reserves, Measures for Management of Settlement Margin, Securities Account Management Rules, Guidelines for Securities Fund Settlement Business of the CSDC Beijing Branch, CSDC Shanghai Branch Guidelines for Settlement Account Management and Fund Settlement, and CSDC Shenzhen Branch Guidelines for Securities Fund Settlement.</i> The Company publicly discloses its collateral segregation arrangements for bond repurchases in the <i>Rules for Bond Registration, Custody and Settlement</i> and publicly discloses its collateral segregation arrangements for stock options and other derivatives in the <i>Guidelines of CSDC Shanghai Branch for the Pilot Settlement of Stock Options.</i> CSDC clearly states in its relevant business rules and guidelines whether the settlement participants' customer collateral is protected on an individual or omnibus basis.

#### **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.

Summary	CSDC can effectively identify, monitor and manage general business risks, including risks to its reputational and financial risks, as well as legal, operational, custody and investment risks that might cause losses to CSDC's management or operations. CSDC has sufficient liquid assets and a complete business continuity plan to ensure the recovery or orderly wind-down of its key operations and services.
Key consideration 1 An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.	The general business risks identified by CSDC are mainly reputational and financial risks (see description under this principle for details), as well as legal risks (see description under principle 1 for details), operational risks (see description under principle 17 for details) and custody and investment risks (see description under principle 16 for details). To address risk to its reputation, CSDC's Information Management Department collects and collates reports which monitor public opinion on a daily basis. CSDC has developed a contingency plan for handling public events. If any incident (e.g. petition) affecting the Company's reputation occurs, the Company's Executive Office will deal with the incident according to the contingency plan and ensure productive communication and coordination with the media outlets. To address financial risk, CSDC has established an internal financial control system under the leadership of the Company's general manager to ensure the safety and efficiency of the Company's financial operations. In addition, CSDC has a General Meeting of Shareholders and a Board of Directors which reviews the Company's annual budget and the previous year's final accounts at the beginning of each year in order to prevent financial fraud.
Key consideration 2 An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and	CSDC holds its liquid net assets mainly in the form of deposits in commercial banks. The Company has sufficient funds to ensure it can continue operations and services in the event it incurs general business losses.

services as a going	
concern if it incurs	
general business	
losses. The amount of	
liquid net assets	
funded by equity an	
FMI should hold	
should be determined	
by its general business	
risk profile and the	
length of time	
required to achieve a	
recovery or orderly	
wind-down, as	
appropriate, of its	
critical operations and	
services if such action	
is taken.	
Key consideration 3	CSDC has formulated business continuity (risk contingency, etc.) plans
An FMI should	(for details, see the description under Principle 17). CSDC's Articles of
maintain a viable	Association sets forth relevant principles for the recovery or wind-down
recovery or orderly	plan.
wind-down plan and	CSDC uses settlement margins, a settlement risk fund and general risk
should hold sufficient	reserve to cover the risk of loss in the event of default of settlement
liquid net assets	participants, and uses its own funds to cover general business risks. The
funded by equity to	settlement margins, settlement risk fund, general risk reserve and
implement this plan.	proprietary funds are managed in separate accounts in accordance with
At a minimum, an	relevant regulations to ensure full segregation.
FMI should hold	Tere vant regulations to ensure ran segregation.
liquid net assets	
funded by equity	
equal to at least six	
months of current	
operating expenses.	
These assets are in	
addition to resources	
held to cover participant defaults or	
other risks covered	
under the financial	
resources principles.	
However, equity held	
under international	
risk-based capital	
standards can be	
included where	
relevant and	
appropriate to avoid	

duplicate capital requirements.	
Key consideration 4 Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.	Pursuant to regulatory requirements, CSDC must exercise prudence in investing and managing assets. Therefore, CSDC holds its liquid net assets basically entirely in the form of bank deposits. Its assets demonstrate quality and liquidity sufficient to meet the expected operational expenses under current or extreme market conditions. CSDC's Finance Department submits an annual report on the depository and use of the Company's own funds, and the annual budget to the Company's Management Team.
Key consideration 5 An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.	CSDC, as an organization directly managed by CSRC, can ensure the rapid raising of additional capital in an emergency. Article 12 of CSDC's <i>Articles of Association</i> provides that "the transfer of shareholders' capital contributions and the increase or decrease of the Company's capital shall be approved by a resolution of the General Meeting of Shareholders and reported to the China Securities Regulatory Commission for approval." Article 30 provides that "the functions and powers of the Board of Directors include formulating plans for registered capital increase or decrease and for bond issuance by the Company."

## 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.

Summary	CSDC has established an effective safekeeping management system for its own assets and the assets of settlement participants. Funds delivered by settlement participants and CSDC's own funds are deposited separately in commercial banks. CSDC has established a sound system of standards for selection and assessment of commercial banks. Funds are deposited in a number of commercial banks to effectively reduce custody and investment risks. The Company has prompt access to its own assets as well as the assets provided by settlement participants.
	CSDC's own funds and the funds of settlement participants are not engaged in investment activities unrelated to securities registration and

