

**People's Republic China: Detailed Assessment Report: CPSS-IOSCO
Recommendations for Securities Settlement Systems and Central Counterparties**

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FINANCIAL SECTOR ASSESSMENT PROGRAM

PEOPLE'S REPUBLIC OF CHINA

CPSS-IOSCO RECOMMENDATIONS FOR SECURITIES
SETTLEMENT SYSTEMS AND CENTRAL COUNTERPARTIES

DETAILED ASSESSMENT OF OBSERVANCE

MARCH 2012

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GLOSSARY

ABS	Asset Backed Securities
BCM	Business Continuity Management
CBRC	China Banking Regulatory Commission
CBL	Clear Stream Banking Luxembourg
CCP	Central Counterparty
CFA	China Futures Association
CFETS	China Foreign Exchange Trading System
CFFEX	China Financial Futures Exchange
CFMMC	China Futures Margin Monitoring Center
CSRC	China Securities Regulatory Commission
CPSS	Committee on Payment and Settlement Systems
CCDC	China Government Depository and Clearing Corporation Limited
CMU	Central Money Markets Unit
CSD	Central Securities Depository
DCE	Dalian Commodities Exchange
DR	Disaster Recovery
DaP	Delivery After Payment
DvP	Delivery versus Payment
FoP	Free of Payment
FSAP	Financial Sector Assessment Program
GDP	Gross Domestic Product
HKMA	Hong Kong Monetary Authority
HVPS	High Value Payment System
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ISIN	International Securities Identification Number
MOF	Ministry of Finance
MoU	Memorandum of Understanding
NPC	National People's Congress
OTC	Over the Counter
PaD	Payment after Delivery
PBC	People's Bank of China
PRC	People's Republic of China
QFII	Qualified Foreign Institutional Investor
RCCP	Recommendations for Central Counterparties
RSSS	Recommendations for Securities Settlement Systems
RTGS	Real Time Gross Settlement
SAC	Securities Association of China
SAMP	Specific Asset Management Plan
SCH	Shanghai Clearing House
SD&C	China Securities Depository and Clearing Corporation Limited
SHFE	Shanghai Futures Exchange

SIPS	Systemically Important Payment System
SSE	Shanghai Stock Exchange
SZSE	Shenzhen Stock Exchange
SRO	Self-Regulatory Organization
SSS	Securities Settlement Systems
ZCE	Zhengzhou Commodities Exchange

EXECUTIVE SUMMARY

The Securities Settlement Systems (SSS) in the People's Republic of China (PRC) are organized around three different types of markets, which are the bond market, the corporate securities market and the futures market. The bond market comprises the interbank bond market, the exchange bond market and the bank counter market. The interbank bond market is the most dominant market, with more than 97 percent of total bond trading volume. The two stock exchanges, the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE), were established in 1990 and offer trading in the same type of securities, being shares, bonds, funds and warrants. Turnover on both stock exchanges is relatively high and has grown tremendously during the last decade. According to the World Federation of Stock Exchanges, as of 2009, the SSE ranks as the 3rd exchange worldwide in share trading with RMB 34 trillion, and the SZSE as the 6th with RMB 18 trillion. There are also three commodities exchanges: Shanghai Futures Exchange (SHFE), Dalian Commodities Exchange (DCE) and Zhengzhou Commodities Exchange (ZCE). The SHFE ranks as the 10th derivatives exchange worldwide, measured in number of contracts traded and the second largest commodity exchange. A financial futures exchange (China Financial Futures Exchange (CFFEX)) was established in 2006 as a joint venture of the SSE, SZSE, SHFE, DCE, and ZCE but still volume and value of transactions are relatively modest.

The China Government Depository and Clearing Corporation Limited (CCDC) is the SSS as well as the central securities depository (CSD) for bonds. It is the only institution entrusted by the Ministry of Finance (MOF) to be the depository for Government securities. The CCDC was established in 1996 as a Government entity and since then it is regulated by the People's Bank of China (PBC) and overseen by the PBC and MOF. In addition, the China Banking Regulatory Commission (CBRC) is in charge of the appointment of Executive Managers of CCDC. The CCDC settles bond transactions (spot, repo, forward) on a gross basis for both bonds and funds, though CCDC management is currently considering introducing also a netting facility. Securities are held at the end-investor level in most cases (98 percent). The CCDC book entry system is interconnected with the interbank trading system (operated by the China Foreign Exchange Trading System (CFETS)). Cash settlement takes place in the central bank high value payment system (HVPS). Settlement takes place on T+0 for most transactions (82.9 percent of total value settled in 2009). In addition to the commonly used delivery versus payment (DvP) settlement, CCDC allows for other settlement modalities, Payment after Delivery (PaD), Delivery after Payment (DaP) and Free of Payment (FoP).

The China Securities Depository and Clearing Corporation Limited (SD&C) is the central counterparty (CCP), SSS, as well as the CSD for all instruments traded on the SSE and SZSE. The SD&C was established in 2001 and is jointly owned by the SSE (50 percent) and the SZSE (50 percent). Securities settlement arrangements for SSE and SZSE are based on front-end availability of securities and funds, otherwise transactions do not take

place. Securities are held at the investor level detail in the SD&C while funds are kept through a system of third party custodian banks with the SD&C acting as the settlement agent.

The four futures exchanges have their own clearing and settlement departments, which offer the function of a CCP. Settlements can be either in cash (daily mark to market) as well as physical settlements (delivery on expiration). The exchanges operate a pre-margining system, that is, futures contracts can only be purchased under the premise of sufficient margin deposits. In addition to the pre-margining system the exchanges have established other risk management controls including: price limits, limits to speculative positions and large holders, compulsory closed-out of positions, a system of warning indicators, and settlement reserves. Cash settlement is effected through the accounts of five commercial “settlement” banks. The “settlement” banks only operate as custodians for margins and facilitators for transfers of funds with the futures exchanges conducting settlement functions. Also, the China Futures Margin Monitoring Center (CFMMC) was established in 2006 as a non-profit company under the sponsorship of the three futures exchanges to guarantee the safety of futures margin.

The CCDC, SD&C, and SHFE/DCE/ZCE operate important securities and derivatives settlement systems both, due to the large volume and value of transactions (GDP comparison) and the fact that they support key financial sector markets (interbank bond market, stock exchanges and futures). Therefore, the CCDC and SD&C are being assessed below against the 19 Recommendations for Securities Settlement Systems (RSSS) and the SHFE is being assessed against the 15 Recommendations for Central Counterparties (RCCP). The SD&C operates as a CCP for most of the market transactions but given the “unique” features of its settlement process (front-end control of securities and funds) it is being assessed against the RSSS (see Section III.B). The other two commodities futures exchanges, DCE and ZCE, follow very similar settlement procedures to the SHFE, thus, findings and recommendations for the SHFE are also applicable to DCE and ZCE.

The assessment of the bonds market-CCDC system against the RSSS concludes that the system observes (observed or broadly observed) thirteen of the 19 recommendations, being one not applicable. However, there are improvement opportunities in several areas:

- **Legal foundation:** undertake an overall review of the legal and regulatory framework to provide a solid legal basis for bond market operations ensuring protection of finality at the Law level. The efficiency of the collateral disposal should be analyzed and improved as soon as possible.
- **Pre-settlement and settlement risk:** in order to minimize settlement risk it will be important: (i) to ensure all transactions are confirmed on T + 0; (ii) finalize the process to determine if the typology of the market and other legal, and institutional considerations justify the establishment of a CCP mechanism; (iii) introduce

securities lending and borrowing mechanisms beyond bilateral arrangements; and (iv) further increase the use of DvP settlement to reach as soon as possible 100 percent settlement on a DvP basis.

- **Custody risk:** ensure that customer's assets are protected from claims to CCDC participants. This protection should be included at the Law level.
- **Governance, transparency and efficiency:** a clear separation should be made from the oversight function of the PBC, the other supervisory tasks of CBRC and MOF, and the operational responsibility of PBC. The CCDC should disclose the answers to the questionnaire set out in the Committee on Payment and Settlement Systems (CPSS)/International Organization of Securities Commissions (IOSCO) disclosure framework or the answers to the key questions set out in the assessment methodology for RSSS. In addition, CCDC is encouraged to continue improvement of its service level.
- **Regulation and oversight:** the overseer should ensure that the system observes all CPSS-IOSCO RSSS and therefore, supervisors and regulators should continue to exercise their action effectively. The PBC should clarify the roles it plays with respect to the CCDC by clearly distinguishing its oversight and supervisory role from its participation in the governance of the system. Also, further fine tuning is needed in the cooperation arrangements of the different regulators in respect to clearance and settlement issues.
- Finally, **communication procedures and analysis of cross-border links risks** can be enhanced.

The assessment of the stock exchanges-SD&C system against the RSSS concludes that the system observes (observed or broadly observed) seventeen of the 19 recommendations. However, there are improvement opportunities in several areas:

- **Pre-settlement and settlement risk:** the front end control of securities and funds plus other risk management tools clearly mitigates settlement risk but China Securities Regulatory Commission (CSRC) and SD&C should consider to make public a description of how clearance and settlement arrangements operate to avoid a potential perception that by not following a more "orthodox" DvP structure the system does not comply with the DvP principle. Also as the market develops, CSRC and SD&C should consider if current arrangements would address market needs (e.g., growth of the wholesale market) and, thus, may consider evaluating how to strengthen its robustness as a CCP.
- **Governance and transparency:** the SD&C should ensure full observance with the RSSS. Also, the SD&C should disclose the answers to the questionnaire set out in the

CPSS/IOSCO disclosure framework or the answers to the key questions set out in the assessment methodology for RSSS.

- **Regulation and oversight:** the CSRC should ensure that the system observes all CPSS-IOSCO RSSS and therefore, supervisors and regulators should continue to exercise their action effectively. Although a high level cooperation framework among relevant authorities does exist, cooperation at the technical level might be structure more formally. Authorities should also further foster cooperation between them and the private sector and other relevant stakeholders by creating an appropriate forum to discuss payment and settlement matters.
- Finally, **communication procedures and analysis of cross-border links risks** can be enhanced.

The assessment of the commodities futures markets-SHFE system against the RCCP concludes that the system observes (observed or broadly observed) eleven of the 15 recommendations, being one not applicable. However, there are improvement opportunities in several areas:

- **Legal foundation:** Most key concepts of clearing and settlement are covered by the SHFE rules and regulations, however, not in statutory law. A statutory law should contain provisions on derivative trading including among other issue, the enforceability of trades, finality, netting, novation, investor protection and collateral protection.
- **Margin requirements:** no clear legal basis exists for the acceptance of warehouse receipts as collateral to deposit as margin for the coverage of market risk exposure.
- **Governance:** the SHFE is urged to engage in a self assessment with the new standards under preparation by the CPSS and IOSCO which will be released in 2011. A workshop on these standards might be organized with the participation of local authorities and market participants, as well as international practitioners from both the public and the private sector.
- **Transparency:** the SHFE should publish the disclosure framework for the CPSS-IOSCO RCCP.
- **Regulation and oversight:** given concentration of risks in a CCP and its potential effect on financial stability CSRC and PBC should establish a cooperative oversight framework for CCPs.

I. GENERAL

1. **The present document is the assessment of securities and derivatives settlement systems in the PRC based on the Recommendations of the CPSS and the IOSCO for RSSS and the Recommendations of CPSS-IOSCO for Central Counterparties (RCCP).** This assessment was conducted during a field mission of the Financial Sector Assessment Program to the PRC in September 2010.
2. **The assessors of the RSSS and RCCP were Massimo Cirasino and Mario Guadamillas.**¹ The same assessors also undertook the assessment of Systemically Important Payment Systems (SIPS) in China with the CPSS Core Principles for SIPS.

II. INFORMATION AND METHODOLOGY USED FOR ASSESSMENT

3. **The information used in the assessment included relevant laws, rules and procedures governing the systems, and other available material.**² In addition, extensive discussions were held with regulators and overseers: PBC, CSRC, SSE, SHFE, DCE, ZCE, CFFEX, CCDC, SD&C, Securities Association of China (SAC), China Futures Association (CFA); several stakeholders, including banks and broker-dealers active on the SSE, SHFE, and the interbank bond market, participants of the CCDC and SD&C as well as banks that facilitate settlement and funds custody for corporate securities and futures. Three self assessments were prepared by the CCDC for the CCDC settlement system, by the SHFE for the SHFE clearing and settlement system and by the Department of Market Supervision of the CSRC for the SD&C clearing and settlement system. Other relevant information was derived by the assessment process for SIPS.
4. **The assessment was conducted on processes and functions as opposed to institutions.** Given that the bonds are mostly traded over the counter (OTC), the processes relating to trades outside the stock exchange were also examined.

III. SECURITIES AND DERIVATIVES SETTLEMENT SYSTEMS INFRASTRUCTURE OVERVIEW

5. **The SSS in the PRC are organized around three different types of markets, which are the bond market, the corporate securities market and the futures market, see**

¹ Massimo Cirasino is Head of the Payment Systems Development Group of the Financial and Private Sector Development Vice Presidency (FPDVP) at the World Bank. Mario Guadamillas is the FSAP Manager in FPDVP at the World Bank. Office research has been conducted by Froukelien Wendt, Senior Securities Settlement Specialist at the Payment Systems Development Group of the FPDVP at the World Bank.

² CSRC Annual Reports 2008 and 2009, CDC Annual Report of China's Bond Market 2009, PBC responses on the FSAP questionnaire for payment systems and securities clearing and settlement; websites from CSRC, SSE, SZSE, SHFE, CDCC/Chinabond; and other relevant documents.

Figure 1. Volumes in these markets have been growing steadily over the last two decades, with the SSS becoming a critical component of the financial infrastructure of China.

A. Clearance and Settlement Arrangements for the Interbank Bond Market and Bank Counter Market

6. **The bond market in the PRC comprises the interbank bond market, the exchange bond market and the bank counter market.** The interbank bond market is the most dominant market, with more than 97 percent of total bond trading volume. Bond trading on the interbank bond market is quote driven and trades are executed OTC. The types of bonds vary from government bonds, central bank bills, corporate bonds, savings bonds to asset backed securities (ABS). Total amount of issued bonds was nearly RMB 9 trillion in 2009. The most issued bonds are central bank bills (46 percent of total issuance in 2009) and government bonds (19 percent), see Figure 2. The issuance of corporate bonds and commercial bank bonds is however rapidly increasing. Investors are commercial banks, insurance companies, mutual funds, the National Social Security Fund, pension funds, corporate investors and individual investors.

7. **The CCDC is the SSS as well as the CSD for bonds.** It is the only institution entrusted by the MOF to be the depository for Government securities. In addition to the OTC bond market, Government securities can also be traded in the stock exchanges. For this purpose, the SD&C holds an omnibus account at the CCDC and beneficial owner securities settlement for stock exchange transactions is done through SD&C books. Cash settlement takes place in the central bank HVPS for OTC traded bonds. The CCDC was established in 1996 as a Government entity and since then it is regulated by the PBC and overseen by the PBC and MOF. In addition, the CBRC is in charge of the appointment of Executive Managers of CCDC. The number of settled transactions was nearly 340 thousand in 2009, representing a value of RMB 122 trillion. The settled volumes have grown tremendously since the last couple of years, see Figure 3.