	settlement transactions. Any major investment must be reported to the Board of Directors and the General Meeting of Shareholders for approval and finalized by the CSRC.
Key consideration 1 An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.	There is no custody or investment risk in terms of business transactions within the Mainland, as financial assets in the securities category are directly registered in the name of investors, and CSDC is prohibited from misappropriating the securities assets of investors for investments or other purposes. As for overseas business, under the current Shanghai/Shenzhen Hong Kong Stock Connect program, CSDC is the nominee holder of the Hong Kong market securities actually held by settlement participants and consolidates these securities under the custody of HKSCC Nominees Limited. HKSCC Nominees Limited is the only CSD in the Hong Kong market, and is subject to supervision by local legal and regulatory authorities, thus it poses minimal custody risk. The assets under the custody of CSDC mainly include settlement reserves and settlement margins. CSRC's <i>Measures for the Administration of Securities Funds Settlement via Settlement Banks</i> enforces a strict access mechanism for settlement banks.
Key consideration 2 An FMI should have prompt access to its assets and the assets provided by participants, when required.	According to the <i>Measures for the Administration of Securities Funds</i> <i>Settlement via Settlement Banks</i> , an important eligibility requirement for settlement banks is "possessing a transfer system that allows for nationwide real-time transfer of securities funds within said system." This rule ensures that when a settlement participant defaults, CSDC can quickly freeze the settlement funds and dispose of the collateral.
Key consideration 3 An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.	CSDC dissipates risk by depositing funds in a number of settlement banks and has established a regular settlement bank review system. CSDC conducts an annual review of each settlement bank's performance in securities monetary settlement with CSDC and comprehensively assesses the timeliness, safety and accuracy of its securities monetary settlements. The assessment method is a combination of on-site and off-site inspections.
Key consideration 4 An FMI's investment strategy should be consistent with its overall risk-management strategy and fully	Except for the Company's equity investments, CSDC currently does not engage in non-deposit investment activities. Its own funds, settlement reserve, settlement margins and settlement risk fund are all deposited in banks and earn interest. The interest income from the settlement reserve and settlement margins is the property of settlement participants, so the settlement participants have full knowledge of the investment income.

disclosed to its
participants, and
investments should be
secured by, or be
claims on,
high-quality obligors.
These investments
should allow for quick
liquidation with little,
if any, adverse price
effect.

#### **Principle 17: Operational risk**

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 fulfillment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Summary	CSDC has a comprehensive operational risk management framework that enables it to effectively identify various operational risks and take relevant measures to manage them. CSDC has established a policy framework and organizational structure for operational risk management. CSDC has clear operational stability indicators and has adopted a series of measures to ensure the fulfillment of its objectives. CSDC's centralized monitoring system monitors the load and future development trends of business systems in real time. Its systems have adequate scalable capacity to allow scaling-up/scaling-out during periods of system overload. CSDC has formulated physical security and information security policies to deal with all potential security vulnerabilities and threats based on multi-level security standards, CSRC requirements and good industry practices. CSDC has established preliminary business continuity and contingency plans to ensure CSDC's timely recovery of operations and the fulfillment of its obligations. CSDC monitors and manages the risks of relevant external institutions such as exchanges, settlement participants and outsourcing service providers through its policies and controls.
Key consideration 1 An FMI should establish a robust operational	CSDC has established a comprehensive system of business rules and policies, and has specified the procedures, standards and organizational structure for its various business operations and management. CSDC ensures the identification of possible sources of operational risks

risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.	through regular or irregular self-check and assessments as well as supervision and inspection by auditing departments. CSDC monitors and manages identified operational risks through internal self-check, audits and policy revisions. Most of CSDC's daily business operations are fixed in IT systems. Therefore, the operational risks addressed by CSDC are mainly related to IT systems. CSDC has formulated various information system policies covering the research, development and maintenance stages of IT systems, and explicitly requires proper management and strict prevention of IT risks. CSDC regularly audits operation records, as well as improves the procedures and standards in accordance with the ISO20000 standard for IT service management. Within the ISO20000 management framework, CSDC regularly develops, reviews and summarizes availability and continuity indicators, management and summarizes availability and continuity
	indicators, regularly records and discusses the problems that have occurred, and regularly formulates problem reports, knowledge bases, etc. CSDC regularly holds routine technical meetings to research the existing and potential problems and specifies risk response measures in the minutes of meetings and other documents, so as to identify potential safety hazards and improve risk handling capabilities.
	As for operational risks not related to IT systems, CSDC has established a complete set of internal policies and procedures to manage risks. The Company effectively prevents operational risks through separation and supervision of functions/duties, reasonable operating procedures, record keeping, regular review and continuous optimization.
	These systems, policies, procedures and controls are mainly documented in business rules, policies and the minutes of business meetings.
Key consideration 2 An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.	CSDC has set up a Risk Management Committee responsible for overall management, organization and coordination. Business and IT departments of the headquarters and branches assume the specific responsibilities for preventing operational risks. The audit department is responsible for supervision and inspection. The IT and Strategy Planning Team is responsible for designing the Company's information security system, tracking and checking information security developments and coordinating internal and external inspections and audits on information security.
	The issuance and implementation of the organizational structure, staffing, policies, procedures and standards for operational risk management are subject to approval by the Company's Management Team. The Risk Management Committee and functional departments regularly or irregularly assess and revise relevant policies according to business changes and market developments when necessary.
	With regard to IT systems, CSDC holds routine technical meetings, regularly analyzes and assesses the operational status of various systems according to reports such as weekly reports on operational security, conducts regular emergency operation manual drills, and regularly scans and inspects system security vulnerabilities. The audit department also