8. **The CCDC settles bond transactions (spot, repo, forward) on a gross basis for both bonds and funds, though CCDC management is currently considering introducing also a netting facility.** Securities are held at the end-investor level in most cases (98 percent). However, for the exchange bond market and the bank counter market an indirect holding method is used, with the SD&C (for the exchange market) and the four big commercial banks (for the bank counter market) acting as sub-custodians, holding the securities in the books of the CCDC on behalf of the beneficial owners. The CCDC book

Figure 1. China: Market structure trading, clearing and settlement in People's Republic of China

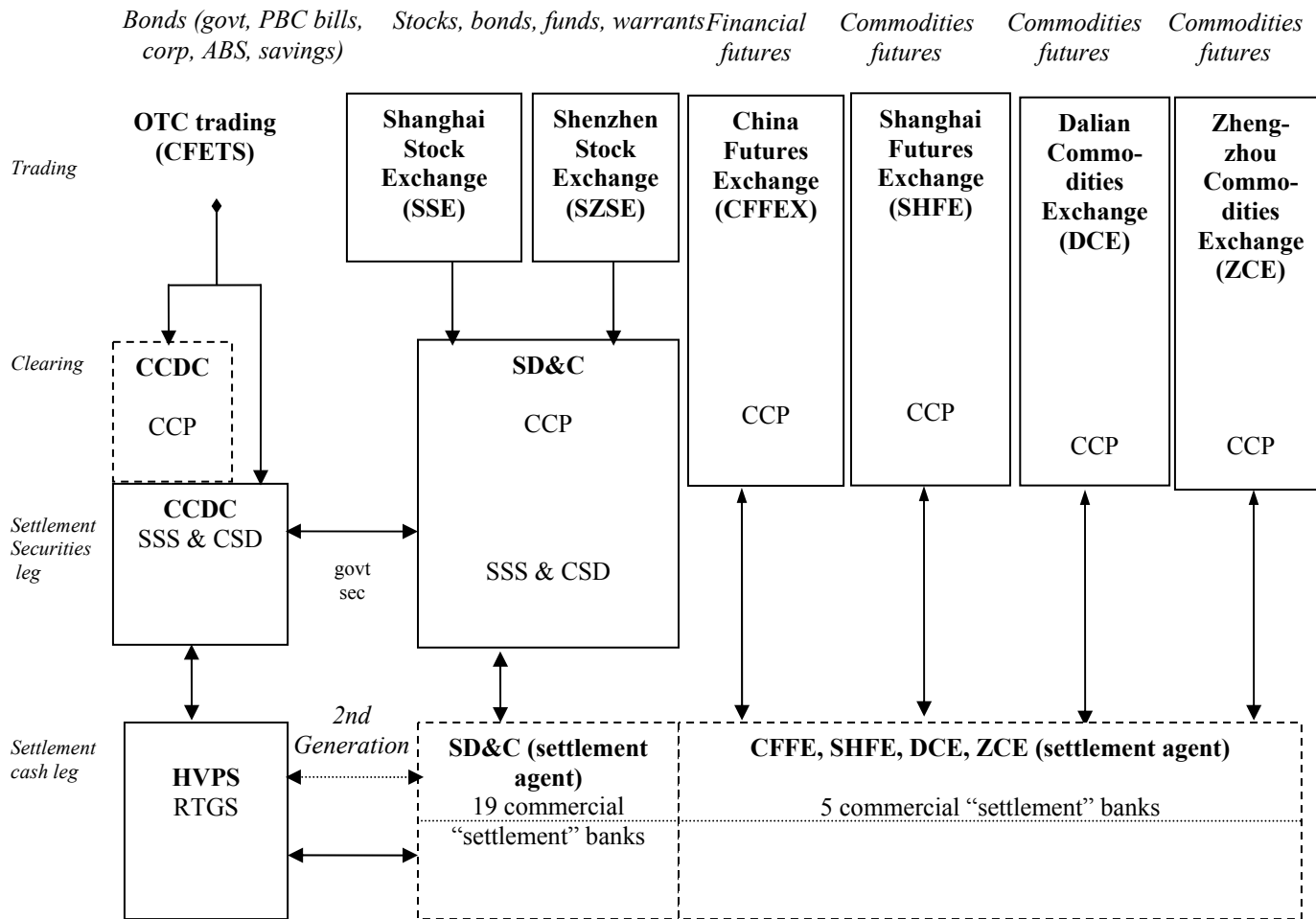
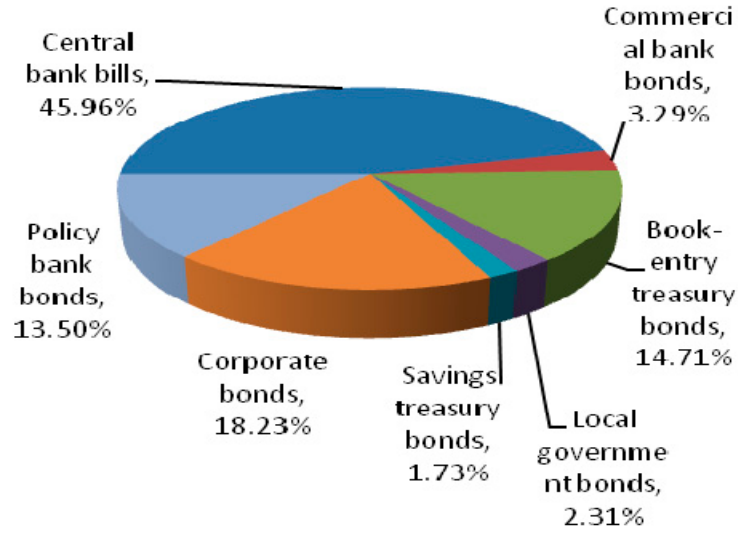
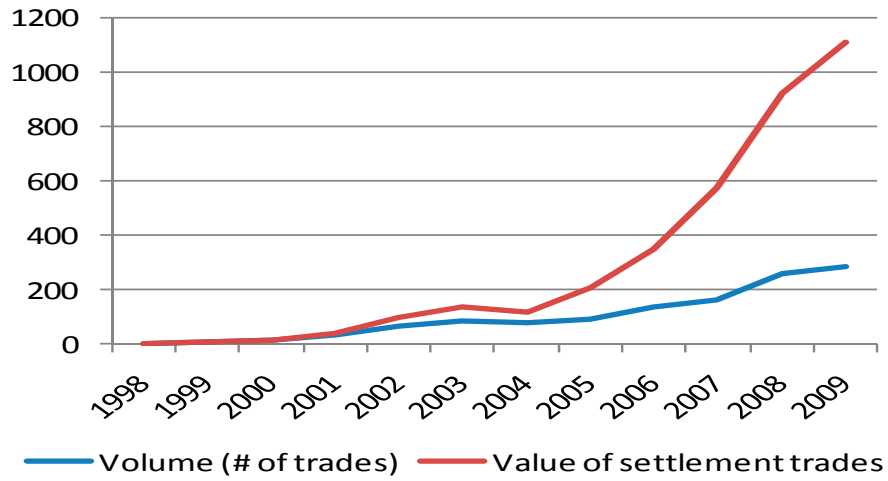


Figure 2. China: Issuance of Bonds in 2009



Source: CCDC, Annual Review of China's Bond Market 2009.

Figure 3. China: Growth in Settlement Transactions of Bonds (Indexed at 1998)



Source: CCDC, Annual Review of China's Bond Market 2009.

entry system is interconnected with the interbank trading system (operated by the CFETS)³ supporting STP for the trading and settlement of the interbank bond market.

9. **Settlement takes place on T+0 for most transactions (82.9 percent of total value settled in 2009).** Market participants confirm trades on the same day. If a trade is conducted through the CFETS, the CCDC automatically receives the details of the trade and sends them to the participants for confirmation. If a trade is conducted outside the CFETS, one participant starts the settlement process sending trade details to the CCDC that, in turn, sends the information to the other counterparty for confirmation. In addition to the commonly used DvP settlement, CCDC allows for other settlement modalities, PaD, DaP, and FoP.

B. Clearance and Settlement Arrangements for the Stock Exchanges

10. **There are two stock exchanges in the PRC, which are the SSE and the SZSE.** Both exchanges were established in 1990 and both offer trading in the same type of securities, being shares, bonds, funds and warrants. For shares a distinction is made in A and B shares.⁴ A shares (99.6 percent of share turnover) listed in Shanghai and Shenzhen are denominated in RMB. Only domestic investors and a select group of foreigners, through the *Qualified Foreign Institutional Investor* (QFII) program launched in 2003, are allowed to trade these shares. B shares (0.4 percent of turnover) are listed in Shanghai and Shenzhen denominated in RMB and traded and settled in USD (Shanghai) or HKD (Shenzhen). Only foreign investors, investors from Hong Kong, Macau Taiwan, and individual investors from China mainland are allowed to trade these shares.

11. **Turnover on both stock exchanges is relatively high and has grown tremendously during the last decade, see Figure 4.** According to the World Federation of Stock Exchanges, the SSE ranks as the 3rd exchange worldwide in share trading with RMB 34 trillion, and the SZSE as the 6th with RMB 18 trillion. Market capitalization of the SSE was RMB 18 trillion at the end of 2009 and RMB 6 trillion at the SZSE. On the SSE 870 companies are listed and on the SZSE 830.

12. **The SD&C is the CCP,⁵ SSS, as well as the CSD for all instruments traded on the SSE and SZSE.** The SD&C was established in 2001 and is jointly owned by the SSE (50 percent) and the SZSE (50 percent). For the whole year 2009 total settlement volumes resulted in almost 7 billion transactions worth RMB 129 trillion. This is a strong increase

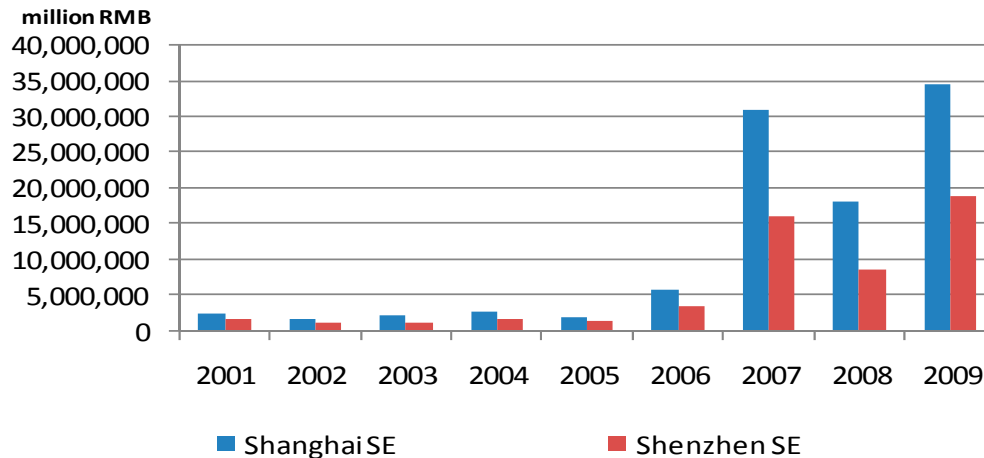
³ CFETS provides the electronic trading platform for interbank markets.

⁴ There are also H shares listed on the Hong Kong Stock Exchange, denominated, traded and settled in HKD; and N shares, listed on the New York Stock Exchange, denominated, traded and settled in USD.

⁵ SD&C settles most transactions as a CCP except for the following SSE operations: repurchase of T-bond buyout repos upon maturity, exercise of warrants, special floor of block trading, trading of non-novated corporate bonds, transfer of Specific Asset Management Plan (SAMP), bond placing for shareholders, seasoned offering for shareholders, corporate bond issue via exchange system.

compared to 2008, when trading activity had decreased because of the crisis. In 2008 the SD&C settled almost 4 billion transactions with a value of RMB 64 trillion.⁶ The cash settlement for exchange trades takes place through the accounts of commercial banks with the SD&C acting as the settlement agent.⁷

Figure 4. China: Share value of trading volume on the SSE and SZSE from 2001–2009



Source: World Federation of Exchanges.

13. **Securities settlement arrangements for SSE and SZSE are based on front-end availability of securities and funds, otherwise transactions do not take place.** Securities are held at the investor level detail in the SD&C while funds are kept through a system of third party custodian banks with the SD&C acting as the settlement agent.

14. **Each settlement participant needs to open a securities account with the SD&C to deposit the securities of its investors and its own securities (segregated).** Securities are registered and kept in the SD&C at the investor level (direct holding method) except for part of B shares, for which nominee accounts are used (indirect holding method). Segregated end-investor accounts are also held in the booking systems of broker-dealers and positions are reconciled at 18:00 every day between the SD&C and broker-dealers. To perform settlement, the SD&C maintains a “Centralized Securities Settlement Account” for its role as a CCP and each settlement participant must –under its own name and legal person– open a “Securities

⁶ Source is SD&C, Yewu tongji yuebao 业务统计月报 (Monthly business statistics report), December 2009, p. 2, retrieved from http://www.chinaclear.cn/main/03/0304/0304_1.html. These statistics may count both trade legs, which results in a figure which approximately is double compared to the turnover statistics of the stock exchange activity.

⁷ This is a function that SD&C performs *de facto* but is not formally included in the legal and regulatory framework.

Settlement Account” with the SD&C for securities deliveries or receipts between itself and the SD&C.

15. **The SD&C also plays the role of settlement agent while “settlement” banks⁸ are the mechanism used to transfer funds resulting of the clearing process as well as facilitating the third party custodian system.**⁹ The third party custodian system introduces a “look-through” feature in the system that prevents appropriation of investor’s funds by broker-dealers.

16. **Figure 5 depicts the third party custodian system arrangements.** Settlement participants¹⁰ should open a “Settlement Reserve Fund Cash Account” with the SD&C and notionally deposit in this account a reserve fund. Settlement participants are required to maintain a minimum level of funds in their “Settlement Reserve Fund Cash Accounts” which is certain percentage of the average daily purchase amount of the last month, and the percentage is 10 percent for bonds and 20 percent for the other securities. Balances in the “Settlement Reserve Fund Cash Account” are remunerated by the SD&C. The real transfer of funds to constitute the reserve fund and keep it at the minimum required level takes place through the “settlement” banks from the “cash accounts” under the broker-dealers to the “deposit account” of the SD&C (see Figure 6). This “Settlement Reserve Fund Cash Account” of settlement participants is also used to facilitate SD&C settlement agent role. The SD&C uses a “Centralized Fund Settlement Account” from or to which the net cash proceeds are booked to or from the “Settlement Reserve Fund Cash Account” of settlement participants. Again, the real transfer of funds takes place through the “settlement” banks.

17. **Investors need to place sufficient funds from their “savings accounts” to the “trading settlement fund special fund account” at the custodian deposit bank in order to be able to trade.** An accounts mirror system is established at the investor level in which investors’ “management account for trading settlement” in the custodian banks and investors’ “cash accounts” in the broker-dealers exchange data on real time. The “cash account” is credited or debited with settlement proceeds and correspondently the credits and debits are mirrored in the “management account for trading settlement.” The “management account for trading settlement” is credited or debited with the investor’s cash deposits or withdrawals and correspondently the credits and debits are mirrored in the “cash account.” Investors can only withdraw cash from the “trading settlement fund special cash account.”

⁸ “Settlement” banks are not indeed providing a settlement function that is provided by SD&C as settlement agent. Thus, “settlement” banks simply provide the accounts services that support funds transaction for both settlement and the third party custodian system.

⁹ “Settlement” banks play a funds custodian role but not a securities custodian role.

¹⁰ Settlement participants are brokers-dealers. According to *Settlement Participant Member Rules of SD&C*, only securities companies are eligible for settlement participant member of SD&C.

Figure 5. China: Third Party Custodian System Arrangements

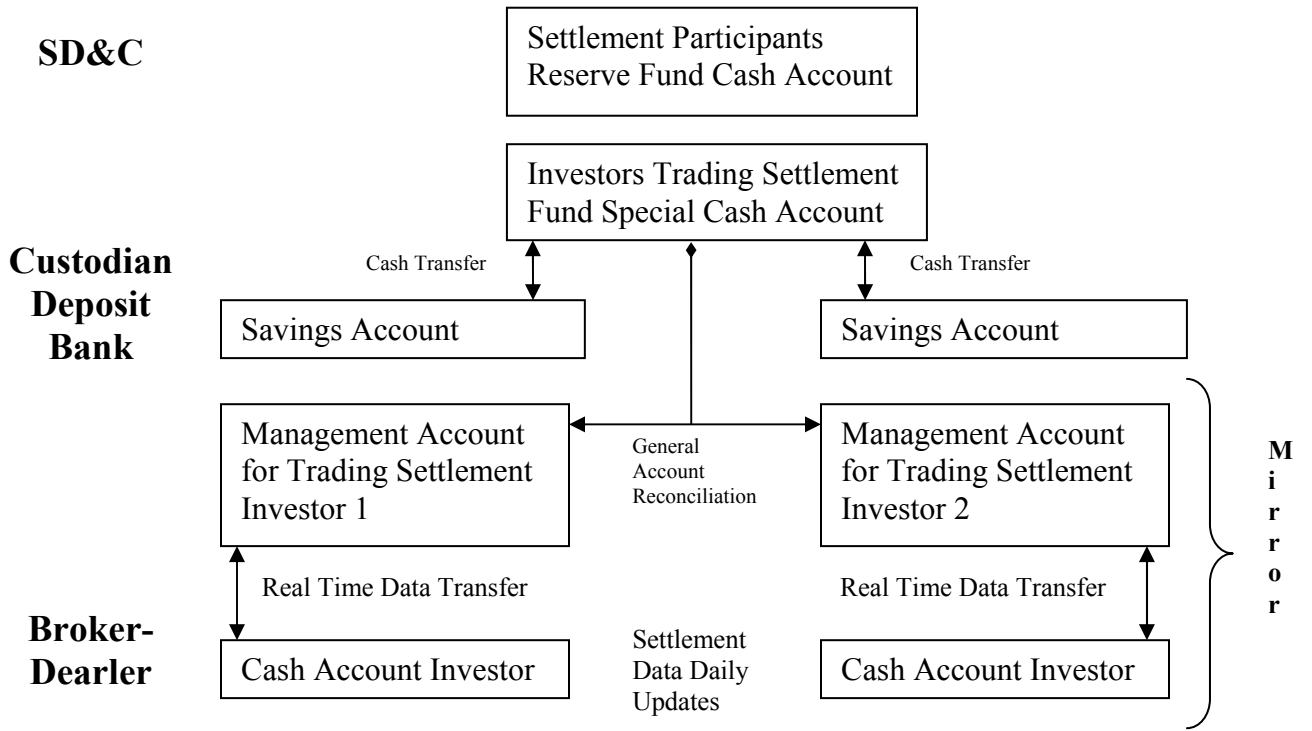
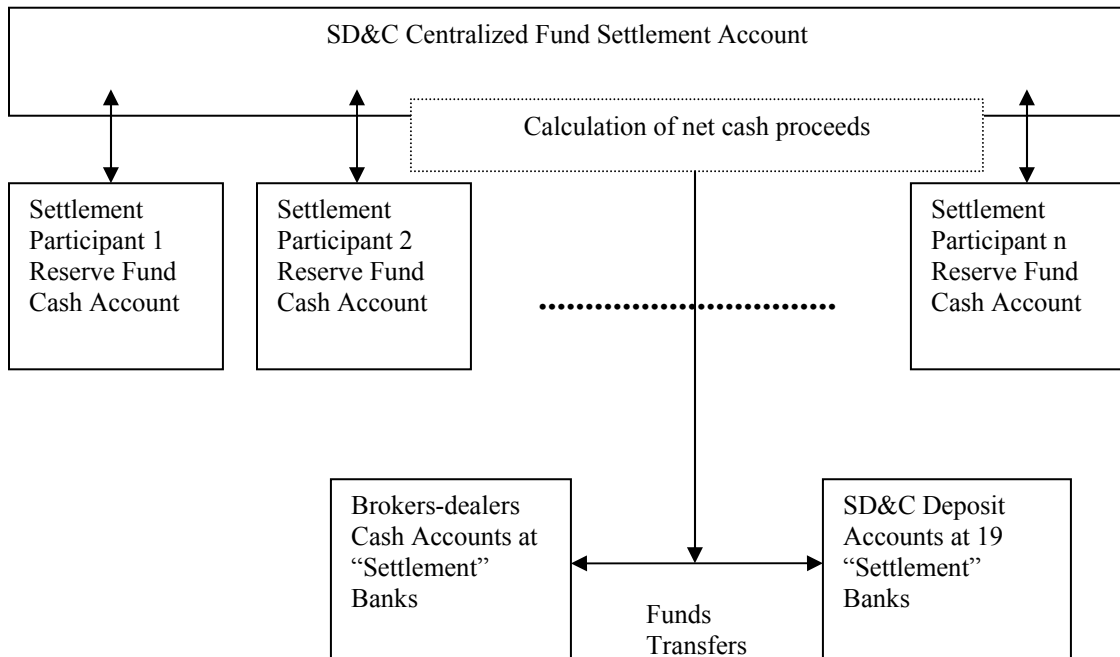


Figure 6. China: SD&C Settlement Agent Role



18. **For a net seller to withdraw the cash resulting from the proceeds of his/her sale, he/she will need to wait for the reconciliation from the “management account for trading settlement” to the “trading settlement fund special fund account” that takes place at the end of every trading day.** However, for trading purposes investors will have funds available once broker-dealers affects investors’ “cash accounts” as the credits and debits will be mirrored in the “management account for trading settlement.” Thus, the fact that settlement participants need to keep a minimum required level ensures a closed-end loop of funds. Then, settlement participants manage the flow of funds with their investors through debits and credits to the “investor’s cash accounts” from settlement proceeds and through the reconciliation between the “management account for trading settlement” and the “trading settlement fund special fund account.” Boxex 1 and 2 present details of the settlement cycle.