	regularly conducts IT audits and requires timely rectification of any problems discovered. After changes occur or before new business goes live, CSDC reviews and tests any relevant changes in accordance with procedures. In addition, the Company has procedures for effectively managing items for improvement of management processes and services identified during operation of the management system, so as to ensure the effective and its continuous improvement. CSDC conducts routine tests with participants in simulated, real-world, total network and other testing environments on an ongoing basis. In areas unrelated to IT systems, CSDC's internal audit department conducts special internal audits each year. CSDC regularly receives information security audits from CSRC, the cyber-security management departments of local public security bureaus, and other authorities.
Key consideration 3 An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	CSDC's operational reliability objectives are "security, efficiency" and "forestalling systemic and major business risks," and are recorded in CSDC's work plan. As for IT systems, CSDC currently has a <i>Service</i> <i>Level Agreement</i> ("SLA") and key performance indicators ("KPI") for each procedure, which are recorded in the Company's system operation documentation. CSDC maintains sound ex ante, real-time and ex post risk management by strengthening day-to-day risk management and updating its risk management system, thereby ensuring high operational stability. In particular, in terms of maintaining the stability of IT systems, CSDC regularly reviews SLA implementation and the validity of its content, annually evaluates and revises performance indicators for its procedures, and assesses the fulfillment status of these indicators. The Company has established service management objectives such as system availability, service recovery capability, timely resolution of incidents, and customer satisfaction.
Key consideration 4 An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	With regard to IT systems, CSDC has established a centralized monitoring system to conduct real-time monitoring and dynamical analysis of business stress and trends, optimize the IT framework in due time, identify any deficiencies in the IT system in advance, and upgrade the system capacity. In addition, CSDC regularly assesses system capacity in accordance with ISO20000 capacity management requirements. In terms of human resources, CSDC evaluates the increase in business volume each year to maintain appropriate human resources and ensure their adequacy. When an emergency occurs, CSDC will initiate an emergency response according to the Company's contingency plan. Countermeasures include optimizing operational procedures, adjusting the IT framework, increasing hardware resources and releasing relevant public announcements in a timely manner. Scalability was taken into account when the system architecture was developed to ensure its capacity could be scaled up quickly in an emergency. CSDC reduces pressure on human

	resources through job rotation, recruitment and automation of operations.
Key consideration 5 An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.	CSDC has established a full-fledged system for management of physical security and information security pursuant to the basic requirements for multi-level information system security, CSRC requirements, and good industry practices. In terms of physical security, the Company has relevant security management policies, procedures and measures to resist physical threats in office spaces, control centers and computer rooms, which appear in ascending order of risk level. Specifically, the Company's requirements for multi-level information system security include regular screening of the risks regarding physical location, physical access control, theft prevention, damage, fires, lightning strikes, floods, humidity, static electricity, power interruptions and other hazards to the computer room, and include improvement of risk prevention measures. With regard to information security management, internal audits, updates, personal roles and responsibilities and data backup, and regularly makes improvements through security self-checks and security testing. CSDC has entered into information security control user rights and data access pursuant to relevant operations and maintenance management procedures.
Key consideration 6 An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be	CSDC regularly prepares and revises its <i>Business Continuity Plan</i> , <i>Business Impact Analysis and Risk Assessment Report</i> and <i>Emergency</i> <i>Operations Manual</i> pursuant to ISO20000 continuity management procedures. In order to ensure business continuity, CSDC has established an organizational structure for emergency response, a system of emergency policies and procedures, and conducts emergency drills each year. All of CSDC's facilities are backed up with redundancy. For example, the computer room has a dual power supply, and the communication links with relevant participants are separately maintained from the primary site and a backup site via private lines rented from two different telecommunications providers. On the other hand, the local and intra-city disaster recovery systems for all core business systems can ensure that the recovery time objective (RTO) is about 1 to 2 hours and the recovery point objective (RPO) is zero. Thus, operations can be resumed within 2 hours following disruptive events and disaster recovery requirements can be met. CSDC's contingency plan and other documents set forth how and what CSDC should disclose to CSRC, exchanges, participants and the entire market in the event of a crisis, and specify CSDC's internal emergency handling measures.

designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	plan, and conducts annual industry-wide and in-house emergency drills. Each year, relevant institutions in the industry also conduct multiple total network tests and switchover drills with each other.
Key consideration 7 An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.	Through its IT systems, CSDC is able to monitor the communication status, data integrity and transmission points with exchanges, participants and other institutions with which it has business links, in real-time, so as to ensure the timely detection and early resolution of problems. CSDC has reached agreements with exchanges, settlement participants and other external institutions by signing memoranda or otherwise, on the times of data transmission and receiving as well as coordination and emergency mechanisms in case of serious abnormalities, in the interest of identifying problems as early as possible to effectively segregate risks in the event of an incident and avoid IT risks arising from changes to any one party's system. CSDC maintains redundancy of all resources to cope with risks from external public utilities, such as power and telecommunications. For outsourced services, CSDC specifies the work standards and confidentiality requirements for outsourcing service providers in service contracts and confidentiality agreements, while also restricting access by outsourced personnel via managerial and technical means, and monitoring and auditing outsourced operations. In addition, CSDC

# Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Summary	CSDC has formulated the <i>Rules for Management of Settlement</i> <i>Participants</i> and has sound policy arrangements for both screening of settlement participants and continuity management. All settlement participants have fair and open access to services provided by CSDC in accordance with the rules.
	Based on reasonable risk-related considerations, CSDC has defined and publicly disclosed different access requirements for different types of

	settlement participants. CSDC monitors the compliance of settlement participants on an ongoing basis. The Company has clearly defined procedures for facilitating the suspension and orderly exit of a settlement participant that breaches, or no longer meets, the participation requirements.
Key consideration 1 An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.	CSDC has formulated the <i>Rules for Management of Settlement</i> <i>Participants</i> . Settlement participants are divided into participating securities companies, participating banks and other participants (including HKSCC Nominees Limited). Participating securities companies are divided into Type A settlement participants and Type B settlement participants according to whether their eligibility to act as settlement agents.
	Based on laws and regulations, risk control needs, and the requirements for day-to-day management of settlement participants, CSDC has formulated the <i>Rules for Management of Settlement Participants</i> and <i>Guidelines for Management of Settlement Participants</i> , which detail requirements for the financial positions, IT infrastructure and staffing of participants, which form the basis for continuity management and the determination of their eligibility.
	The relevant conditions neither impose restrictions on the minimum transaction amount or the customers of settlement participants, nor impose annual fees or access fees on settlement participants. Settlement participants that meet CSDC's criteria have fair and open access to services provided by CSDC.
Key consideration 2 An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavor to set requirements that have the least-restrictive impact on access that circumstances permit.	CSDC requires settlement participants to have a valid business license, stable financial security, IT and risk control systems that meet the requirements for settlement transactions, as well as specialized bodies and full-time settlement personnel, in order to ensure settlement participants have sufficient technical and human resources to support its business activities.
	In terms of commensurateness with specific risks, CSDC uses different access standards for different classes of settlement participants. In addition, CSDC sets settlement margin ratios and minimum settlement reserve ratios specific to the business type of settlement participants (for details, please see the description under Principle 5).
	Except for the financial licensing and regulatory requirements imposed by law, the participation restrictions set by CSDC are all based on risk management considerations. There are no participation restrictions that are not related to risks.

FMI should An compliance monitor with its participation requirements on an basis ongoing and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

CSDC inspects and monitors the compliance of settlement participants as appropriate, to include on-site and off-site inspections and routine risk monitoring. CSDC regularly conducts overall settlement evaluations of settlement participants. The evaluation criteria involve the execution of business and work related to settlements, regulatory penalties received or self-discipline measures taken, professional qualifications and financial position. Evaluation results are divided into three grades: A (Excellent), B (Good), and C (Watch).

Those who no longer meet CSDC requirements for Type A or Type B settlement participants will have their participant class downgraded or be disqualified from settlement participation by CSDC. Settlement participants who are deemed to likely unable to perform their settlement obligations properly due to a high-risk institution rating from CSRC, stock exchanges or other regulatory authorities, or because of regulatory measures enforced against then, will be placed on CSDC's watch list and may be subject to various risk control measures according to their risk level. Settlement participants who either apply to CSDC for voluntary disqualification from settlement participation, are no longer meet the participation conditions, seriously violate the business rules or settlement code of CSDC, are declared revoked, closed, dissolved or bankrupt according to law, or are deemed by CSRC to be disqualified from settlement participation, will be disqualified from settlement participation by CSDC in accordance with relevant regulations, and CSDC will carry out special management of their settlement operations that may subsequently occur, as well as make a report to CSRC and a public announcement on the Company's website. The disqualification procedures for settlement participants are published on CSDC's website.

### **Principle 19: Tiered participation arrangements**

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Registration and Settlement and the Rules for Managemen Participants, among other regulations and rules, CSDC h well-founded legal basis for implementing tiered arrangements. For the time being, there are no n participants in CSDC.SummaryCSDC has established settlement risk management effectively identify, monitor, prevent and manage materia from tiered participation arrangements. The Company integrated risk monitoring system that covers all settlement	In accordance with the <i>Measures for the Administration of Securities</i> <i>Registration and Settlement</i> and the <i>Rules for Management of Settlement</i> <i>Participants</i> , among other regulations and rules, CSDC has provided a well-founded legal basis for implementing tiered participation arrangements. For the time being, there are no non-settlement participants in CSDC.
	CSDC has established settlement risk management policies to effectively identify, monitor, prevent and manage material risks arising from tiered participation arrangements. The Company also has an integrated risk monitoring system that covers all settlement participants at present and may incorporate non-settlement participants when necessary in the future.

Key consideration 1 An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.	CSDC has policy arrangements for tiered participation. The Measures for the Administration of Securities Registration and Settlement and Rules for Management of Settlement Participants set forth a three-tiered management structure consisting of CSDC, settlement participants and non-settlement participants. CSDC has a direct settlement relationship with settlement participants, which have an agency settlement relationship with non-settlement participants are divided into Type A and Type B settlement participants. Only Type A settlement participants can establish an agency settlement relationship with non-participants, while Type B settlement participants are not eligible as settlement agents for non-settlement participants are not eligible as settlement agents for non-settlement participants. Individual customers are excluded from tiered participation arrangements. According to CSDC's business rules, "non-settlement institutional participants" generally refers to securities companies that are not eligible as settlement participants or not eligible for the Company's option settlement business. Individual customers are not yet part of tiered participants in practice, it has established a mechanism for collecting basic information on indirect participants. The identified material risks to CSDC arising from tiered participation arrangements are due to poor management by direct participants of risks posed by indirect participants, which results in the transmission of indirect participants' credit risks to CSDC. CSDC mitigates risks arising from tiered participants regarding risk management of their customers, which require settlement participants to impose risk management requirements on their customers and non-settlement participants which are stricter or no less stringent than those imposed by CSDC on participants. CSDC at one time introduced tiered settlement arrangements to the warrant settlement business, but all warrant products have since expired and terminated. CSDC has not practiced agency settlement arrange
Key consideration 2 An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.	CSDC mainly identifies material dependencies between direct and indirect participants that might affect the Company by the following means: First, the Company examines the proportional relation between the number of direct and indirect participants. Second, the Company examines the proportional relationship between the transaction volumes of direct and indirect participants. At present, CSDC's integrated risk monitoring system covers all settlement participants. If any indirect participants emerge in future, the Company can also use the monitoring system to identify various substantive dependencies that may affect CSDC settlements.