19. **A similar system is established for proprietary trading by broker-dealers completely separated from the system for individual investors.** It works in a similar but simplified way to the one for investors. The settlement participants open a “Proprietary Settlement Reserve Fund Special Account” with the SD&C. Broker-dealers also open a “Proprietary Trading Settlement Fund Special Cash Account” with the custodian deposit banks and keep their own “proprietary cash account.”

C. Clearance and Settlement Arrangements for the Futures Exchanges

20. **There are four futures exchanges in the PRC.** They include three commodities exchanges: SHFE,¹¹ DCE,¹² and ZCE.¹³ The CFFEX was established in 2006 by the SHFE, DCE, ZCE, SSE, and SZSE. Futures traded on the SHFE include copper, aluminum, zinc, steel wire rod, rebar, natural rubber, fuel oil, and gold. The DFE offers trading in futures on soybean No. 1, soybean No. 2, corn, soybean meal, soybean oil, linear low density polyethylene, RBD palm oil and PVC. The ZFE offers trading in futures on hard white wheat, strong gluten wheat, cotton, white sugar, rapeseed oil, PTA and long-grain non-glutinous rice. The SHFE ranks as the 10th derivatives exchange worldwide (see Figure 7), measured in number of contracts traded (source Futures Industry Association) and the second largest commodity exchange. Overall trading volume and value for the four futures exchanges in 2009 was 130.5 trillion RMB and 2.16 billion contracts. SHFE has seen impressive steady growth in the most recent years with trading value of 13, 23, 29, and 74 trillion RMB for 2006, 2007, 2008, and 2009 respectively. In 2009, 870 million contracts were negotiated, representing a 210 percent increase over the previous year. The DCE ranks 11th with 834 million contracts traded in 2009, representing a

¹¹ The SHFE was established in 1998 from the merger of the Shanghai Metal Exchange, Shanghai Cereals and Oil Exchange and Shanghai Commodity Exchange.

¹² Established in 1993.

¹³ Established in 1990.

Box 1. Clearance and Settlement Process for a Typical Transaction (A Shares)**T**

Buyers and sellers place their orders through broker-dealers (indeed some broker-dealers allow for investors to place their orders before T).

There is a double monitoring (by broker-dealer and stock exchange) for availability of securities and a single monitoring (by the broker-dealer) for availability of funds.

Once that front-end availability of funds and securities is ensured buying and selling orders are accepted for trading.

Matching of trading takes place during the stock exchanges operating hours (from 9:15 a.m. to 11:30 a.m. and from 1:00 p.m. to 3:00 p.m.) Matched transactions are locked-in and sent automatically to SD&C for clearance and settlement. Thus, no confirmation process is needed.

At the end of the day (6:00 p.m.) securities are settled on a net basis (for the majority of securities).

T + 1

Funds settlement takes place at 4:00 p.m. by debiting and crediting the “Reserve Fund Cash Accounts” of settlement participants. Broker-dealers can decide to keep their “Reserve Fund Cash Accounts” at a level above the minimum reserve requirement. The balances are remunerated by SD&C. Thus, net cash settlement at SD&C does not necessarily need to match with net cash movements done through the “settlement” banks.

Box 2. Shares Clearance and Settlement in Shenzhen Stock Exchange

Electronic trading system is used in SSE. According to the business rules of the SSE, B shares trades are locked-in transactions which means when the orders are executed, the transactions become effective immediately and the results of which must not be revised or revoked. Both the buying and the selling parties must fulfill their settlement obligations related to those transactions.

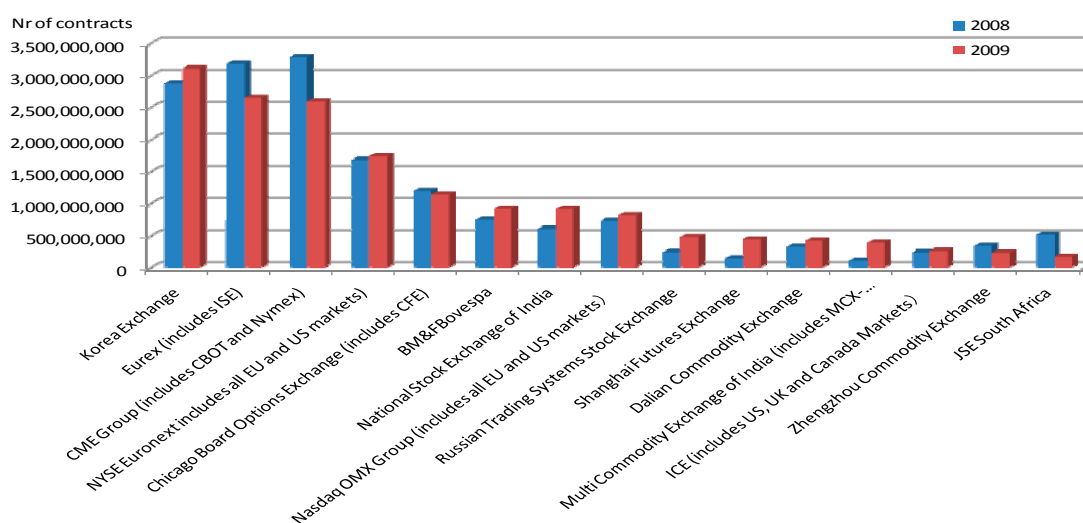
Under the situation where clients use a custodian bank while trading B shares via a foreign broker, the settlement obligations against the SD&C for the transactions are assumed by the foreign broker. In this case, a “Second Type” Settlement Instruction is used to transfer the clients’ B shares between the custodian bank and foreign broker during the settlement process. No matter whether the Second Type Settlement Instructions were matched or not, the outcome and obligations of relevant parties of the B share transactions must not be revised or revoked, and the foreign broker should fulfill its settlement obligations against the SD&C.

As for processing procedure, foreign brokers and custodians shall submit Second Type Settlement Instruction to the SD&C respectively, and then the SD&C implements the matching process for those instructions. If the instructions cannot be matched successfully, the above two parties could modify the instructions and submit to the SD&C again no later than 3:00 p.m. on the day of T+2. For instructions matched successfully, the SD&C will implement final settlement process before 12:00 a.m. on the day of T+3.

Before 1995, trading rules of SSE required clients who use a custodian bank whilst selling B shares via a foreign broker to transfer their B shares from the custodian bank to the foreign broker prior to submitting their trading orders. In order to improve trade efficiency and meet the demands of participants, in 1995 the SSE changed the rule, allowing clients to sell their B shares via foreign broker without having to first transfer their B shares from custodian bank to foreign broker. After client’s orders are executed, the broker and custodian bank should then, according to the transaction results, complete the transfer of client’s shares between them by using the second type settlement instructions.

growth of 31 percent compared to 2008 and the ZCE ranks as the 14th derivatives exchange with 454 million contracts traded in 2009, representing an increase of 2 percent compared to the previous year.¹⁴ All the commodities exchanges were established in the early nineties.

Figure 7. China: International Derivatives Exchanges Ranked by Volume



Source: Futures Industry Association.

21. **The four futures exchanges have their own clearing and settlement departments, which offer the function of a CCP.** There are 210 members currently in the SHFE, among which about 80 percent (167 members) are futures brokerage firms, the rest only operate for proprietary trading. The DCE has about 200 members of which about 90 percent are brokerage firms and the ZCE also has over 200 members. Settlements can be either in cash (daily mark to market) as well as physical settlements (delivery on expiration). Cash settlement is effected through the accounts of five commercial “settlement” banks. The in-house clearing mechanism has two layers: exchange-clearing members and clearing members-clients. The exchanges operate a pre-margining system, that is, futures contracts can only be purchased under the premise of sufficient margin deposits. In addition to the pre-margining system the exchanges have established other risk management controls including: price limits, limits to speculative positions and large holders, compulsory closed-out of

¹⁴ According to usual practices in China figures of trading volume include both legs.

positions and a system of warning indicators. Settlement reserves have been constituted (a minimum balance of RMB 2 million for brokerage firms and RMB 500,000 for non-brokerage members) in order to operate the pre-margin system. A Futures Investors Safeguarding Fund has also been constituted.

22. **The CFMMC was established in 2006 as a non-profit company under the sponsorship of the three futures exchanges to guarantee the safety of futures margin.** The CFMMC collects data from the futures exchanges, brokerage firms and “settlement” banks and cross check the information of the three sources to ensure consistency. In case of conflict, the exchange data would prevail. The CFMMC is subject to regulation and supervision of the CSRC.

23. **The five “settlement” banks only operate as custodians for margins and facilitators for transfers of funds being the futures exchanges the settlement agents.** Futures exchange members open special settlement accounts at the “settlement” banks and the futures exchanges have also accounts in each of the “settlement” banks to facilitate its settlement agent function. Investors keep ordinary accounts for investments and other purposes. The third party custodian system is similar to the one described for the operations of the SSE and SZSE.

IV. MAIN FINDINGS FROM THE ASSESSMENT WITH INTERNATIONAL STANDARDS

24. **The CCDC, SD&C, and SHFE/DCE/ZCE operate important securities and derivatives settlement systems both, due to the large volume and value of transactions (GDP comparison) and the fact that they support key financial sector markets (interbank bond market, stock exchanges and futures).** Therefore, the CCDC and SD&C are being assessed below against the 19 RSSS and the SHFE is being assessed against the 15 RCCP. The SD&C operates as a CCP for most of the market transactions but given the “unique” features of its settlement process (front-end control of securities and funds), it is being assessed against the RSSS (instead of the RCCP). The other two commodities futures exchanges, DCE and ZCE, follow very similar settlement procedures to the SHFE (as confirmed by DCE and ZCE representatives during the September 2010 mission), thus, findings and recommendations for the SHFE are also applicable to DCE and ZCE. Finally, the CFFEX was launched in 2006 as a joint venture of the SSE, SZSE, DCE, and ZCE but still volume and value of transactions are relatively modest. Therefore, it was determined that CFFEX arrangements would not be assessed at this stage. Tables 1 to 10 present main findings and recommendations of the assessment.

Table 1. China: Exchanges Volume and Value Compared to GDP, 2009

Exchange	Volume	Value of Share Trading (RMB trillion)	% of GDP ^d
SSE	2,142 million equity transactions ^a	34.6 ^a	101%
SZSE	1,256 million equity transactions ^a	18.9 ^a	55%
SHFE	870 million derivative contracts ^b	74 ^c	217%
DCE	833 million derivative contracts ^b	38	111%
ZCE	454 million derivative contracts ^b	19	56%

Sources :^a World Federation of Exchanges, ^b FIA, ^c SHFE, ^d World Bank estimate of China GDP in 2009 was RMB 34.1 trillion.

¹ Trading volume figure for SHFE, DCE and ZCE include both trade legs.

Table 2. China: Detailed Assessment of Observance of the CPSS-IOSCO Recommendations for Securities Settlement Systems—OTC Bonds Market—China Government Depository and Clearing Corporation Limited

RSSS 1 SSS should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	
Description	<p>The legal framework for securities clearing and settlement in China consists of statutory laws, secondary regulation, rule books, notices, etc. Most key aspects for securities clearing and settlement are covered by the Securities Law. However, the Securities Law, that includes most of the concepts that provide a sound legal basis for securities settlement, is not applicable to the interbank bond market, OTC securities markets, and CCDC. Thus, in these cases, these aspects are missing or only covered at the level of Ministry-level procedures. For <i>OTC traded bonds</i> the legal framework consists of:</p> <ul style="list-style-type: none"> • PBC Law of the PRC; • Methods for administration of bond trading on Interbank bonds markets nationwide; • Measures for the Administration of Bond Registration, Custody and Settlements in the Interbank Bond Market (“<i>Administrative measures</i>”); • Notice of the office of the PBC regarding issuance, trading and payment; and • PBC Circulars. <p>Regulations of PBC are established in accordance with the spirit and procedures of the “<i>Law of the People’s Republic of China.</i>” Article 4 of “<i>The Law of the People’s Bank of China</i>” (2003) provides that the roles of PBC include “supervising and regulating interbank bond market,” and PBC has issued “<i>Measures for the Administration of Bond Registration, Custody and Settlement in the Inter-Bank Bond Market</i>” and other regulations.</p> <p>So far there have not been judicial cases against PBC regulations and rules. Many core legal concepts in the PBC regulations on custody and settlement are in consistence with the law spirit of “<i>The Securities Law of the People’s Republic of China</i>” (2005).</p> <p>Article 170 of “<i>The Property Law of the People’s Republic of China</i>” (2007) provides, “where the obligator fails to pay its due debt or any other case agreed by the parties concerned occur, the holder of real rights for security shall enjoy preferred payments from the property for security.” However, according to the self-assessment the efficiency of collateral disposal can be improved.</p> <p>The current legal and regulatory framework does not address any conflict of laws issues for cross-border systems. However, PBC regulation requires that foreign investors entering into interbank bond market and using the service of CCDC shall comply with Laws of China.</p>
Assessment	Partly observed
Comments	<p>In the absence of another statutory securities law, which addresses OTC bond and futures trading, clearing and settlement, some major legal gaps are apparent. The efficiency of the collateral disposal should be analyzed and improved as soon as possible. The conflict of law in the cross-border settlement is not currently an important risk source for SSS. However, as the Chinese financial markets increasingly interact with foreign ones, it is important that the Chinese legal and framework addresses any potential conflict of laws.</p> <p>The CCDC includes in the self-assessment: “<i>The Securities Law has been enacted to govern exchange markets, containing no provisions for governing the interbank bond market, OTC securities markets and bond depositories, that are primarily governed by ministry-level procedures issued by PBC and MOF</i>” In follow-up discussions, CCDC representatives have indicated that Article 2 of the Securities Law indicates: “<i>the present Law shall be applied to the</i></p>

	<p><i>issuance and transaction of stocks, corporate bonds as well as any other securities as lawfully recognized by the State Council in within the territory of the PBC” and they also indicated that the director of the legal committee of the National People’s Congress (NPC) once expressed that the Securities Law is also applicable to the interbank bond market. There is no jurisdiction interpretation about this issue. The mission team thinks that there is a lot of ambiguity and that clarity on this issue is needed.</i></p>
<p>RSSS 2. Confirmation of trades between market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.</p>	
Description	<p>Confirmation of nearly all trades in OTC bonds occurs on trade date. The use of the CCDC system for settlement is mandatory for all participants. CCDC has two types of direct settlement participants:</p> <ul style="list-style-type: none"> • Category A: settle trades for its own account and on behalf of its clients • Category B: only settles trades on its own account <p>Indirect participants (Category C) can only settle trades through a Category A participant.</p> <p>It appears that some trades by indirect participants are not confirmed on trade date. All trades are matched before settlement.</p> <p>The CCDC book entry system is interconnected with the interbank trading system supporting STP for the trading and settlement of the interbank bond market.</p>
Assessment	Observed
Comments	It will be important to ensure that all transactions are confirmed on trade date (T+0).
<p>RSSS 3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be evaluated.</p>	
Description	<p>The agreed settlement standard for OTC transactions is on the trade date (T+0). PaD, DaP methods use T+1 settlement cycles.</p> <p>Only a small percentage of trades fails to be settled caused by operational mistakes. The CCDC system provides trade participants with real-time notification of settlement status and monitors the overall process of settlement.</p>
Assessment	Observed
Comments	-
<p>RSSS 4. The benefits and costs of a CCP should be assessed. Where such a mechanism is introduced, the CCP should rigorously control the risks it assumes.</p>	
Description	<p>Currently, the CCDC operates a SSS that settles transactions on a gross-basis for both securities and funds. It also does not assume the counterparty risk under any circumstances.</p> <p>CCDC has sent PBC a proposal for the launching of a netting mechanism. The proposal is still under consideration by the PBC. Independently, the Shanghai Clearing House (SCH) was founded in November 2009 with the approval of the MOF and PBC and is owned by CFETS, CCDC, China Banknote Printing and Minting Corp., and China Gold Coin Inc. It has not started operations yet and its business scope is still undefined, but it is likely that it will serve the interbank bond market (in addition to others, e.g., interbank exchange market).</p>

Assessment	Broadly Observed
Comments	PBC and CCDC should finalize the process to determine if the typology of the market and other legal, institutional and market considerations would justify the establishment of a CCP mechanism.
RSSS 5. Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.	
Description	<p>Bilateral bond lending was introduced in 2006 in interbank bond market. PBC issued a special regulation on bond lending, i.e., “<i>Provisional Measures for Administration of Bond Lending Business in Interbank Bond Market.</i>”</p> <p>The CCDC has also completed feasibility studies for central automatic lending and tri-party repos, which are currently subject to approval by the PBC.</p> <p>In addition, the Interbank Markets Dealers Association has recently finalized the revision of the master repurchase agreement to better clarify procedures for the execution of collateral.</p>
Assessment	Broadly Observed
Comments	<p>CCDC should consider improving securities lending and borrowing mechanisms beyond the current bilateral arrangements.</p> <p>Also, accounting practices and tax rules need to be improved to facilitate securities lending and borrowing.</p>
RSSS 6. Securities should be immobilized or dematerialized and transferred by book entry in CSDs to the greatest extent possible.	
Description	<p>Negotiable securities are 100 percent paperless. Every new issue has to be done in dematerialized form.</p> <p>The CCDC is the registrar and is exclusively authorized by MOF to establish and operate the national government securities depository system; also, it is authorized by PBC as bond registration, custody and settlement institution for the interbank bond market.</p>
Assessment	Observed
Comments	-
RSSS 7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves DvP.	
Description	<p>The CCDC settlement system is linked to the PBC real time gross settlement system (HVPS). Most OTC transactions are settled on a DvP basis on T+0. Once a transaction is confirmed securities and funds are simultaneously moved on the bookkeeping system of the CCDC and HVPS respectively. The CCDC acts as the funds settlement agent for settlement participants that do not have an account with the PBC (nonbank institutions).</p> <p>In addition to DvP, the CCDC offers other three types of settlement options:</p> <ul style="list-style-type: none"> • Movement of securities FoP. • PaD: the securities buyer pays the funds only once the securities ownership transfer has taken place in the books of the CCDC.

	<ul style="list-style-type: none"> • DaP: the securities seller only delivers the securities once the movement of funds has been completed.
Assessment	Partly Observed
Comments	<p>In August 2008, the CCDC began to provide DvP settlement services to nonbank institutions. Since then, DvP settlement has been applied to all type of participants in the interbank bond market. In 2009, DvP settlement reached 82.4 percent of valued and 73 percent of participants.</p> <p>The most important participants of the system (700+) settle mostly on DvP basis, about 98 percent of their transactions. Also, CDCC adopts direct holding and settlement with over 10,000 participants.</p> <p>However, the assessment methodology for the RSSS provides specific guidance on how to assess the compliance of this recommendation. Therefore, in order to achieve full compliance at least 95 percent or more transactions between direct participants should be settled on a DvP basis and 90 percent or more to be broadly observed.</p>
RSSS 8. Final settlement should occur no later than the end of the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.	
Description	<p>The technical features of the CCDC system do support finality as each trade is settled on real time. A contract between settlement participants is triggered once settlement participants input instructions into the CCDC system and those are matched. Also rules of the CCDC system prevent unilateral revocation of matched transactions.</p> <p>Article 40 of <i>Administrative Measures</i> states: “bond transaction settlement cannot be revoked once completed;” and Article 43: “the cash and bond with the status of waiting for transfer in the settlement process and the collateral regarding to the settlement can only is used for completing the settlement and shall not be enforced compulsorily for other purposes.” However, the legal framework does not support finality at the Law level.</p>
Assessment	Broadly Observed
Comments	<p>From an operational perspective, final settlement occurs on settlement day and on a DvP basis for the vast majority of transactions, as mentioned under RSSS 7.</p> <p>However, it needs to be noted that the legal basis does not fully support finality as for OTC securities it basically consists of Ministry-level procedures and rules but there are no provisions at the Law level.</p> <p>Achieving DvP for all transactions and providing full legal protection to finality at the level of the law should be a priority to achieve full compliance with RSSS 1, 7, and 8.</p>
RSSS 9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements and limits.	
Description	The CCDC does not operate a net settlement system and does not provide intraday credit facilities to its participants.
Assessment	Not applicable
Comments	-

RSSS 10. Assets used to settle the ultimate payment obligations arising from securities transactions should carry little or no credit or liquidity risk. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of the cash settlement agent, whose assets are used for that purpose.	
Description	<p>Trades in OTC bonds are settled in central bank money in the HVPS system. The settlement proceeds are available to CCDC participants in real time.</p> <p>The CCDC maintains a specially authorized settlement account at the PBC to facilitate DvP settlement for participants not eligible to open an account with the PBC. These participants settle funds through a special account under the CCDC's specially authorized settlement account in the PBC.</p>
Assessment	Observed
Comments	-
RSSS 11. Sources of operational risk arising in the clearing and settlement process should be identified and minimized through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Contingency plans and back-up facilities should be established to allow for timely recovery of operations and completion of the settlement process.	
Description	<p>The Risk Task Force of the CCDC is responsible for identification and management of all risks aspects. The CCDC has a Business Continuity Management (BCM) Program that identifies various sources of operational risks and establishes contingency plans for recovery in case of emergency, that the status of all transactions at the time of disruption can be identified. The plans are subject to periodic reviews and updates and recovery drills are performed periodically. There are management controls and sufficient personnel to ensure that procedures are implemented.</p> <p>The CCDC system has a local backup system, which is able to start operations in 30 minutes. An offsite back-up system is also available, which needs one day of preparations before it can start operations. The systems are tested regularly.</p> <p>The system is subject to annual internal audits as well as external audits. Systems are also subject to certification and evaluation by generally accepted certification agencies.</p> <p>There has never been any major system failure or data loss. CCDC developed a plan related to the complete availability of its systems.</p> <p>No application can start operating until it has passed all necessary tests, including a stress test.</p>
Assessment	Observed
Comments	-
RSSS 12. Entities holding securities in custody should employ accounting practices and safekeeping procedures that fully protect customers' securities. It is essential that customers' securities be protected against the claims of a custodian's creditors.	
Description	<p>CCDC predominantly applies a direct holding method (98 percent of total securities deposited in CCDC) with end investors' securities accounts being held directly in the CCDC. However, for the exchange bond market and the bank counter market, an indirect holding method (2 percent of total securities deposited in CCDC) is used being the SD&C and the big four state-owned banks the securities holders on behalf of the beneficial owners.</p> <p>The CCDC applies segregation of assets and customers' assets are exempt from claims by CCDC's creditors.</p>

	<p>CCDC's book entry system generates record in real time and provides account inquiry services. Reconciliation with the books of the CCDC participants is done on a monthly basis. PBC and MOF both have relevant authority over protection of customer's assets as stipulated in the law and regulation. Article 4 of Administrative Measures indicates: <i>"PBC shall have the authority to supervise and regulate the bond CSD and bond business of registration, custody and settlement in interbank bond market according to the relevant law."</i> Article 4 of <i>"Interim Measures for the Administration of Treasury Bonds of the People's Republic of China"</i> indicates that, MOF is the supervisory authority to Treasury bond custody business.</p> <p>Article 35 of Administration Measures states: <i>"in case of bond CSD bankruptcy, the bonds and other assets of bondholders under the custody of the CSD are protected against the CSD liquidation."</i></p> <p>For the exchange bond market with SD&C as second-tiered custodian, the provisions of "Securities Law" and CSRC's regulations shall apply. For the commercial bank counter market with banks as second-tiered custodian, the "Measures for Administration of Trading Treasury Bonds over the Commercial Bank Counter" (Article 30) provides, "the undertaking bank shall strictly segregate the proprietary bonds and the investors' bonds, and shall not misappropriate the investor's bonds" (herein the investor refers to the bank's client opening bond account with the bank). So even in case of bankruptcy of second-tiered custodian in the exchange market and the bank counter market, their customer's assets will be protected against claims of the custodian's creditors.</p>
Assessment	Observed
Comments	
RSSS 13. Governance arrangements for CSDs and central counterparties should be designed to fulfill public interest requirements and to promote the objectives of owners and users.	
Description	<p>CCDC is fully owned by the central government.</p> <p>The Executive team of the CCDC is appointed by the CBRC among senior officials with extensive expertise in financial regulation. The General Manager reports to the Board of Directors. CCDC operations are subject to the supervision of the PBC and the MOF. Information on CCDC systems, ownership structure, Board of Directors, management structure and processes is made publicly available.</p> <p>CCDC keeps real-time communications with its settlement members through China Bond Information Network, customer service platforms and other channels. In addition, CCDC communicates with its members through business interaction, training sessions, conferences and other channels.</p> <p>As for the consideration of user interests:</p> <ul style="list-style-type: none"> • As Administration Measures provides, rules of government securities depositories shall be approved by PBC (Article 9); when the depository establishes fee schedule and business agreement, it shall solicit the comments and suggestions from dealer's association, the bondholders and bond issuers and file a report to PBC (Articles 14, 15). • For any new innovation to be introduced in interbank bond market, market participants are required to participate in all through the process of research and argumentation, institution and documentation design, and system testing, etc. • CCDC communicates with clients through various channels such as Advisory Group, Annual

	Customer Forum, Customer Survey, customer visit etc., receiving the feedback and demand from the users.
Assessment	Partly Observed
Comments	<p>It is unclear to what extent governance and oversight functions are clearly separated. CBRC, PBC and MOF seem to play both roles in regards to the CCDC. This may conflict with the role of these institutions as overseers of payments and settlement systems as a whole.</p> <p>Despite consultation with stakeholders and members, the self-assessment mentioned: “<i>a better mechanism is needed for balancing and coordinating interests of system owners, administrators and users as markets grow with an increasing number of members and more resources being invested in the markets, i.e., transforming the CSD’s ownership at appropriate time and absorbing market participants as its owners to improve corporate governance and establish a modern financial corporation system.</i>”</p> <p>The system does not comply fully with some RSSS.</p>
RSSS 14. CSDs and central counterparties should have objective and publicly disclosed criteria for participation that permit fair and open access.	
Description	<p>CCDC has created three types of membership to accommodate different needs and levels of risk:</p> <ul style="list-style-type: none"> • Category A for participants that settle trades on their own account and on behalf of their clients. • Category B for participants that settle trades on their own account only. • Category C that are indirect participants (e.g., some institutional investors). <p>Access rules are different and clearly stated for each group, but the same for all members in the same group. The access rules are publicly available through China Bond Information System.</p> <p>There are also rules for the voluntary orderly exit of a participant. CCDC can also suspend participation of members that violate laws, regulations or CCDC’s operational rules. Rules facilitate the orderly exit of participants.</p>
Assessment	Observed
Comments	-
RSSS 15. While maintaining safe and secure operations, SSS should be cost-effective in meeting the requirements of users.	
Description	<p>CCDC fees are set on transactions basis. It applies a cost recovery principle. Given the structure of the fees participants with a high volume of transactions have lower costs.</p> <p>CCDC regularly monitors its service levels through customers’ interviews, focus groups, surveys and other methods.</p> <p>CCDC takes measures to ensure operational reliability of the system (see Recommendation 11). IT services and service levels have been recognized at the highest secure level by the National Department of Public Security and are currently under further improvement.</p>
Assessment	Observed
Comments	In 2010 CCDC has made new significant progress by launching the new generation of client terminal, locating the new data centre and completing IT new structure, which contributes to cost-

	<p>efficiency.</p> <p>CCDC is also improving the fee system to deliver more cost-effective solutions to users and create incentives for market innovation.</p>
<p>RSSS 16. SSS should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.</p>	
Description	<p>The CCDC is the numbering agent for assigning International Securities Identification Number (ISIN) codes to new bond issues. CCDC has developed China Bond business message format in accordance with ISO 20022. As a matter of fact, the Communication Interface for external user to connect with CCDC system is fully in conformity to ISO 20022.</p> <p>For cross border business, domestic format can be easily convertible with other messaging format adopting ISO 20022.</p>
Assessment	Broadly observed
Comments	The CCDC should work to further improve the use of relevant communication procedures and standards and, therefore, facilitate cross-border trades.
<p>RSSS 17. CSDs and central counterparties should provide market participants with sufficient information for them to accurately identify the risks and costs associated with using the CSD or CCP services.</p>	
Description	<p>Market participants have information about CCDC rules and procedures to help them identify the risks in the system. However, it is unclear to what extent participants are aware of the risks introduced by the lack of an adequate legal framework.</p> <p>The China Bond Information Network contains comprehensive information about the bond market and is accessible to everyone. However, some information is only available in Chinese and this may be an issue as capital markets continue its process of opening to foreign participants and investors.</p> <p>The CCDC has conducted an assessment with the CPSS-IOSCO RSSS, which has not been disclosed as yet.</p> <p>A dedicated team within the CCDC is responsible for evaluating the information disclosures annually.</p>
Assessment	Partly observed
Comments	The CCDC should disclose the answers to the questionnaire set out in the CPSS/IOSCO disclosure framework or the answers to the key questions set out in the assessment methodology for RSSS.
<p>RSSS 18. SSS should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.</p>	
Description	<p>The CCDC is supervised and overseen by three regulators: CBRC, PBC, and MOF. However, given that some of these regulators have also responsibilities regarding the governance of the CCDC, it is unclear to what extent they exercise an overseer role and to what extent it is separated from its participation in the governance of the CCDC.</p> <p>There is no overall legal framework establishing oversight responsibilities and functions of each of the institutions. However, several specific legal provisions can be found.</p>

	<p>For example, the PBC Law of the PRC, Articles 4, 27, and 32 specify that the PBC is responsible for the supervision and management of the bond registration and custody settlement institutions, bond registration, custody and settlement of interbank payment systems and interbank bond market (OTC market).</p> <p>Supervisory duties include: (1) develop and revise bond registration and custody settlement methods, (2) supervision bond registration and OTC settlement institutions, (3) guide and develop revisions of agreements and Rulebooks, (4) supervise operations.</p>
Assessment	Broadly Observed
Comments	<p>The system does not fully observe all CPSS-IOSCO RSSS and therefore, supervisors and regulators should continue to exercise their action effectively.</p> <p>The PBC should clarify the roles it plays with respect to the CCDC by clearly distinguishing its oversight and supervisory role from its participation in the governance of the system.</p> <p>Further fine tuning is needed in the cooperation arrangements of the different regulators in respect to clearance and settlement issues.</p>
RSSS 19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlement.	
Description	<p>The CCDC has established two direct links with other CSDs to settle cross-border transactions:</p> <ol style="list-style-type: none"> 1. Link with the Central Money Markets Unit (CMU), operated by the Hong Kong Monetary Authority (HKMA). This is a one way link with bond titles registered for CCDC customers through CMU that was established in 2004. Transfer of funds is done by CCDC settlement agents. Some risk aspects were analyzed but no comprehensive risks analysis was made. 2. Link with Clear Stream Banking Luxembourg (CBL). This is also a one way link through an agent account opened with the CBL. On-line connection is used for sending instructions and inquiring information for bonds delivery and funds settlement. Intraday settlement of funds is completed through settlement agents. Analysis and evaluations of risks have been undertaken in terms of legal risks. Operational risks are mitigated through standardization of relevant agreements, internal controls and account reconciliation.
Assessment	Broadly Observed
Comments	There does not seem to be a comprehensive and standardized procedure to analyze risks in cross-border links. This matter should be addressed as soon as possible by the CCDC and its overseers.

Table 3. China: Detailed Assessment of Observance of the CPSS-IOSCO Recommendations for Securities Settlement Systems—Stock Exchanges (SSE, SZSE)-the China Securities and Clearing Corporation Limited

RSSS 1 SSS should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	
Description	<p>The legal framework for securities clearing and settlement in China consists of statutory laws, secondary regulation, rule books, notices etc. The most comprehensive legal framework is built for the stock exchanges, SSE and SZSE, and the SD&C. Most key concepts are covered by the Securities Law.</p> <p>For stock exchange traded securities the legal framework consists of:</p> <ul style="list-style-type: none"> • Securities Law of the PRC. • Measures for the Administration of securities registration, clearing and settlement. • Rules for the administration of Securities clearing Participants. • Measures for the Administration of Securities Settlement Risk Funds. • Methods for Administration of Securities Settlement Risk Funds. • Methods for the Administration of securities settlement business of settlement banks. • Implementation Rules for the Registration of securities pledging. • Contract Law. <p>The Securities Law is the most important statutory law for securities clearing and settlement. It explicitly addresses the main key concepts, i.e., enforceability of trades (Article 120 of the <i>Securities Law</i>), netting (Article 167 of the <i>Securities Law</i> and Article 45 of the <i>Measures for the Administration of securities registration, clearing and settlement</i>), protection of customer’s assets (Articles 136, 139, 168 of the <i>Securities Law</i> and chapter V of <i>Regulations on the supervision and administration of securities companies</i>), DvP (Article 167 and Article 49 of the <i>Securities Law</i> and Article 78 of the <i>Measures for the Administration of securities registration, clearing and settlement</i>), protection of collateral (Article 167 of the <i>Securities Law</i>) and dematerialization (Article 41 and Article 160 of the <i>Securities Law</i> and Article 47 of the <i>Measures for the Administration of securities registration, clearing and settlement</i>).</p> <p>Regarding legal basis for settlement finality:</p> <ul style="list-style-type: none"> • Article 112 of the <i>Securities Law</i> provides: “A securities company shall, based on the entrustment of its investors, declare orders and engage in the centralized trading at a stock exchange according to the rules of securities trading and shall, based on trading results, bear the relevant liabilities of settlement and delivery.” • Article 120 of the <i>Securities Law</i> states that, “any trading results of a transaction, which has been conducted in accordance with the trading rules as formulated according to law, may not be altered.” • According to Article 139 of the <i>Securities Law</i>, “.in the event of bankruptcy or liquidation of a securities company, such funds (customer’s funds) and securities shall not be deemed bankruptcy property or property for liquidation. Nor shall the funds and securities be sealed up, frozen, deducted and diverted, or subject to compulsory enforcement, except for cases incurred by indebtedness on the part of customers themselves or under such other circumstances as provided for by law.”