Key consideration 3 An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.	<ul> <li>Based on the transaction data of exchanges, CSDC identifies indirect participants that might pose significant risks using the following four indicators, and manages risks arising from such indirect participants' transactions on this basis.</li> <li>The ratio of indirect participants' transaction volume to direct participants' transaction volume (agency settlement vs. direct settlement).</li> <li>Direct participants responsible for a significant proportion of agency settlement transactions.</li> <li>Indirect participants responsible for a large proportion of transaction volume.</li> <li>Indirect participants that have a larger transaction volume than that of their direct participants.</li> </ul>
Key consideration 4	In practice, all the settlement participants in CSDC are direct
An FMI should	participants. There are no indirect participants for the time being. Thus,
regularly review risks	the Company is not exposed to any material risks arising from tiered
arising from tiered	participation arrangements. Therefore, CSDC does not yet have clear
participation	risk control measures or monitoring methods. However, at the level of
arrangements and	statistical analysis, CSDC has conducted research on the trading
should take mitigating	behaviors and habits of large investors. In the future, the Company will
action when	further improve risk management measures for indirect participants
appropriate.	based on existing research findings.

# Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

G	At present, CSDC's current CSD-CSD link only involves free-of-payment (FOP) settlement. The Company has no temporary arrangements for securities transfer or credit granting and no credit or liquidity risks will result.
Summary	Before relevant CCP-CCP links between CSDC and HKSCC Nominees Limited were created, CSDC formulated a detailed business plan to comprehensively analyze and identify potential risks that might arise from the links and made policy arrangements to effectively prevent and manage risks. These links, once established, render CSDC and HKSCC

of host jurisdiction and risk segregation. Settlement risks of participants in CSDC will not spread to HKSCC Nominees Limited and vice versa.		Nominees Limited participants of each other according to the principles of host jurisdiction and risk segregation. Settlement risks of participants in CSDC will not spread to HKSCC Nominees Limited and vice versa.
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#### Key consideration 1

Before entering into a link arrangement and on an ongoing basis the link once is established. an FMI identify, should monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.

At present, CSDC maintains the following FMI links: A two-way CSD link and two-way CCP link with HKSCC Nominees Limited for settlement under the Shanghai/Shenzhen-Hong Kong Stock Connect program and Hong Kong settlement, a link with CDC for cross-market custody transfer of treasury bonds, a link with CFFEX for bond transfer regarding the treasury bond futures delivery, and a one-way CSD link with HKSCC Nominees Limited for B-to-H Conversion and Full H-Share Convertibility.

Before establishing a link with any other FMI, CSDC will create a cross-departmental joint working group consisting of the Company's legal, business and technical personnel to comprehensively identify various risk points according to FMI principles and analyze and assess potential risks (e.g., legal, credit, liquidity, custody and operational risks) that might arise from such a link. In addition, the Company will set up a bilateral working group linked with the FMI in order to fully communicate and exchange ideas, provide preliminary assessments and suggest preventive measures for identified risks. In addition, CSDC employs external lawyers to independently assess relevant legal risks. CSDC's Risk Management Committee and Management Team review the assessments and undergo CSRC approval or filing procedures. The above assessment results directly influence CSDC's decision whether to link with other FMI's. If the assessment results show that the potential risks are too high and cannot be effectively controlled through solution improvements, CSDC will terminate efforts geared toward linkage.

CSDC reviews the validity and compliance of the linkage from time to time. When relevant laws and regulations or business rules change, CSDC will review and assess the impact of such changes on the link, and, when necessary, adjust the relevant business agreements and rules or even terminate the link.

CSDC continuously identifies, monitors and manages risks arising from links through relevant business agreements, operating procedures, regular reconciliation, contingency planning and other policies. For a risky link, CSDC regularly conducts a financial assessment and due diligence on the linked FMI (once a year) and identifies, measures and manages the risk exposure arising from the link on an ongoing basis.

Key consideration 2

A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate

As for cross-border links, CSDC conducts transactions involved with the link in accordance with the principle of host jurisdiction and laws, regulations and business rules applicable to linked markets and bilateral business agreements with the linked FMI. CSDC employs professional lawyers to issue relevant legal opinions and also requires the linked FMI to issue relevant legal opinions to ensure that the link has a well-founded legal basis, and is free of any conflicts of interest. In the existing cross-border link with HKSCC Nominees Limited, CSRC has signed