	<ul style="list-style-type: none"> Article 168 of <i>Securities Law</i> provides: “The clearing funds and securities as collected by a securities registration and clearing institution according to the operational rules shall be deposited into a special account for settlement and delivery. The settlement and delivery that can only be applied to the securities trading as concluded according to the operational rules may not be subject to enforcement.” <p>Novation is covered by <i>Contract law</i>, Article 88. The clearing member contracts should explicitly state that the clearing member assigns its rights and obligations to the SD&C.</p>
Assessment	Observed
Comments	The Securities Law provides a very strong legal basis through articles 112, 120, 139, 168, and others. Although Article 18 of the Enterprise Bankruptcy Law stipulates that the bankruptcy administrator shall have the right to rescind contracts that are effective before the bankruptcy. CSRC has clarified that according to the principle of special law preempts general law, the Securities Law shall be first applied in the securities market.
RSSS 2. Confirmation of trades between market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.	
Description	<p>China’s market generally adopts locked-in trade confirmation for most trades including A-share trades. Trading data received by the SD&C are deemed on default as confirmed and are not re-confirmed prior to settlement.</p> <p>Thus, all trades executed on SSE and SZSE, except B-shares on the SZSE, are automatically confirmed upon conclusion of the trade on T+0. Second type settlement instructions for B-share trading on the SZSE need to be confirmed by direct market participants on both sides with the SD&C from T+1 to T+3 but no matter whether second type settlement instructions are matched or not the outcome and obligations of relevant parties of the B share transactions must not be revised or revoked and the foreign broker should fulfill its settlement obligations against the SD&C. All trades are matched before settlement.</p>
Assessment	Observed
Comments	De facto, also B-share trades at the SZSE are matched on T+0, as they are irrevocable and the obligation lies on the foreign broker. The ancillary reconciliation process between T+1 and T+3 does not seem to violate the spirit of the Recommendation.
RSSS 3. Rolling settlement should be adopted in all securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be evaluated.	
Description	<p>The agreed settlement standard for A-shares traded on the stock exchanges is one day after the trade (T+1). For B-shares this is three days after trade (T+3).</p> <p>Front end controls on the securities and funds side before trading prevent failures.</p> <p>Other incentives for timely settlement have been installed by the SD&C:</p> <ul style="list-style-type: none"> Penalties for participants who fail. Fines in case of default. Suspension of relevant businesses. Proposal to the CSRC for revocation of business licenses.
Assessment	Observed

Comments	Securities settlement takes place on T (except for B-shares in some cases) while cash settlement among settlement participants takes place on T+1. But indeed the design of settlement procedures is peculiar as it does not entirely follows the concept of a cycle on the funds side (see Section III.B Clearance and Settlement Arrangements for the Stock Exchanges). The fact that settlement participants must have a minimum balance in the “Reserve Funds Cash Account” combined with front end control of funds makes the facto a settlement cycle of T.
RSSS 4. The benefits and costs of a CCP should be assessed. Where such a mechanism is introduced, the CCP should rigorously control the risks it assumes.	
Description	<p>The SD&C offers a CCP service for most transactions concluded on the SSE and SZSE. The SD&C has implemented the following risk controls:</p> <ol style="list-style-type: none"> 1. Access rules for clearing members, which are operational and financial requirements. Participants are classified into different categories, based on financial status. 2. Front end control of securities and funds before trading. 3. Financial resources: <ul style="list-style-type: none"> • Settlement collaterals: to collateralize individual exposures. • Mutual guarantee fund: to collateralize mutual exposures and for liquidity risk. • Settlement reserves: for liquidity risk (calculated as 10 percent of the average daily purchase value for bonds and 20 percent of the average daily purchase for others in the preceding month per clearing member). • Settlement risk fund: for liquidity risk. • Specific requirements for high-risk participants: raise collateral. <p>To ensure liquidity in times of stress the SD&C has applied for commercial bank credit lines. The SD&C once used a credit line of the central bank.</p> <ol style="list-style-type: none"> 4. In case of default of one of the clearing members the SD&C may: <ul style="list-style-type: none"> • Suspend delivery of securities. • Suspend delivery of funds. • Impose a fine. • Ask the stock exchanges for suspension of trading for defaulter. • Require additional collaterals.
Assessment	Broadly Observed
Comments	Although most risk control measures seem to be in place, the self assessment stresses the need to institutionalize the liquidity and adequacy of SD&C financial resources and further improve some mechanisms, for example related to rules to mutualize losses by market participants, which are under preparation by the SD&C.
RSSS 5. Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.	
Description	No securities borrowing and lending facility is established yet, but advanced plans exist for margin trading and short selling. These activities are subject to regulation called ‘Measures for the administration of pilot margin trading and short selling’ and include provisions for risk management.

	<p>Given front-end control of securities, securities lending is not needed as a current method for expediting settlement of securities transactions.</p> <p>There are no legal, regulatory, accounting and taxation restrictions on the development of the securities lending market in China.</p>
Assessment	Observed
Comments	For the fixed income market a securities borrowing and lending service does exist. Market maker schemes are available to implement compulsory bond lending to ensure smooth settlements.
RSSS 6. Securities should be immobilized or dematerialized and transferred by book entry in CSDs to the greatest extent possible.	
Description	<p>Article 41 of the Securities Law states that “securities purchased and sold by the parties to securities transactions may be in the form of paper certificates or such other forms as may be so prescribed by the securities regulatory authority under the State Council.”</p> <p>In practice, 100 percent of negotiable securities are paperless.</p> <p>According to Article 158 of the Securities Law, securities registration, clearing and settlement shall be completed in a unified manner nationwide. The SD&C is not only the securities depository that records securities held by investors and variations thereof through the investors’ securities accounts, but also the statutory registrar for listed securities, providing registration services for issuers through its securities register (i.e., register of securities holders, including that of shareholders, fund unit holders, etc.). In its operations, the SD&C processes securities settlement by writing up/down securities accounts, and updates the securities register according to changes in the accounts. Therefore, the transfer of securities between securities accounts will definitely result in the transfer of securities in the register. The two processes can be deemed as simultaneous without any lag in between.</p>
Assessment	Observed
Comments	-
RSSS 7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves DvP.	
Description	<p>The legal framework supports DvP in the SD&C systems.</p> <ul style="list-style-type: none"> • Article 167 of the Securities law states: “<i>when providing netting services for securities trading, the securities registration, clearing and settlement institution shall request settlement participants to observe the principle of DvP. No securities, funds or collaterals for the purpose of settlement prior to settlement completion shall be subject to other uses.</i>” • Article 45 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i> states: “where the securities registration, clearing and settlement institution adopts multi-lateral netting, it shall act as a CCPCCP....., based on the principle of DvP.....” • Article 78 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i> includes the definition of DvP in line with international standards stating: “<i>DvP means that the securities registration, clearing and settlement institution shall, during its settlement with clearing participants, deliver securities upon, and only upon receiving the corresponding funds, and deliver funds upon, and only upon receiving the corresponding securities.</i>”

	Securities settlement arrangements for SSE and SZSE are based on front-end availability of securities and funds, otherwise transactions do not take place. Securities are held at the investor level detail in the SD&C while funds are kept through a system of third party custodian banks with the SD&C acting as the settlement agent. Securities settlement takes place on T and funds on T + 1. However, the fact that settlement participants need to keep a minimum required level ensures a closed-end loop of funds thus de facto replicating the risk mitigation of a more “orthodox” DvP model.
Assessment	Observed
Comments	See Section III.2 Clearance and Settlement Arrangements for the Stock Exchanges for detail of how clearance and settlement arrangements replicate the risk mitigation of a more “orthodox” model.
RSSS 8. Final settlement should occur no later than the end of the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.	
Description	<p>The SD&C system does support finality, since it prohibits unilateral revocation of unsettled transfer instructions.</p> <p>According to the operational rules of the SD&C, there is a clear schedule for settlement finality of transactions completed by clearing participants. For example, the A-shares are settled on T+1 at 16.00, so finality occurs at the end of the day. Provisional transfers of securities are not allowed over the link with CCDC.</p>
Assessment	Observed
Comments	Indeed, securities settlement takes place by end of trading date. Even if settlement of funds among settlement participants is deferred to T +1 the closed end loop of funds ensures DvP as explained in Recommendation 8.
RSSS 9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements and limits.	
Description	<p>The SD&C operates a system with front end control of securities and funds, making SD&C limit its exposures to participants. In addition, settlement reserves are collected from clearing participants at 10 percent of their average daily purchase for bonds and 20 percent for other securities of their average daily purchase value in the preceding month. This is supplemented by other financial resources including settlement collaterals, mutual guarantee funds and settlement risk funds. In addition, the SD&C can deduct proprietary securities of defaulting participants to complete settlement.</p> <p>The above-mentioned risk management measures and sufficient financial resources available for the SD&C have minimized risks resulting from its uncollateralized exposures. In addition, the settlement risk fund set up for this purpose can also help address the SD&C’s uncollateralized exposures.</p> <p>At present, the SD&C has not imposed any limits on credit extensions of clearing participants. However, the third-party custody of customers’ trading settlement funds, the adequate financial resources of the SD&C and the default management mechanisms are sufficient to prevent potential principal and spread risks facing the SD&C, ensure its liquidity and timely settlement. In practice, the SD&C has not encountered a liquidity drought.</p>

Assessment	Broadly Observed
Comments	<p>SSE and SZSE adopt front-end controls, thus, securities overdraft in the process of settlement is rare. But there were cases of securities overdraft in the settlement of B-shares on the SZSE, where the SD&C completed the daily settlement by temporarily debiting balances and required the clearing participants concerned to immediately buy the relevant securities to make up for the shortfall. The SD&C's business rules prohibit overdraft by clearing participants, but in practice, there are exceptional cases of very small overdrafts. According to statistics, by the end of November, 2010, the free float market capitalization of B shares accounted for 1.07 percent of that of the depository balance; among the total transferred value in centralized trading during the past 4 months, B shares account for 3.1 percent–3.8 percent; since 2010, overdraft has only happened in 116 B share settlements, which takes up 0.0085 percent of the total B share settlements during the same period of time.</p> <p>SD&C has not adopted a thorough assessment of its credit risk exposures and their collateralization.</p> <p>Also, the probability of multiple failures has yet to be assessed. Multiple failures are most likely to arise from serious operational and financial problems of settlement participants.</p>
<p>RSSS 10. Assets used to settle the ultimate payment obligations arising from securities transactions should carry little or no credit or liquidity risk. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of the cash settlement agent, whose assets are used for that purpose.</p>	
Description	<p>The SD&C plays the role of settlement agent while the 19 “settlement” banks are the mechanism used to transfer funds resulting of the clearing process as well as facilitating the third party custodian system.</p> <p>The concentration of funds under custody is relatively low, with an average of 25 percent credited to accounts of the biggest settlement bank every day.</p> <p>The “settlement” banks should comply with the requirements as mentioned in the “<i>Methods for the Administration of securities settlement business of settlement banks.</i>” Eligibility criteria concern the financial positions and internal control mechanisms of the banks.</p> <p>The payment systems used for interbank transfers among settlement banks include the central bank and the interbank payment systems.</p> <p>In practice, during the past two decades since the launch of the Chinese securities market, there has never been any loss or liquidity pressure due to the shutdown or bankruptcy of commercial banks.</p>
Assessment	Broadly observed
Comments	<p>Full compliance of the payment systems used to transfer funds with the CPSIPS should be achieved to ensure that no settlement risks stem from the clearing and settlement process due to the existence of liquidity and credit risks in the payment system. However, the DvP equivalent nature of the SD&C settlement arrangements would eventually limit the risk to market risk.</p>
<p>RSSS 11. Sources of operational risk arising in the clearing and settlement process should be identified and minimized through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Contingency plans and back-up facilities should be established to allow for timely recovery of operations and completion of the settlement process.</p>	

Description	<p>The SD&C system operator is responsible for identification and management of risks. Both stock exchanges have issued rules which cover the identification and management of operational risks. SD&C has contingency plans and backup facilities. SD&C has established a relatively comprehensive set of codes for system operation that includes rules, business procedures and operating instructions, specifically: measures for the administration of data backup, contingency plans for coping with major abnormalities in the registration and settlement system, procedures for data backup and recovery, reporting of system abnormalities, etc. Besides, the SD&C has established disaster recovery (DR) server room as well as corresponding intra-city remote backup systems, and has set up a centralized and intuitive system of real-time surveillance that covers the whole core technology system.</p> <p>Contingency plans and facilities of the SD&C are tested and reviewed regularly. The backup facilities are checked twice a year.</p> <p>Contingency plans can ensure that the status of all transactions at the time of the disruption is identified with certainty in a timely manner. The system of the SD&C receives data on a real-time basis and processes the data in batches on a non-real-time basis. In case the system is interrupted for half an hour, contingency plans can still ensure the status of all transactions at the time of the disruption are identified, with the disruption not even detected by participants of the system. It takes about 45 minutes to recover operations through the backup systems. The SD&C is able to recover such operations within 45 minutes in most cases.</p> <p>The procedures can preserve all the transaction data, and the system operator has many ways to secure the integrity of messages. Since the SD&C system is subject to real-time backup and check-up, backup data can be recovered through backup tapes in a timely manner in case the data is lost.</p> <p>Operational reliability issues are reviewed regularly by senior management. The SD&C system includes an automatic monitoring system, which checks the reliability of system operation every few seconds. Besides, the server provider inspects the equipment every two weeks.</p> <p>The SD&C's IT systems are subject to regular external audits. The server provider inspects the equipment of the SD&C on a regular basis and submits risk assessment reports thereof. The systems are configured with an independent audit function, with a risk monitoring function in place to review the control of operational risks regularly.</p> <p>The core system of the SD&C did not encounter any failure last year. The system operator has adequate plans to ensure the capacity of the system. The core system was tested regularly, while the system operator submits reports on system performance on a quarterly basis.</p>
Assessment	Observed
Comments	-
<p>RSSS 12. Entities holding securities in custody should employ accounting practices and safekeeping procedures that fully protect customers' securities. It is essential that customers' securities be protected against the claims of a custodian's creditors.</p>	
Description	<p>The legal framework supports the protection of customer's assets. The Securities Law prohibits securities companies from misappropriating their customers' assets. According to Article 136, "<i>securities companies shall conduct brokerage, underwriting, proprietary trading, and securities asset management businesses separately and shall not mix them up in operation.</i>" According to Article 139, "<i>securities companies shall not count customers' trading settlement funds and</i></p>

	<p><i>securities towards their proprietary property. No institution or individual shall misappropriate in any manner the customers' trading settlement funds and securities.”</i></p> <p>In the event of the custodian's insolvency, the transfer of customers' positions to a solvent intermediary by a receiver is endorsed by specific provisions related to suspension of business for rectification, custody, takeover and administrative restructuring as well as Article 5 of the <i>Regulations on the Handling of Risks at Securities Companies</i>, which states “<i>the normal operation of securities brokerage businesses shall be ensured through risk handling procedures for the securities company concerned.</i>”</p> <p>A direct registration system is adopted in China's securities market, where most of securities are recorded directly in investors' own accounts. Entrusted by the securities custodian institutions, the SD&C maintains securities accounts of the institutions and of their clients, and sends daily registration and settlement data to the institutions after the completion of its business procedures, including the documents on the securities balances and variations thereof. In this way, the SD&C ensures the consistency between the securities balances on the records of the custodian institutions and the securities in the depository. The securities custodian institutions, mainly securities companies and commercial banks, are subject to mandatory internal as well as external audits, and are required by regulators to conduct internal and external financial audits on an annual basis as well as to submit the auditing results to the regulatory authorities. Investors also have easy access to the information on the securities held under their names.</p> <p>Securities custodian institutions (including securities companies and commercial banks) are subject to prudential supervision/regulation. Securities regulators are empowered by the <i>Securities Law</i> and the <i>Law on Securities Investment Funds</i> to perform their duties and conduct inspections on securities custodian institutions, including inspections on the procedures of the safekeeping of securities and their internal controls.</p>
Assessment	Observed
Comments	-
RSSS 13. Governance arrangements for CSDs and central counterparties should be designed to fulfill public interest requirements and to promote the objectives of owners and users.	
Description	<p>The SD&C is a non-profit limited liability company. Both SSE and SZSE own 50 percent of the share capital. Both stock exchanges are owned by domestic securities companies.</p> <p>Currently, the SD&C's board of directors consists of four directors, of which two are dispatched by the SSE and the SZSE, and the other two are members of the SD&C's management. The management is appointed by the board of directors. According to Article 10 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, the appointment or dismissal of the chairperson, vice chairpersons, president and vice presidents of the SD&C are subject to the approval of the CSRC.</p> <p>The information on the SD&C's shareholders, board of directors and management team is disclosed on the SD&C website and stated in the annual reports of the SD&C.</p> <p>Under Articles 10 and 15 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, opinions of the market participants should be solicited on major decisions of the SD&C, which shall be subject to the CSRC's approval. Internal decisions of the SD&C shall be made through collective discussions at meetings presided over by the president. The objective of the SD&C is to establish a centralized and unified system for securities</p>

registration, clearing and settlement, which is market-oriented, has open and scalable features, complies with laws and regulations and can effectively prevent market risks, improve market efficiency and better serve the future growth of China's securities market. This mission is clearly articulated in the SD&C's charter and website. As for financial objectives, under Article 155 of the *Securities Law* and Article 4 of the *Measures for the Administration of Securities Registration, Clearing and Settlement*, the SD&C shall be not-for-profit. The objective and the non-profit nature of the SD&C reflect the needs of its owners and participants as well as public interests.

The SD&C's participants and the public can influence the decision-making process. When drafting or modifying its business rules, the SD&C will follow provisions in the *Measures for the Administration of Securities Registration, Clearing and Settlement* and will solicit comments from market participants and the public by hosting seminars or releasing the draft rules on newspapers and the SD&C website. In addition, the SD&C listens to voices of its participants through annual visits, participant meetings and messages on its on-line bulletin board. Moreover, both the participants and the public have easy access to the business rules and major decisions of the SD&C, which are released on newspapers and the SD&C website.

As required by the CSRC, the SD&C needs to draft its annual work plan at the beginning of each year, which is both a presentation of the policy intention of the CSRC and an outcome of soliciting comments from market participants. At the same time, the SD&C will draft an annual work summary and submit it to the CSRC at the end of each year or the beginning of the following year. In its annual summary, the SD&C's management sums up the implementation of its work plan. The CSRC may assess the performance of the management through routine regulation and reviewing the annual work summary.

In addition to the assessment and supervision conducted by the CSRC, the SD&C's board of directors also deliberates on the company's development plans, which, centering on the objectives of the SD&C, set forth the SD&C's programs and arrangements for the following five years. Currently, the SD&C's board of directors consists of four directors, of which two are dispatched by the SSE and the SZSE, and the other two are members of the SD&C's management. All board members have broad expertise in the securities sector.

Currently, all the SD&C's board members are presidents/vice presidents of the stock exchanges and the SD&C, who are appointed upon the CSRC's approval. The CSRC can, in this way, influence the line-up of the board, making it represent or take into account public interests. In addition, half of the SD&C's directors are staff members of the stock exchanges. Since the stock exchanges are mutual exchanges, the directors from the stock exchanges can, to a certain degree, represent the common interests of various parties in the market.

The SD&C is jointly established by SSE and SZSE, but according to the CSRC, the exchanges cannot affect the decision-making of the SD&C out of their own interests through its corporate governance structure for the following reasons:

- First, in accordance with the *Securities Law*, *Measures for the Management of Stock Exchanges*, *Measures for the Management of Securities Registration and Settlement*, the exchanges and the SD&C are all under direct regulation by CSRC. In its daily regulation, CSRC focuses on whether these two parties can fully consider and satisfy the demands of public interests. They are under strict restriction in decision-making of key issues. The relevant charter, business rules and key events should be approved by the CSRC.
- Second, both parties are not-for-profit organizations, thus they do not have any pressure for profit generation. The SD&C has its objectives as "security, efficiency, low-cost." Once the

	<p>standards of risk control are loosened, the SD&C will be strictly held accountable by the regulator.</p> <p>Third, the relationship between exchanges and the SD&C is different from that between an ordinary corporation and its shareholders. The SD&C is independent on its operation and decision-making, and will not be affected or controlled by the shareholders. The charter of the SD&C has made it clear that dividends paid to the shareholders are prohibited. In practice, the two exchanges have never required the SD&C for interests, nor have they gained any returns on investment from the SD&C. The SD&C does not fully comply with all RSSSSs.</p>
Assessment	Broadly Observed
Comments	The SD&C does not fully comply with all RSSSSs and the Governance of the system must be accountable for it and take the necessary actions to achieve full compliance.
RSSS 14. CSDs and central counterparties should have objective and publicly disclosed criteria for participation that permit fair and open access.	
Description	<p>Participants of the SD&C mainly include clearing participants, account agents, securities account holders and securities issuers. The access rules/criteria for the four categories are clearly stipulated in the <i>Rules for the Administration of Securities Clearing Participants</i>, the <i>Rules for the Administration of Securities Accounts</i> and the <i>Rules for Securities Registration</i> of the SD&C, which have been distributed to the participants concerned and released at the SD&C website, easily accessible by all potential applicants.</p> <p>The same rules are applied for participants of the same category. For instance, the same rules are applied to account agents and securities issuers regardless of their identity, type and location. Clearing participants are classified by the SD&C into different categories and subject to different rules in specific aspects. Based on its need for risk control, the SD&C may require high-risk clearing participants to put up extra collaterals or raise the minimum settlement reserves requirement. Such differentiated restrictions are justified based on the need for risk control. Where a participant no longer meets the participation requirements or under other circumstances, the participant may apply for termination of its membership and handle the exit procedures in accordance with the SD&C's rules. Relevant provisions are presented in the <i>Rules for the Administration of Securities Clearing Participants</i>, <i>Rules for the Administration of Securities Accounts</i>, <i>Rules for Securities Registration</i> and related operational instructions, easily accessible by all participants on the SD&C website.</p>
Assessment	Observed
Comments	-
RSSS 15. While maintaining safe and secure operations, SSS should be cost-effective in meeting the requirements of users.	
Description	<p>Under Article 155 of the <i>Securities Law</i> and Articles 4 and 15 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, the SD&C is a not-for-profit entity. According to Articles 11 and 15 of the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, the formulation or adjustment of the SD&C's main fees and rates shall be approved by the CSRC. Comments from market participants concerned shall be solicited before adjusting the main fees and rates for securities registration, clearing and settlement.</p> <p>Therefore, SD&C's fees are aimed at cost recovery. The CSRC conducts annual financial audits</p>

	<p>on the SD&C and supervises its operational costs. Such institutional arrangements can effectively control the operational costs of the system, and the SD&C can set reasonable fee rates for some charged services accordingly. Until now, market participants have not raised any objections to the fees and rates of the SD&C.</p> <p>Every year, the SD&C solicits opinions and recommendations from participants on a regular basis through satisfaction surveys, on-site visits, seminars, etc. The on-line bulletin board of the SD&C is also open for comments. Moreover, the SD&C conducts or entrusts a third party to conduct annual assessments on operational reliability, with issues concerning system capacity and contingency responses assessed, and measures such as capacity enhancement and system optimization adopted based on the findings</p>
Assessment	Observed
Comments	-
RSSS 16. SSS should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	
Description	<p>Investors send orders to their brokers usually by phone or by internet. Then broker sends orders to the stock exchange via a terminal. Orders can be sent to the SSE's main framework through terminals either on the floor or from member firms.</p> <p>The SD&C does make use of ISIN codes. The SD&C does not make use of international communications procedures or standards to process communications with participants. This is not necessary since there is no demand for such features, according to the SD&C Self assessment.</p>
Assessment	Partly observed
Comments	Based on the methodology for assessing CPSS-IOSCO RSSS, the system is non compliant. The methodology does not elaborate in detail on market needs and timing of the development of such channels and standards, other than saying that the advantages of embedding them in the original design should be considered. It is advisable that the SD&C in cooperation with the exchanges and market participants and in consultation with the CSRC activate a process to constantly evaluate the benefits of such developments and act promptly to implement the necessary changes to meet market needs.
RSSS 17. CSDs and central counterparties should provide market participants with sufficient information for them to accurately identify the risks and costs associated with using the CSD or CCP services.	
Description	<p>The SD&C discloses to market participants its rules, regulations, relevant laws, governance procedures, risks, steps taken to mitigate risks, the rights and obligations of participants and the cost of participating in the system. The information is disclosed on the website of the SD&C and usually distributed to market participants through the SD&C's communications system upon its release.</p> <p>The SD&C does not publish the disclosure framework for the CPSS-IOSCO Recommendations. The self-assessment provided to mission members was the first time SD&C undertook a self-assessment.</p> <p>The relevant laws and regulations as well as the SD&C's rules, governance structure, risk analysis, risk control measures, the rights and obligations of participants and the cost of participating in the system are all available on the website of the SD&C. At present, most of the information is in Chinese, but information involving foreign investors is disclosed in both Chinese and English.</p>

Assessment	Partly observed
Comments	The SD&C should disclose the answers to the questionnaire set out in the CPSS/IOSCO disclosure framework or the answers to the key questions set out in the assessment methodology for RSSS.
RSSS 18. SSS should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.	
Description	<p>The CSRC is responsible for the regulation of the SD&C under the Securities Law with the following mandates: the establishment of the securities registration, clearing and settlement institution (Article 155 of the <i>Securities Law</i>), the approval of the charter and business rules of the securities registration, clearing and settlement institution (Article 158 of the <i>Securities Law</i>), the dissolution of the securities registration, clearing and settlement institution (Article 165 of the <i>Securities Law</i>), etc.. Based on relevant provisions in the <i>Securities Law</i>, the CSRC formulated the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, which sets forth more detailed stipulations.</p> <p>The CSRC is responsible for the regulation of securities-related businesses of the SD&C under the <i>Securities Law</i>. The duties and major policies of the CSRC in regulating the SSS are prescribed in the <i>Securities Law</i> and the <i>Measures for the Administration of Securities Registration, Clearing and Settlement</i>, which are disclosed publicly.</p> <p>The SSS operated by the SD&C is subject to the CSRC's regulation under the <i>Securities Law</i>. There is a framework for cooperation between the CSRC and the PBC for the exchange of information and views on the SSS. Every year, the SD&C provides, as requested, the PBC's Department of Payment and Settlement with information on the operation and development of the SSS in the first half of the year through the CSRC's Department of Market Supervision as input for the China Payment System Development Report, compiled by the PBC's Department of Payment and Settlement. Also, the PBC's Department of Payment and Settlement and the CSRC's Department of Market Supervision hold discussions on issues in need of coordination in their routine operations.</p> <p>PBC also organizes joint meetings on regulation with CSRC, CBRC and CIRC on a regular basis. Key issues concerning payment and settlement can be solved through consultation in these meetings. In addition, the PBC has taken the lead to summon the workshop on the development and planning of the payment system in China, with CSRC being one member. CSRC is member of IOSCO, and PBC is member of CPSS and both have dispatched representatives to take part in the task force for the amendment of the CPSS-IOSCO standards that constitutes another form of cooperation among regulators.</p> <p>The CSRC, the CBRC, and the CIRC officially released the Memorandum of the Three Major Financial Regulators on Specialization and Cooperation in Financial Regulation on June 28th, 2004, institutionalizing the tripartite cooperation.</p> <p>As a member of the IOSCO, the CSRC has signed Memorandum of Understanding (MoUs) on cooperation with foreign securities regulators including those in the U.S., the U.K., and Russia. Moreover, as a formal signatory to the IOSCO Multilateral Memorandum of Understanding Concerning Consultation and Cooperation and the Exchange of Information (IOSCO Memorandum of Understanding), the CSRC may conduct cross-border enforcement cooperation and information exchange with other signatories under this framework.</p> <p>Some cooperative mechanisms with the private sector have also been established. According to</p>

	<p>the <i>Measures for Formulating the Rules and Regulations in Securities and Futures</i>, before being officially issued, all the rules and regulations have to be disclosed to the public for opinions and suggestions, so that the general public can be encouraged to participate in the rule-making process. Also, the stock exchanges and the SD&C are entitled to reflect the opinions of their members or participants, apart from them, the SAC is also a Self-Regulatory Organization (SRO), being able to reflect the demands of the securities companies and their practitioners.</p>
Assessment	Broadly Observed
Comments	<p>CSRC exercises its regulation and oversight function effectively. CSRC should continue efforts to ensure the SSS fully observe all CPSS-IOSCO RSSS.</p> <p>Although a high level cooperation framework among relevant authorities does exist, cooperation at the technical level might be structure more formally.</p> <p>In addition to the existing mechanisms, authorities should further foster cooperation between them and the private sector and other relevant stakeholders by creating an appropriate forum to discuss payment and settlement matters.</p>
RSSS 19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlement.	
Description	<p>In practice, the Shenzhen Branch of the SD&C set up links with the CDP, the Singaporean depository, so as to support the cross-listing of a few B-share stocks on the SZSE and the SGX. Specifically, the CDP opened accounts at the SD&C Shenzhen Branch, transferred their investors' securities to the accounts, and wrote up the investors' securities accounts at the CDP or CDP participants correspondingly. The SD&C assessment on this arrangement shows that risks in the process are controllable, and the CDP's financial and operational risks would not be passed on to the SD&C Shenzhen Branch.</p> <p>The link only involves securities transfer, which is a FoP approach. There are no provisional securities transfers across the link.</p> <p>The SD&C Shenzhen Branch has not extended credit to the CDP across the link.</p>
Assessment	Broadly Observed
Comments	<p>In light of the potential internationalization of the Chinese market, links are likely to become the norm rather than the exception. The SD&C, the exchanges and market regulators might want to work on a standardized framework to assess the risks associated to such links, when the need materializes.</p>

Table 4. China: Detailed Assessment of Observance of the CPSS-IOSCO Recommendations for Central Counterparties—the Shanghai Futures Exchange

RCCP 1 A CCP should have a well founded, transparent and enforceable legal framework for each aspect of its activities in all relevant jurisdictions.	
Description	<p>The legal framework for securities clearing and settlement in China consists of statutory laws, secondary regulation, rule books, notices etc. Most key aspects of securities clearing and settlement are covered by the Securities Law. Some key concepts are however missing, of which the most important are finality and novation.</p> <p>However, the Securities Law is not applicable to futures trading, clearing and settlement. For SHFE the legal framework consists of:</p> <ul style="list-style-type: none"> • Regulations on the Administration of futures trading. • Measures for Administration of futures exchanges and futures companies. • Measures for futures clearing. • SHFE Rules include: detailed trading rules, detailed settlement Rules, detailed delivery rules, membership management measures, and risk Control management measures. <p>Most key concepts of clearing and settlement are covered by these rules and regulations, however, not in statutory law. For example, for trading and clearing on the SHFE enforceability of trades, finality, netting, novation, investor protection and collateral protection are covered by regulation. The legal framework supports the protection of customer’s assets. CSRC supervises whether the SHFE complies with accounting practices and safekeeping procedures that protect customer’s assets. The CFMMC monitors whether brokerage firms comply with accounting practices and safekeeping procedures that protect customer’s assets.</p> <p>Cross-border conflict of law provisions are not applicable in the absence of foreign investors.</p>
Assessment	Partly observed
Comments	In the absence of another statutory securities law, which addresses futures trading, clearing and settlement, some major legal gaps are apparent.
RCCP 2. A CCP should require participants to have sufficient financial resources and robust operational capacity to meet obligations arising from participation in the CCP. A CCP should have procedures in place to monitor that participation requirements are met on an ongoing basis. A CCP’s participation requirements should be objective, publicly disclosed, and permit fair and open access.	
Description	<p>The SHFE applies comprehensive participant access rules. These rules are stated in “Membership Management measures of the SHFE.” There is an annual inspection of the members and requirements are monitored on an ongoing basis by the SHFE. All participants are also supervised by the CSRC. The membership measures include provisions of suspension and exclusion of members that violate the rules. The <i>Membership Management Measures of the SHFE</i> set forth financial and operational standards for eligible participants. For example, according to Article 5 of the <i>Membership Management Measures of the SHFE</i>, to become a futures-company member, the applicant shall have a minimum registered capital of RMB 30 million; to become a non-futures-company member, the applicant shall have a minimum registered capital of RMB 10 million with a solid organizational structure as well as comprehensive financial control and futures business</p>

	<p>management systems. The <i>Measures for the Administration of Futures Companies</i> also sets forth certain standards for futures companies in terms of accounting, personnel and operations. For instance, shareholders who apply to incorporate a futures company must be Chinese legal persons, and those with a 5 percent or higher stake in the company shall meet the following qualifications: (i) neither its paid-in capital nor net assets shall be less than RMB 30 million; and it has a track record of continuous operations in two or more fiscal years, with positive profits for at least one of the latest two fiscal years; or (iii) neither its paid-in capital nor net assets shall be less than RMB 200 million. The <i>Trial Measures for the Administration of Risk Control Indicators of Futures Companies</i> specifies that a futures company shall meet a set of requirements including a net capital of no less than RMB 15 million and no less than 6 percent of customers' equity, a net capital/net assets ratio of no less than 40 percent, etc.</p>
Assessment	Observed
Comments	-
RCCP 3. A CCP should calculate its credit exposures to participants on a daily basis and hold collateral that in normal market conditions covers its potential losses from closing out positions held by a defaulting participant.	
Description	<p>The SHFE has a daily mark-to-market system and applies a pre-margining system, that is, purchase of futures contracts is only allowed if there are sufficient margin deposits. Upon the completion of the day's trading, the exchange will, according to the day's settlement price, settle the profits and losses, trading margins and other fees for all contracts. The amounts payable and receivable will then be transferred to and from the corresponding member settlement reserves. In addition to the pre-margining system the exchanges have established other risk management controls including: price limits, limits to speculative positions and large holders, compulsory closed-out of positions and a system of warning indicators.</p>
Assessment	Observed
Comments	-
RCCP 4. If a CCP relies on margin requirements to limit its credit exposures to participants, those requirements should be sufficient to cover potential exposures in normal market conditions. The models and parameters used in setting margin requirements should be risk-based and reviewed regularly.	
Description	<p>The SHFE has put in place measures to ensure the settlement of futures contracts. If a futures contract is matched during the day, the exchange will collect trading margins from both parties. After the closing of a trading day, the exchange will net the profits and losses for all contracts, based on settlement prices of the day. The members' settlement reserves are adjusted accordingly. If the balance of settlement reserves falls below the minimum requirement, the member is required to replenish the reserves before the opening of the next trading day. If the balance is negative, the member cannot open a new position (Trading Rules of SHFE, Article 7.5). To further protect itself against the default of one of its participants the SHFE has implemented price limits, speculative position limits, major client reporting, compulsory close-out of positions, risk warning, etc. Based on the market situation, the exchange may impose one or several of the following measures on one or both parties of trading, in the same proportion or different proportions and on part of or all of its members: raising the trading margins, limiting the withdrawal of funds, suspending new positions, adjusting price limits, closing out within a time limit or by force, etc.</p> <p>The margins collected by the SHFE can cover a maximum volatility to the price limits in 1.5 trading days.</p>