protection to the FMIs involved in the link.	MOU's on regulatory cooperation with Hong Kong market regulators, providing an adequate regulatory basis for cross-border links. When relevant laws and regulations are revised, CSDC comprehensively assesses their impact on relevant business rules, agreements and arrangements for cross-border links and makes appropriate adjustments when necessary. In case of major legal conflicts, CSDC may terminate the relevant cross-border link agreement under the regulatory authorities' central arrangements.
Key consideration 3 Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.	Regarding the link between CSDC and HKSCC Nominees Limited under the Shanghai/Shenzhen-Hong Kong Stock Connect program: The securities settlement under the Shanghai/Shenzhen-Hong Kong Stock Connect program follows the principle of host jurisdiction; that is, CSDC as a participant in HKSCC Nominees Limited fully abides by the business rules of HKSCC Nominees Limited, and HKSCC Nominees Limited as a participant in CSDC fully abides by the business rules of CSDC. Under the Shanghai/Shenzhen-Hong Kong Stock Connect program, pursuant to the principle of host jurisdiction, CSDC maintains front-end short-selling monitoring of the nominee holder account of HKSCC Nominees Limited. Therefore, the securities accounts of HKSCC Nominees Limited poses no risk of securities delivery default. Securities delivery under the Shanghai/Shenzhen-Hong Kong Stock Connect program follows the DVP mechanism. There is neither provisional securities transfer nor credit arrangement, so there will be no credit risk exposure.
	CSDC-CDC link for cross-market custody transfer of treasury bonds CSDC performs write-down according to the investor's application for outgoing transfer, sends the verified custody transfer instruction to CDC through the user terminal of the book-entry system user terminal. Following the confirmation by CDC, the Company indicates successful custody transfer. No credit is granted to the investor in the process. In addition, the cross-market incoming transfer of treasury bonds follows the FOP mechanism, and CSDC also grants no credit to CDC in the process.

Regarding CSDC-CFFEX links for bond transfers regarding treasury bond futures delivery: At the instruction of CFFEX, CSDC forwards the pre-delivery amount of the seller (investor) to the securities company or bank acting as its custodian, and completes the transfer of relevant securities or funds according to CFFEX instructions. CSDC mainly functions as a custodian bank in the process and faces no credit risks.

Link between CSDC and HKSCC Nominees Limited for B-to-H Conversion: When a domestic investor sells H-shares, CSDC is responsible for completing the DVP settlement of securities in real time with the overseas securities company acting as an agent according to the transaction data. CSDC mainly functions as a custodian bank in the process and faces no credit risks.

To sum up, CSDC is not exposed to any credit risks arising from its

	current CSD-CSD links.
Key consideration 4 Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.	Business rules prohibit provisional transfer of securities to or from linked CSD's. In inter-system cooperation, CSDC does not transfer securities provisionally. The agreements between CSDC and linked FMI's confirm the finality of securities transfer and prohibit provisional transfer.
Key consideration 5 An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.	The agreements between CSDC and linked FMI's stipulate that CSDC as an investor, CSD open an account with the issuer CSD, with its participant accounts segregated from the issuer CSD's participant accounts, and its participant assets segregated from the issuer CSD's own assets as well as the issuer CSD's participant assets. The assets of CSDC's participants are immune from claims of the issuer CSD's creditors. The issuer CSD shall, should it go bankrupt, protect the assets of CSDC's participants from freeze or other bankruptcy claims. The assets of CSDC's participants share no losses with other participants in the issuer CSD. As an investor CSD, CSDC reconciles shares with the issuer CSD on a daily basis. As an investor CSD, CSDC implements an internal segregation system; that is, the Company opens securities accounts in the name of participants and investors on order to register their securities holdings, which are segregated from CSDC's own assets and immune from CSDC's financial risks. Therefore, participants and investors are protected at a high level, and participants and investors in turn, receive a high level of protection.
Key consideration 6 An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.	Not applicable. CSDC uses no intermediary for CSD links.

Key consideration 7 Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.	CSDC operates a CCP-CCP link with HKSCC Nominees Limited under the Shanghai/Shenzhen-Hong Kong Stock Connect program. Before the CCP-CCP link was created, CSDC formulated a detailed business plan to comprehensively analyze and identify potential risks that might arise from the link and made policy arrangements (including business rules and agreements) to effectively prevent and manage risks. The establishment of this link, following the principles of host jurisdiction and risk segregation, renders CSDC and HKSCC Nominees Limited participants of each other, which abide by each other's business rules. CSDC and HKSCC Nominees Limited pay settlement margins to each other and strictly manage each other's credit risk and liquidity risk, exactly as for other settlement participants. In addition, settlement participants in the two markets are segregated from each other, i.e. CSDC's settlement participants will not become settlement participants of HKSCC Nominees Limited or vice versa. Thus, the settlement risks of settlement participants in the two markets are segregated from each other.
Key consideration 8 Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfill its obligations to its own participants at any time.	In the CCP-CCP link under the Shanghai/Shenzhen-Hong Kong Stock Connect program, HKSCC Nominees Limited, like other settlement participants in CSDC, shall abide by relevant business rules of CSDC. The assessment results under other principles in this Report are all applicable to this link (including Principles 4, 5, 6 and 7). Unlike other settlement participants, under the Shanghai/Shenzhen-Hong Kong Stock Connect program, the exchanges on both sides have set a daily ceiling for trading volume and a range for tradable securities (stocks of relatively good quality), which limit current and potential maximum mutual exposures to a relatively low level. Such arrangements, together with the existing margin system, effectively cover the above risk exposures.
Key consideration 9 A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.	Not applicable.

# Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Summary	CSDC is not for profit. The Company's priority objectives are safety, efficiency and supporting market development, and it continuously meets the needs of its participants and the market it serves. Through the regular formulation and implementation of development strategy, annual work plans and the Company's operating factors and indicators, CSDC clearly defines, strictly implements and regularly assesses its long-term goals and short-term objectives.
Key consideration 1: An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.	<ul> <li>CSDC is not for profit. It strives to meet the needs of its participants and the markets it serves. Further explanations are provided below as to how CSDC meets the needs of its participants and the market it serves in terms of clearing and settlement, operational structure, scope of products, use of technology and procedures, and cost control.</li> <li>Clearing and settlement arrangements: The Company provides settlement participants with guaranteed multilateral net settlements, non-guaranteed bilateral net and gross obligation-by-obligation settlements, and non-guaranteed settlement in the primary market.</li> <li>Operating structure: CSDC has achieved straight-through processing (STP) with exchanges, settlement participants and settlement banks, ensuring high operational efficiency.</li> <li>The scope of products cleared, settled or recorded: The scope of services covers stocks, bonds, funds and securities derivatives listed on stock exchanges, unlisted securities and foreign stocks listed overseas, for which CSDC has achieved net settlement under a single agreement in a single market. The settlement efficiency is high.</li> <li>Technology and procedures: Currently CSDC follows domestic standards and specifications that are sufficient to meet market needs. In the future, CSDC will conduct further research on how to accommodate internationally accepted communication procedures and standards according to the needs of opening to a two-way market.</li> <li>IT arrangements: The Company's IT and strategy planning department is responsible for formulating IT plans, overall planning of development resources, and arranging for the development of new products and technologies. Finally, the Company makes the overall arrangements for implementation. In the process of implementation, the Company makes the necessary adjustments according to the needs of settlement participants and transactions, and may reduce the adverse impact of initial expenses on the participants.</li> </ul>

Key consideration 2:

An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities. In accordance with CSDC's *Articles of Association*, the Company will "create a centralized, safe and effective system of securities registration and settlement that meets standardization and internationalization requirements, features openness and scalability, prevents market risks, boosts market efficiency and better meets the future development needs of China's securities market." In accordance with the *Administrative Measures for Development Planning of the Company*, CSDC has formulated the Company's strategic plan, annual work plan and other development goals and objectives in line with the Company's statement of purpose. When goals and objectives are set, whether they are measurable and achievable is taken into consideration. Main measures include the following:

• Long-term goals are mainly defined in the Company's strategic development plan. CSDC always strives to become a globally important financial facility with solid basic policies, a full-fledged risk control system, advanced technology, strong service capabilities and a sharp global competitive edge, and has likewise formulated relevant measures. Formulation of CSDC's strategic development plan includes breaking the plan down into smaller tasks and specifying the deliverables and scheduling of relevant tasks, so as to make long-term goals more executable. In defining its long-term goals, the Company comprehensively weighs its own capabilities and resources, as well as national and CSRC development plans and external supports available to the Company, and also will describe the means of ensuring adequate implementation of the plan in the strategic plan report.

• Short-term objectives are defined mainly in the Company's annual plan. The annual work plan gives top priority to supporting market development, improving efficiency and forestalling risks, and provides specific supportive measures. At the beginning of each year, CSDC defines tasks for the year based on its strategic development plan, the work conducted in the previous year and major innovation activities in the market. In determining annual tasks, the Company comprehensively weighs its own capabilities and resources and external supports available to the Company, so as to ensure that the tasks are executable.

Key consideration 3:

An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

CSDC has established a set of procedures and indicators such as its strategic development plan, annual work plan and operating factors and indicators, which basically reflect CSDC's operating efficiency and effectiveness. Regular review of strategic development plan, work plan and operating factors and indicators includes but is not limited to the following: Is safe operation guaranteed? Are systemic risks prevented? Have they effectively supported important and urgent innovations and development of the market? These elements all involve CSDC's efficiency and effectiveness. CSDC conducts interim and final reviews of its strategic development plan, assesses annual tasks on a quarterly basis, and assesses the Company's operating factors once annually.

## 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.

Summary	In order to meet business needs and take into account security and efficiency considerations, CSDC mainly uses domestic communication procedures and standards at present. From a practical point of view, CSDC's IT systems currently provide efficient and safe services. The Company has kick-started research on ISO20022 and other international communication procedures and standards. In terms of the practical needs of future cross-border business, the Company can accommodate international communication procedures and standards through interface conversion in the short term.
Key consideration 1	CSDC mainly operates within the territory of the People's Republic of
An FMI should use, or	China. For efficiency and security considerations, it mainly follows
at a minimum	domestic or in-house communication procedures and standards.
accommodate,	To support cross-border business development in the future, the
internationally	Company has kick-started research on ISO20022 and other international
accepted	communication procedures and standards. Should it be necessary to
communication	conduct cross-border business, the Company can accommodate
procedures and	international communication procedures and standards through interface
standards.	conversion in the short term.