	<p>In addition, the exchange collects risk reserves at 20 percent of its commission revenue. So far, the balance of risk reserves has reached the maximum reserve requirement, or 10 times of the registered capital of the exchange, and it has never been used.</p> <p>According to Article 32 of the <i>Regulations on the Administration of Futures Trading</i>, the members and customers of a futures exchange may use standardized warehouse receipts, T-bonds and other negotiable securities with limited value volatility and high liquidity as margin contributions for futures trading. According to Article 71 of the <i>Measures for the Administration of Futures Exchanges</i>, standardized warehouse receipts accepted by a futures exchange could be used as margin contributions.</p> <p>In practice, using negotiable securities as margin contributions is a kind of pledge, while standardized warehouse receipts in the futures market have been 100 percent dematerialized. However, according to Article 224 of the Property Law, the parties concerned should enter into written contracts for the pledge of the warehouse receipts. In the event that there is no document of title, the pledge right will be established after registration of the pledge is processed by relevant authorities. Given that the concept of “relevant authorities” is not clearly defined, there is no clear and effective legal basis for the exchange to serve as a registration authority for the pledge.</p>
Assessment	Partly Observed
Comments	The lack of legal recognition of dematerialized warehouse receipts exposes the SHFE to risks.
<p>RCCP 5. CCP should maintain sufficient financial resources to withstand a default by the participant to which it has the largest exposure in extreme but plausible market conditions that produces losses not fully covered by collateral requirements.</p>	
Description	<p>The SHFE has the following procedures to guarantee settlement:</p> <ol style="list-style-type: none"> 1) SHFE has a <i>pre-margining system</i> and a <i>daily mark-to-market</i> system. The margin level is determined by measuring risks. In long holidays or under special circumstances, the exchange can raise margin level according to market conditions. Apart from the exchange's margin requirement, futures companies can also require a certain percentage of additional margins from their clients, usually about 2–3 percentage points. 2) There is a <i>compulsory close-out system</i>. If a member's margin is lower than required, and has not paid in the margin before the due time or closed out its position voluntarily, the exchange shall close out such member's position by force. 3) The futures market has a <i>price limits system</i>. In the extreme situations when the market hits three consecutive price limits, the exchange may reduce positions compulsorily, to resolve market risks. 4) There are <i>minimum settlement margins</i> and <i>risk reserve funds requirement</i> for all members. Futures members use their own capital to pay the minimum settlement margins to the exchange, which is RMB 2 million according to the current standard. The futures members and the exchange shall extract a certain percentage from their fee revenue to constitute risk reserve funds, in order to handle market risks. When a member defaults in trading, the exchange will use such member's margin to cover the failure. If the member's margin is not sufficient, the exchange will use such member's risk reserve funds, proprietary funds, the exchange's risk reserve funds, and then the exchange's proprietary funds to cover the failure. When the exchange covers the failure with its own risk reserve funds or proprietary funds, it

will have the right of recourse against the defaulting member. Currently, the futures exchange has accumulated abundant risk reserve funds and proprietary funds. The SHFE is now extracting its reserve funds from its fee revenue at the highest possible level according to the regulation. The SHFE has never experienced a need to use the risk reserve funds to handle market risks

Articles 78 and 79 of the Detailed Settlement Rules of the SHFE include clear stipulations in case of a member default.

Article 78 states that in the event of default by a member, the exchange may take the following measures:

- (1) use the member's settlement margins;
- (2) suspend the opening of new positions;
- (3) close out positions compulsorily in accordance with relevant rules and regulations until the released margins are enough to perform the contracts; and
- (4) cash out the deposited negotiable securities as remedy for failed contracts.

Article 79 states that if a member's contracts are still not fully funded after the aforementioned measures are taken, the exchange may take the following additional measures to cover failures:

- (1) terminate membership, and use its membership fee as remedy for failed contracts;
- (2) with prior approval of the board, use risk reserve funds to cover the failures;
- (3) use the exchange's own assets to cover the failures; and
- (4) further pursue claims against the defaulting member through legal procedures.

In addition, SHFE regularly conduct stress tests on the adequacy of their financial resources and their ability to withstand any extreme situation. SHFE tracks factors such as the market volatility of various futures as well as the changes of its members' financial situation on a daily basis. The system is able to evaluate the risk exposures in possible extreme market conditions. The system can assume different scenarios, which include real-time settlement at specific time-point, single- or multi- contract price caps or floors, consecutive price caps or floors of single-/multi-contracts, and their combinations. These scenarios include the most volatile situation having been experienced by the markets since the operation of SHFE, which was the financial turbulence after the National Day Holiday in 2008. During that period of time, SHFE successfully identified the members with potential risk through the evaluation by the system and timely warned them to increase their margins. None of SHFE members experienced insufficiency of their margin balance during the financial turbulence.

SHFE carried out risk evaluations under the extreme hypothesis that all members default at the same time, and no longer provide any money to SHFE. The risk evaluation (stress tests) is performed weekly. In addition, if certain futures touch the price cap/floor, the stress test will be performed right after the completion of settlement in the same trading day. The models, parameters and scenarios used in SHFE are not reviewed comprehensively on an annual basis, but they are under ongoing scrutiny and examination, so that SHFE can make adjustments whenever things to be improved are identified.

Members' margins and the exchange's risk funds can only be deposited in a special account at a designated custodian bank in the form of bank deposits. Even if members use warehouse receipts as margin contributions, since the SHFE has developed a warehouse receipt system, it can cash out the warehouse receipts through transfers in a timely manner. In addition, membership fees are

	<p>deposited in the proprietary account of SHFE, thus there is no possibility that the resources the SHFE relying upon to cover losses from defaults cannot be immediately available to meet the SHFE's obligations.</p> <p>Finally, all the rules and business provisions of the SHFE have been approved by the CSRC and disclosed to the market.</p>
Assessment	Observed
Comments	-
<p>RCCP 6. A CCP's default procedures should be clearly stated, and they should ensure that the CCP can take timely action to contain losses and liquidity pressures and to continue meeting its obligations. Key aspects of the default procedures should be publicly available.</p>	
Description	<p>Where a member fails to deposit margins in full within the required time limit, the exchange may order it to correct its actions, use its settlement reserves, temporarily prohibit it from opening new positions, compulsorily close out its positions, cash out its deposited negotiable securities, and give written warnings at the same time.</p> <p>According to the <i>Detailed Settlement Rules of the SHFE</i> and the <i>Measures for Default Management of the SHFE</i>, the SHFE will impose penalties on participants who fail to discharge their settlement obligations on the contractual date. Such penalties include suspending the opening of new positions, warning, public notices of criticism, suspending part of the participants' futures business, fines, or collecting remedies, etc. Fines range from RMB 10,000 to 200,000. Any gains on compulsory close-out will be confiscated pursuant to relevant provisions.</p> <p>As for physical delivery, according to the <i>Detailed Settlement Rules of the SHFE</i>, in the event of default by a member, the exchange may take the following measures: (i) use the members settlement reserves; (2) suspend the opening of new positions; (iii) close out positions compulsorily in accordance with relevant rules and regulations until the released margins are enough to perform the contracts; and (iv) cash out the deposited negotiable securities as remedy for failed contracts. If a member's contracts are still not fully funded after the aforementioned measures are taken, the exchange may, with prior approval of the board of governors, use its risk funds to cover the failures.</p> <p>Under the <i>Detailed Delivery Rules of the SHFE</i>, if the sell-side defaults, the exchange will, to the discretion of the buy-side, terminate delivery or make an announcement of receipt purchase on the next trading day after the sell-side is convicted of default and complete the purchase within seven trading days. If the buy-side defaults in funds payment, the safeguard measures as provided in the Rules may be adopted.</p> <p>So far no default in physical delivery has occurred at the SHFE. Over the past 30 months, no positions have been forced to close out.</p>
Assessment	Observed
Comments	-
<p>RCCP 7. A CCP should hold assets in a manner whereby risk of loss or of delay in its access to them is minimized. Assets invested by a CCP should be held in instruments with minimal credit, market and liquidity risks.</p>	
Description	<p>SHFE assets can only be invested in cash in the custodian banks.</p> <p>The custodian banks are subject to the following requirements:</p>

	<ul style="list-style-type: none"> • First, all the custodian banks are national commercial banks with strong balance sheets, good reputation and professionals with extensive knowledge in the futures market and a strong sense of risk prevention and control. • Second, the SHFE has set certain thresholds for the custodian banks, which are also subject to strict regulation of the CSRC. A commercial bank needs to obtain the approval from the CSRC and pass the examination of the exchange before it becomes a custodian bank for margin deposits. • Third, the SHFE engages with more than one commercial bank as custodian to diversify risks and secure the safety of settlement assets. • Fourth, the margins of the members are kept in accounts of the custodian banks in the form of currency with strong liquidity. • Finally, the SHFE may conduct real-time monitoring over the margin accounts of its members through the futures funds management system to ensure its safekeeping.
Assessment	Observed
Comments	-
<p>RCCP 8. A CCP should identify sources of operational risk and minimize them through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Business continuity plans should allow for timely recovery of operations and fulfillment of a CCP's obligations.</p>	
Description	<p>The systems have backup sites as well as contingency plans. All back-up facilities are on line hot spares covered by the monitoring system. Measures exist to avoid data loss. A data backup site is in place as well as restoration methods. It takes 30 minutes to recover operations through the local data center.</p> <p>The futures exchanges apply system security management, for example pass words and limited access.</p> <p>Contingency plans and facilities are tested and reviewed regularly. Drills take place every week-long holiday and all production facilities are subject to “daily checks” on the working conditions for both, hardware and software. The SHFE has a local backup site in Zhangjiang and has also recently established an off-site in Beijing (tests were undertaken on November 13 and a formal report was sent to the CSRC on November 25, 2010). The sites are regularly tested (every week-long holiday). The trading system can be shifted from Shanghai to Beijing within 10 minutes. Thus, SHFE has developed a "two locations, three centers" system, including the data center in Shanghai Futures Plaza, the local back-up site in Zhangjiang, and the off-site back-up center in Beijing.</p> <p>Operational reliability issues are reviewed regularly by the senior management.</p> <p>The systems are subject to internal audits annually, including reviews of operational risk control. The key systems of the SHFE did not fail during the last several months. The real time business monitoring system of the SHFE can monitor the capacity of key systems on a real time basis and send warnings in case of disruptions. The system operator can then adjust operating parameters based on the warnings to ensure that the systems are capable of handling stress volumes.</p>
Assessment	Observed
Comments	-

RCCP 9. A CCP should employ money settlement arrangements that eliminate or strictly limit its settlement bank risks, that is, its credit and liquidity risks from the use of banks to effect money settlements with its participants. Funds transfers to a CCP should be final when effected.	
Description	<p>The SHFE settles through its internal settlement department and assumes the settlement risk. Banks only serve as the custodians of margin deposited by members of the exchange and shall not assume any settlement risks, but they are subject to prudential supervision by the regulatory authorities of the Chinese government.</p> <p>SHFE has accounts with 5 custodian banks for the fund transfers between the members and the futures exchanges (gains, losses, fees and margin). At the SHFE the concentration of cash settlement flows is limited, with an average of 38 percent of value handled by the largest “settlement” bank.</p> <p>According to the <i>Detailed Settlement Rules of the SHFE</i>, the SHFE may designate institutions to become custodian banks according to relevant regulations of the CSRC and its own business rules released after filing with the CSRC. At the same time, under the <i>Regulations on the Administration of Futures Trading</i>, for a financial institution in the banking sector to become a margins deposit custodian with futures settlement qualification, it shall obtain the approval of the banking regulator under the State Council and the CSRC.</p> <p>The custodian banks should comply with the requirements of the CSRC and the futures exchanges (see description on RCCP 7).</p> <p>The SHFE per se is not organized as a limited purpose bank, with its scope of business strictly regulated by the CSRC. Risks associated with non-settlement activities are under tight control.</p>
Assessment	Observed
Comments	-
RCCP 10. A CCP should clearly state its obligations with respect to physical deliveries. The risks from these obligations should be identified and managed.	
Description	<p>The futures exchanges are obliged to organize the physical delivery following trading in futures (Regulation on the Administration of Futures Trading, Article 39). For this purpose the futures exchanges shall appoint a delivery warehouse.</p> <p>The SHFE describes the procedures of delivery in the “<i>Detailed delivery rules of SHFE.</i>” A DvP mechanism exists for the seller of physical settlements on T+2, using standardized warehouse receipts. The settlement process consists of the following steps:</p> <ul style="list-style-type: none"> • T+0: buyer releases intentions; seller submits standardized warehouse receipts; • T+1: SHFE allocates standardized warehouse receipts to buyers; • T+2: buyer pays and obtains warehouse contracts; seller receives payments; and • T+4 and T+5: seller submits VAT invoices. <p>Therefore, it is possible for the buy-side to make payments and obtain warehouse receipts within one day; for the sell-side, there will be a two-day span between submitting warehouse receipts and receiving payments, where the trades can be deemed as settled on T+2.</p> <p>In case buyers do not pay in time, according to the applicable rules, or sellers do not deliver in time, the exchange may carry out auctions to obtain the cash or the physical deliverables and</p>

	<p>ensure settlement. The defaulting members shall assume the related cost (Trading rules of SHFE, Article 8.15).</p> <p>Rules exist to support the management of the risks associated with storage and delivery obligations. The designated warehouses need approval of the futures exchange to start business. They are under annual review by the SHFE. The SHFE is entitled to force a delivery warehouse to restructure or pay losses, or even terminate its activities in case of certain citations (Trading rules of SHFE, Articles 8.11, 8.12, and 8.13).</p> <p>Members have the right to appeal in case the physical deliveries do not meet the quality or quantity requirements (Detailed delivery rules of SHFE, Article 2.6).</p>
Assessment	Observed
Comments	-
RCCP 11. CCPs that establish links either cross-border or domestically to clear trades should evaluate the potential sources of risks that can arise, and ensure that the risks are managed prudently on an ongoing basis. There should be a framework for cooperation and coordination between the relevant regulators and overseers.	
Description	The Chinese futures market has not set up cross-border links as yet.
Assessment	Not applicable
Comments	-
RCCP 12. While maintaining safe and secure operations, CCPs should be cost-effective in meeting the requirements of participants.	
Description	<p>The futures exchanges all have installed special clearing and settlement departments, which are responsible for offering CCP services and to manage the physical delivery upon expiration. After the trade has been made, the computer automatically provides a report that displays the price and transaction volume to the brokerage firms. Brokerage firms must also clear their clients daily. Brokerage members must provide clients with a daily clearing report.</p> <p>According to Article 7 of the <i>Regulations on the Administration of Futures Trading</i>, a futures exchange shall be a non-profit institution. Therefore, most of the charged services of the SHFE are targeted at cost recovery rather than profits. The CSRC is responsible for conducting financial audits on and supervising the operational costs of the SHFE. At present, market participants have not yet raised any objections to the fee items and rates of the SHFE.</p> <p>Every year, the SHFE will solicit opinions and recommendations from the participants through surveys, visits, questionnaires and seminars, etc. The operational reliability issues are reviewed regularly by the SHFE's senior management. The database software service provider, system security service provider and external professional evaluators will assess the security, capacity and operation of the database and the IT system of the exchange on a regular basis.</p>
Assessment	Observed
Comments	-
RCCP 13. Governance arrangements for a CCP should be clear and transparent to fulfill public interest requirements and to support the objectives of owners and participants. In particular, they should promote the effectiveness of a CCP's risk management procedures.	
Description	SHFE is a non-profit mutual exchange with legal person status, mutually owned by its members. The members can influence the decision-making process through the general meeting of members or the board of governors. SHFE conducts annual surveys, visits, questionnaires and organizes members' meetings. Governance of the future exchanges is regulated by <i>Regulations on the</i>

	<p><i>Administration of Futures Exchanges and Measures for the Administration of Futures Exchanges.</i></p> <p>The general meeting of members is the organ of power of the exchange, which consists of all members of the exchange and is usually assembled by the board once every year.</p> <p>The board of governors is a permanent organ under the general meeting of members and is accountable to the general meeting. Under the board are 9 specialized committees as consultative bodies to assist the board in its work and be accountable to the board. The board consists of 15 governors, including 9 member governors and 6 non-member governors. The board has one chairperson and one to two vice chairperson(s), who shall be nominated by the CSRC and elected by the board. The chairperson shall not assume the position of president concurrently. The board shall assemble as least once every half year.</p> <p>The president and vice presidents of the exchange shall be appointed and dismissed by the CSRC. In case of the appointment or dismissal of a middle manager, the exchange shall report to the CSRC within 10 days upon the decision.</p> <p>Detailed information regarding the SHFE's board, specialized committees and management team is available on the SHFE website.</p> <p>Major decisions of the SHFE are generally made by the general meeting of members or the board of governors in accordance with its constitution; while other decisions are usually made through discussions at meetings presided over by leaders of the exchange.</p> <p>The members of the SHFE may influence the decision-making process through the general meeting of members or the board of governors. For instance, the board has the right to review and finalize development strategies and annual work plans proposed by the president, as well as the detailed rules and measures developed in accordance with the trading rules; the general meeting of members has the right to deliberate and approve the constitution and trading rules of the exchange and the revised drafts thereof, as well as to deliberate and approve its budgets and final accounts reports. In addition, the SHFE listens to the voices of its members through annual surveys, visits, questionnaires and member s' meetings, etc.</p> <p>After the assessment, the SHFE has fully understood the international standards applicable to their case, namely the CPSS-IOSCO RCCP.</p>
Assessment	Broadly Observed
Comments	The SHFE is urged to engage in a self assessment with the new standards under preparation by the CPSS and IOSCO which will be released in 2011. A workshop on these standards might be organized with the participation of local authorities and market participants, as well as international practitioners from both the public and the private sector.
RCCP 14. A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using its services.	
Description	<p>The SHFE makes clear disclosure to market participants about its rules, applicable regulations, relevant laws, governance procedures, risks, steps taken to mitigate risks, the rights and obligations of participants and the costs of participating in the system, with all information released at the website of the SHFE.</p> <p>The SHFE has not disclosed information in accordance with the CPSS/IOSCO disclosure</p>

	<p>framework. This is the first time for the SHFE to address the key questions set out in the assessment methodology.</p> <p>The relevant authorities have not yet publicly disclosed answers to the key questions regarding implementation of the recommendations.</p> <p>The information is available at the website of the SHFE. Most of such information is in Chinese, while a small proportion is in English.</p> <p>The SHFE reviews the information on a regular basis. Once the rules are revised, relevant updates will be made online.</p>
Assessment	Partly Observed
Comments	SHFE should disclose the answers to the questionnaire set out in the CPSS/IOSCO disclosure framework or the answers to the key questions in the RCCP report.
<p>RCCP 15. A CCP should be subject to transparent and effective regulation and oversight. In both a domestic and an international context, central banks and securities regulators should cooperate with each other and with other relevant authorities.</p>	
Description	<p>According to Article 50 of the <i>Regulations on the Administration of Futures Trading</i>, the CSRC shall perform the following functions and duties as the regulator of the futures market: (i) formulate regulations and rules for the regulation of the futures markets and exercise the right of review and approval pursuant to law; (ii) regulate the listing, trading, clearing, settlement, delivery and other trading activities related to futures contracts; (iii) regulate the futures-related business activities of the futures exchanges, futures companies, other companies engaged in futures businesses, non-futures-company clearing members, futures margin deposit and monitoring institutions, futures margin custodian banks, delivery warehouses and other market participants; (iv) develop norms of practitioner qualifications and relevant administrative measures, and supervise the implementation of such measures; (v) supervise and review the information disclosures of the futures market; (vi) guide and supervise the activities of the futures associations; (vii) investigate and penalize violations of the laws or administrative regulations governing the futures market; (viii) facilitate international communications and cooperation related to the regulation of the futures market; and (ix) other functions and duties as may be so prescribed by laws or administrative regulations. The CSRC has formulated the <i>Measures for the Administration of Futures Exchanges</i> according to the provisions in the <i>Regulations on the Administration of Futures Trading</i>, providing more detailed stipulations on the basis of the <i>Regulations</i>.</p> <p>According to the <i>Regulations on the Administration of Futures Trading</i>, the CSRC is responsible for the regulation of China's futures market. The CSRC, the CBRC, and the CIRC officially released the <i>Memorandum of the Three Major Financial Regulators on Specialization and Cooperation in Financial Regulation</i> on June 28, 2004, which set forth general requirements for sectoral regulation, coordination, information collection and exchange. The <i>Memorandum</i> also institutionalized such tripartite mechanisms of "joint regulatory conference," "joint conference" and "regular communications." As a member of the IOSCO, the CSRC has signed MoUs on cooperation with foreign securities regulators including those in the U.S., the U.K. and Russia.</p>
Assessment	Broadly Observed
Comments	Given concentration of risks in a CCP and its potential effect on financial stability CSRC and PBC should establish a cooperative oversight framework for CCPs.

**Table 5. China: Summary Assessment of Observance of CPSS-IOSCO
RSSS—OTC Bonds Market-CCDC**

<i>Assessment Grade</i>	<i>Principles Grouped by Assessment Grade</i>	
	<i>Count</i>	<i>List</i>
Observed	8	2, 3, 6, 10, 11, 12, 14, 15
Broadly observed	6	4, 5, 8, 16, 18, 19
Partly observed	4	1, 7, 13, 17
Non-observed		
Not applicable	1	9

**Table 6. China: Summary Assessment of Observance of CPSS-IOSCO
RSSS—Stock Exchange (SSE, SZSE)-SD&C**

<i>Assessment Grade</i>	<i>Principles Grouped by Assessment Grade</i>	
	<i>Count</i>	<i>List</i>
Observed	11	1, 2, 3, 5, 6, 7, 8, 11, 12, 14, 15
Broadly observed	6	4, 9, 10, 13, 18, 19
Partly observed	2	16, 17
Non-observed		
Not applicable		

**Table 7. China: Summary Assessment of Observance of
CPSS-IOSCO RCCP—SHFE**

<i>Assessment Grade</i>	<i>Principles Grouped by Assessment Grade</i>	
	<i>Count</i>	<i>List</i>
Observed	9	2, 3, 5, 6, 7, 8, 9, 10, 12
Broadly observed	2	13, 15
Partly observed	3	1, 4, 14
Non-observed		
Not applicable	1	11

Table 8. China: Recommended Actions to Improve Observance of CPSS-IOSCO
RSSS—OTC Bonds Market-CCDC

Reference Recommendation	Recommended Action
Legal risk	
<p>Recommendation 1. SSS should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.</p>	<p>The PBC and MOF should consider an overall review of the legal and regulatory framework to provide a solid legal basis to clearance and settlement of operations of the interbank money market, the OTC bond market and CCDC. The framework should include the main elements at the Law level and not only at the Ministry-level procedures.</p> <p>The efficiency of the collateral disposal should be analyzed and improved as soon as possible.</p> <p>The conflict of law in the cross-border settlement is not currently an important risk source for securities settlement in China. However, as the Chinese financial markets increasingly overact with foreign ones, it is important that the Chinese legal and regulatory framework addresses any potential conflict of laws.</p>
Pre-settlement risk	
<p>Recommendation 2. Confirmation of trades between direct market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). Where confirmation of trades by indirect market participants (such as institutional investors) is required, it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.</p>	<p>Efforts should be made to ensure that all OTC transactions are indeed confirmed on T+0.</p>
<p>Recommendation 4. The benefits and costs of a CCP should be assessed. Where such a mechanism is introduced, the CCP should rigorously control the risks it assumes.</p>	<p>PBC and CCDC should finalize the process to determine if the typology of the market and other legal, institutional and market considerations would justify the establishment of a CCP mechanism.</p>
<p>Recommendation 5. Securities lending and borrowing (or repurchase agreements and other equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions. Barriers that inhibit the practice of lending securities for this purpose should be removed.</p>	<p>CCDC should consider improving securities lending and borrowing mechanisms beyond the current existing bilateral arrangements.</p> <p>Accounting practices and tax rules need to be improved to facilitate securities lending and borrowing.</p>
Settlement risk	
<p>Recommendation 7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves DvP.</p>	<p>The settlement of transactions using DvP has strongly increased since 2008. The CCDC is encouraged to further increase the use of DvP settlement to reach as soon as possible 100 percent settlement on a DvP basis.</p>

Reference Recommendation	Recommended Action
<p>Recommendation 8. Final settlement should occur no later than the end of the settlement day. Intra-day or real-time finality should be provided where necessary to reduce risks.</p>	<p>Protection of settlement finality should be included in the legal framework.</p>
<p>Other issues</p>	
<p>Recommendation 13. Governance arrangements for CSDs and CCPs should be designed to fulfill public interest requirements and to promote the objectives of owners and users.</p>	<p>A clear separation should be made between the oversight function of the PBC, the other supervisory tasks of CBRC and MOF, and the operational responsibility of PBC.</p> <p>The interests of participants should be explicitly taken into account.</p>
<p>Recommendation 16. SSS should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.</p>	<p>The CCDC should work to improve the use of relevant communication procedures and standards and, therefore, facilitate cross-border trades.</p>
<p>Recommendation 17. CSDs and central counterparties should provide market participants with sufficient information for them to accurately identify the risks and costs associated with using the CSD or CCP services.</p>	<p>The CCDC should disclose the answers to the questionnaire set out in the CPSS/IOSCO disclosure framework or the answers to the key questions set out in the assessment methodology for RSSS.</p>
<p>Recommendation 18. SSS should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.</p>	<p>The system does not fully observe all CPSS-IOSCO RSSS and therefore, supervisors and regulators should continue to exercise their action effectively.</p> <p>The PBC should clarify the roles it plays with respect to the CCDC by clearly distinguishing its oversight and supervisory role from its participation in the governance of the system.</p> <p>Further fine tuning is needed in the cooperation arrangements of the different regulators in respect to clearance and settlement issues.</p>
<p>Recommendation 19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlements.</p>	<p>There does not seem to be a comprehensive and standardized procedure to analyze risks in cross-border links. This matter should be addressed as soon as possible by the CCDC and its overseers.</p>

Table 9. China: Recommended Actions to Improve Observance of CPSS-IOSCO RSSS—Stock Exchange (SSE, SZSE)-SD&C

Reference Recommendation	Recommended Action
Pre-settlement risk	
<p>Recommendation 4. The benefits and costs of a CCP should be assessed. Where such a mechanism is introduced, the CCP should rigorously control the risks it assumes.</p>	<p>SD&C today mostly relies on its clearance and settlement system design and some additional risk control measures to ensure control of risks.</p> <p>For the future, SD&C may consider to evaluate how to strengthen its robustness as a CCP through a review of several elements such as monitoring of exposures, stress tests, availability of financial resources, etc. Exploring experiences from off-shore peers on this may be useful. This may become a more immediate priority if SD&C wants to accommodate a market evolution to a more wholesale market for which the current clearance and settlement design (mostly thought for a retail market) may not be effective.</p>
Settlement risk	
<p>Recommendation 7. CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves DvP.</p>	<p>CSRC and SD&C should consider to make public a description of SD&C clearance and settlement arrangements to avoid the perception that by not following a more “orthodox” DvP structure they do not comply with the DvP principle.</p>
<p>Recommendation 9. CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems, should institute risk controls that, at a minimum, ensure timely settlement in the event that the participant with the largest payment obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements and limits</p>	<p>SD&C should perform a comprehensive and deep assessment of its credit risk exposures as soon as possible, including possibility of multiple failures.</p>
<p>Recommendation 10. Assets used to settle the ultimate payment obligations arising from securities transactions should carry little or no credit or liquidity risk. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of the cash settlement agent whose assets are used for that purpose.</p>	<p>Full compliance of the payment systems used to transfer funds with the CPSIPS should be achieved to ensure that no settlement risks stem from the clearing and settlement process due to the existence of liquidity and credit risks in the payment system. However, the DvP equivalent nature of the SD&C settlement arrangements would eventually limit the risk to market risk.</p>

Reference Recommendation	Recommended Action
Other issues	
Recommendation 13. Governance arrangements for CSDs and CCPs should be designed to fulfill public interest requirements and to promote the objectives of owners and users.	The SD&C should develop an action plan to comply with all RSSs and the Governance of the system must be accountable for it and take the necessary actions to achieve full compliance.
Recommendation 16. SSS should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.	It is advisable that the SD&C in cooperation with the exchanges and market participants and in consultation with the CSRC activate a process to constantly evaluate the benefits of developments on relevant international communication procedures and standards and act promptly to implement the necessary changes to meet market needs.
Recommendation 17. CSDs and CCPs should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using the CSD or CCP services.	The SD&C should disclose the answers to the questionnaire set out in the CPSS/IOSCO disclosure framework or the answers to the key questions set out in the assessment methodology for RSS.
Recommendation 18. SSS should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.	The system does not fully observe all CPSS-IOSCO RSS and therefore, supervisors and regulators should continue to exercise their action effectively. Although a high level cooperation framework among relevant authorities does exist, cooperation at the technical level might be structure more formally. In addition to existing mechanisms, authorities should also foster cooperation between them and the private sector and other relevant stakeholders by creating an appropriate forum to discuss payment and settlement matters.
Recommendation 19. CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlements.	In light of the potential internationalization of the Chinese market, links are likely to become the norm rather than the exception. The SDC&C, the exchanges and market regulators might want to work on a standardized framework to assess the risks associated to such links, when the need materializes.

Table 10. China: Recommended Actions to Improve Observance of CPSS-IOSCO RCCP—SHFE

Recommendation 1. Legal risk	
A CCP should have a well founded, transparent and enforceable legal framework for each aspect of its activities in all relevant jurisdictions.	Most key concepts of clearing and settlement are covered by the SHFE rules and regulations, however, not in statutory law. In order to observe this recommendations statutory law should contain provisions on derivative trading, e.g., the enforceability of trades, finality, netting, novation, investor protection and collateral protection.
Recommendation 4. Margin requirements	
If a CCP relies on margin requirements to limit its credit exposures to participants, those requirements should be sufficient to cover potential exposures in normal market conditions. The models and parameters used in setting margin requirements should be risk-based and reviewed regularly.	No clear legal basis exists for the acceptance of warehouse receipts as collateral to deposit as margin for the coverage of market risk exposure. This threatens the stability of the CCP.
Recommendation 13. Governance	
Governance arrangements for a CCP should be clear and transparent to fulfil public interest requirements and to support the objectives of owners and participants. In particular, they should promote the effectiveness of a CCP's risk management procedures.	The SHFE is urged to engage in a self assessment with the new standards under preparation by the CPSS and IOSCO which will be released in 2011. A workshop on these standards might be organized with the participation of local authorities and market participants, as well as international practitioners from both the public and the private sector.
Recommendation 14. Transparency	
A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using its services.	In order to observe this recommendation the SHFE should publish the disclosure framework for the CPSS-IOSCO RCCP.
Recommendation 15. Regulation and oversight	
A CCP should be subject to transparent and effective regulation and oversight. In both a domestic and an international context, central banks and securities regulators should cooperate with each other and with other relevant authorities.	Given concentration of risks in a CCP and its potential effect on financial stability CSRC and PBC should establish a cooperative oversight framework for CCPs.

V. AUTHORITIES' RESPONSE

The PBC and CSRC appreciate the significant undertaking associated with the FSAP review by the International Monetary Fund (IMF) and the World Bank in a comprehensive assessment of the SD&C, CCDC, the SHFE against the *CPSS-IOSCO RSSS* and *for Central Counterparties (RCCP)*. We would like to pay a high tribute to the great efforts made by all parties involved in the assessment process and the professionalism of the assessors as demonstrated. We recognize the positive and far-reaching influence the assessment has on the stability and effective regulation and oversight of SIPS, clearing and settlement systems.

The assessment well objectively reflects the status of the settlement system in China's security market, bond market and futures market as well as the compliance of the SD&C and CCDC with the *RSSS*, the compliance of the SHFE with the *RCCP*. The PBC and CSRC will share and analyze the comments and recommendations in the assessment with the SD&C, CCDC and SHFE, and consider absorbing and adopting the comments and recommendations in the future. All relevant parties will work together to ensure that SSS in China can operate in a secure, efficient and transparent environment.

Meanwhile, the CSRC still holds reservations about certain parts of the assessment of SHFE on its compliance with the *RCCP*, i.e., Recommendation 1 and Recommendation 4, for the following reasons:

1. **On the issue of legal basis.** Regarding China's legislative system, laws are promulgated by the NPC, and administrative regulations are issued by the State Council. Administrative regulations constitute an important part of China's legal system, providing legal basis for not only administrative regulation, but also the settlement of disputes and cases by judicial authorities. However, it is not an explicit clause after all. The *Regulations on the Administration of Futures Trading*, which is the administrative regulation governing futures trading, is the legal basis for China's futures market. We do not believe legal gaps exist in China's futures settlement system.
2. **On the legal recognition of the use of dematerialized warehouse receipts as margin contributions.** The use of standardized warehouse receipts as margin contributions is clearly stipulated in the *Regulations on the Administration of Futures Trading*, the *Measures for the Administration of Futures Exchanges* and the relevant business rules of futures exchanges. The *Property Law* also contains clearly-stated provisions on pledge right. In practice, the SHFE designates delivery warehouses to serve as the registration authority for the pledge of dematerialized warehouse receipts. There have never been any controversies or disputes in this regard.

The PBC holds reservations about certain parts of the assessment of CCDC on its compliance with the *RSSS*, i.e., Recommendation 1 and Recommendation 8. Since bond is a kind of security, the Securities Law applies to interbank bond market. Also the finality has legal certainty. The regulations issued by PBC indicates, "bond transaction settlement cannot be revoked once completed," "the cash and bonds with the status of waiting for transfer in the settlement process and the collateral regarding to the settlement can only be used for

completing the settlement and shall not be enforced compulsorily for other purposes.” The spirit and principles of the *Securities Law* apply to domestic securities market in China, including inter-bank bond market; despite that the *Securities Law* contains specific provisions more on the exchange market. Regulations promulgated by PBC, which are in accordance with the spirit and principles of the *Securities Law* and mainly applied to inter-bank bond market, are the special provisions in Chinese legislation system on securities. According to the *Law on Legislation*, regulations issued by PBC belong to broadly defined laws and have legal enforceability. Owing to these, inter-bank bond market has been operating smoothly and safely these years since its establishment.

The PBC, together with CCDC, will seriously analyze the opinions and suggestions raised in the Assessment Report and keep improving the depositary and settlement system of China’s inter-bank bond market.