### 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.

	CSDC has clear and comprehensive rules and procedures, and discloses/issues them to participants and the general public in a timely manner through the Company's website (http://www.chinaclear.cn).
Summary	CSDC clearly discloses relevant system designs and operations and service fees, interacts with participants through training and other means, and helps participants assess and manage the risks and costs incurred by their use of CSDC's services. In addition, CSDC regularly discloses relevant business data to the market in order to improve market

	transparency
	transparency.
Key consideration 1 An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	CSDC's rules and procedures are divided into the following 11 categories according to business type: Account management, registration and depository, clearing and settlement, management of settlement participants, innovative businesses, bonds, stock options, margin trading and short selling/refinancing, open-ended funds, foreign-related business and others. Relevant document types include business rules, detailed rules for implementation, guidelines and directives, standard-form agreements (contracts) and notices. The above documents include all the important rules and procedures binding CSDC and its settlement participants, as well as the relevant rules and measures for dealing with non-conventional events such as participant default, system failure and temporary market suspensions. They are publicly disclosed on CSDC's website.
	CSDC usually discloses its revisions to rules and procedures publicly in the form of notices on its website. In addition, the Company will notify settlement participants in a timely manner of the revisions to the rules involving settlement participants. CSDC will disclose important ad hoc matters and data changes in accordance with relevant procedures as appropriate, to ensure that participants have equal access to relevant information. In addition, material information will be released through public media channels in the securities industry.
Key consideration 2 An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	The rights and obligations between CSDC and settlement participants are set forth in CSDC's business rules. CSDC's rules and procedures also include information on the design and operations of its systems. CSDC's business rules are published on its website without any access restrictions and are transparent and open to all settlement participants and market players.
	With regard to CSDC's clearing and settlement operations, the Company provides settlement participants with sufficient information to enable identification and assessment of risks and costs incurred by their use of CSDC's services. CSDC's clearing and settlement rules provide the following information: The types of transactions that can be cleared and settled by CSDC and the conditions for clearing and settlement of transactions; how CSDC handles the defaults of settlement participants, including the sources of funds for supporting the handling of defaults and the relevant measures taken against defaulting members; operational risks of CSDC's clearing facilities.
	As for the registration and depository functions of CSDC, the Company's registration and depository rules specify how CSDC should operate. The Company provides sufficient information to enable participants to identify and assess risks and costs incurred by their use of CSDC's registration and depository services.
Key consideration 3	CSDC maintains interaction with existing and prospective settlement participants to facilitate their understanding of CSDC's relevant rules,

An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.	procedures, systems and requirements. In addition, CSDC provides necessary training and assistance to settlement participants. CSDC provides face-to-face or distance training to market participants on a regular basis for a range of topics, including business issues, risks and regulatory issues, changes in relevant regulatory policies and CSDC's rules and procedures. Participants in training include securities companies, listed companies, settlement participants and other market players. The training courses encompass registration and depository, settlement, pledge, non-transaction transfers, issuer services, business innovation and major market developments. CSDC conducts a questionnaire survey of attendees during each session of market participant training results and provide ongoing training in a more targeted manner. The settlement participants who lack an adequate understanding of CSDC's rules and procedures and participation risks can consult CSDC via its customer service center hotline. In addition, CSDC's website offers an FAQ module to facilitate settlement participants' understanding of CSDC's rules, procedures and participation risks.
Key consideration 4 An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.	CSDC publishes its fees on its website, including registration and settlement service fees, securities settlement risk funds, and taxes and fees withheld or collected on behalf of tax authorities, CSRC, stock exchanges or other institutions. In addition, CSDC also publishes its policies on available discounts. CSDC publishes the descriptions of its priced services on its website. Relevant information on the fees for such services is sufficiently detailed for comparability with those of other clearing and depository institutions.
Key consideration 5 An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes	Following an FSAP assessment in 2010, CSDC published Chinese and English versions of the FSAP assessment report on its website in accordance with the FSAP disclosure policy. Recently, CSDC has conducted a self-assessment based on CPMI-IOSCO's <i>Principles for</i> <i>Financial Market Infrastructures</i> . This disclosure report was prepared and disclosed in accordance with the requirements of the <i>Disclosure</i> <i>Framework for Financial Market Infrastructures</i> . In the future, CSDC will update the disclosure documents in accordance with relevant requirements and procedures. CSDC regularly publishes relevant market data. The market data reports are divided into weekly, monthly and annual reports.

and values.	

# Principle 24: Disclosure of market data by trade repositorie

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

Summary	Upon authorization from CSRC, CSDC has established and operates a securities registration and settlement repository and a central exchange platform for fund data. China has not yet enacted legislation regarding TR's. CSDC has not been legally recognized as a TR. There is still a certain distance between CSDC and foreign TR's in a strict sense. Therefore, Principle 24 is not applicable.
Key consideration 1 A TR should provide data in line with regulatory and industry expectations to relevant authorities and the public, respectively, that is comprehensive and at a level of detail sufficient to enhance market transparency and support other public policy objectives.	Upon authorization from CSRC, CSDC has established and operates a securities registration and settlement repository and a central exchange platform for fund data. CSDC is taking further steps to strengthen institutional planning of data storage and disclosure of the central exchange platform's fund data, so as to enhance the capability of external data services. As China has not yet enacted legislation regarding TR's, and CSDC has not been legally recognized as a TR, there is still a certain distance between CSDC and foreign TRs in the strict sense. Therefore, this principle is not applicable.
Key consideration 2 A TR should have effective processes and procedures to provide data to relevant authorities in a timely and appropriate manner to enable them to meet their respective regulatory mandates and legal responsibilities.	

Key consideration 3
A TR should have robust information systems that provide accurate current and historical data. Data should be provided in
a timely manner and in a format that permits it to be easily analyzed.

#### V. List of Publicly Available Resources

All laws, judicial interpretations, administrative regulations, ministerial rules, as well as CSDC's business rules and guidelines, and operational directives governing the Company's operations are publicly available in the Laws and Regulations module of CSDC's website (www.chinaclear.cn).