

**United States: Publication of Financial Sector Assessment Program Documentation—
Detailed Assessment of Observance of the National Securities Clearing Corporation’s
Observance of the CPSS-IOSCO Recommendations for Central Counterparties**

This Detailed Assessment of Observance of the National Securities Clearing Corporation’s Observance of the CPSS-IOSCO Recommendations for Central Counterparties for the United States was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in May 7, 2010. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of the United States or the Executive Board of the IMF.

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FINANCIAL SECTOR ASSESSMENT PROGRAM

UNITED STATES OF AMERICA

THE NATIONAL SECURITIES CLEARING CORPORATION'S
OBSERVANCE OF THE CPSS-IOSCO RECOMMENDATIONS FOR
CENTRAL COUNTERPARTIES

DETAILED ASSESSMENT OF OBSERVANCE

MAY 2010

INTERNATIONAL MONETARY FUND
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GLOSSARY

BCP	Business Continuity Plan
BITS	Banking, Infrastructure and Technology Services
CCP	Central Counterparty
CPSS	Committee on Payment and Settlement Systems
DTC	Depository Trust Company
DTCC	Depository Trust and Clearing Corporation
DVP	Delivery-versus-Payment
FDIA	Federal Deposit Insurance Act
FDICIA	Federal Deposit Insurance Corporation Improvement Act
FICC-GSD	Fixed Income Clearing Corporation – Government Securities Division
FICC-MBSD	Fixed Income Clearing Corporation – Mortgage Backed Securities Division
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commission
JPMC	J.P. Morgan Chase
NSCC	National Securities Clearing Corporation
NSS	National Settlement Service
OCC	Options Clearing Corporation
RCCP	Recommendation for Central Counterparties
SEC	Securities and Exchange Commission
SIFMA	Securities Industry and Financial Markets Association
SROs	Self Regulatory Organizations
TRADES	Treasury/Reserve Automated Debt Entry System
UCC	Uniform Commercial Code

Table 1. Detailed Assessment of Observance of the National Securities Clearing Corporation (NSCC) of the CPSS-IOSCO Recommendations for Central Counterparties

Recommendation 1.	A CCP should have a well founded, clear and transparent legal basis in the relevant jurisdictions.
Description	<p><i>Accessibility of the regulatory framework (Q1)</i></p> <p>NSCC is a registered clearing agency with the Securities and Exchange Commission (SEC) pursuant to the provisions of Section 17A of the Exchange Act as well as all the requirements applicable to registered clearing agencies that are contained in the Exchange Act and in the SEC regulations and rules. NSCC is also a “clearing corporation” within the meaning of Article 8 of the New York Uniform Commercial Code.</p> <p>Laws, regulations and rules are readily accessible to participants and the general public via the Internet and through other public sources. NSCC Rules & Procedures (collectively the “Rules”) have been available to its participants since 1976 and can be found on the website at NSCC’s parent company, The Depository Trust & Clearing Corporation (“DTCC”) at www.dtcc.com.</p> <p>All NSCC participants are required to execute membership agreements under which they agree to be bound by NSCC’s Rules.</p> <p>In addition, all changes to NSCC’s Rules are filed with and reviewed by the SEC, and proposed rule changes are subject to public comment. NSCC’s rule filings and SEC approvals thereof are posted on the DTCC website as well as the SEC’s website, www.sec.gov.</p> <p><i>Legal basis (Q2)</i></p> <p>The legal framework demonstrate a high degree of assurance that there is a clear and effective legal basis for:</p> <p>(a) The CCP acting as counterparty</p> <p>The legal framework includes statutory provisions and clearing agency rules. The New York law of contracts and provisions of the Uniform Commercial Code (UCC) (<i>see e.g.</i>, NYUCC §8–111) support NSCC’s activities as a CCP. In addition, each membership applicant is required to provide a legal opinion confirming that the membership agreement and the Rules (including those relating to NSCC’s role as a CCP) are enforceable against it.</p> <p>(b) The timing of assumption of liability as CCP</p> <p>Following NSCC’s Rules, NSCC becomes legal counterparty in a trade (or provide trade guaranty) at the latest at midnight of T+1. The New York law of contracts and provisions of the UCC support the enforceability of the timing of assumption of liability as CCP by NSCC. NSCC is currently in the process of seeking regulatory approval to move the trade guaranty forward to the point of trade validation (for locked-in trades) and comparison (for trades compared through NSCC).</p> <p>(c) Netting arrangements</p> <p>U.S. law supports netting arrangements relating to securities transactions. In particular, the U.S. Federal Deposit Insurance Corporation Improvement Act of 1991, as amended (FDICIA) supports “netting contracts” providing for the netting of payment obligations and payment entitlements between and among members of clearing organizations. Under FDICIA, netting under a netting contract is not prevented or subject to being unwound by the receiver or trustee in a subsequent insolvency proceeding. In addition, New York law</p>

recognizes the validity of contractual netting arrangements generally (including transaction novation, payment and closeout netting).

Recent amendments to both FDICIA and the U.S. Bankruptcy Code contained in the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (the “2005 Amendments”) include provisions that validate master netting agreements in respect of securities, commodities, forward, swap and repurchase transactions, and provide that the closeout and netting of transactions arising under such agreements may not be stayed or avoided in any bankruptcy proceeding brought under the Code, the Federal Deposit Insurance Act (FDIA), or the Securities Investor Protection Act (SIPA).

(d) The protection of the CCP’s interest in collateral (including margin)

The UCC (Articles 8 and 9) and general New York contract law support the validity of NSCC’s membership agreements and its rules, including the validity of NSCC’s lien and collateral protections and the cross guaranty arrangements, that are structured as “netting contracts” under FDICIA.

Although relevant insolvency laws can limit a secured party’s rights to access and liquidate its collateral, the FDICIA provision referred to above, the Code, FDIA, and SIPA contain specific provisions to protect clearing agency closeouts (including access to and retention of collateral).

(e) Default procedures

NSCC’s Rules provide that if a Member fails to meet its settlement obligations to NSCC, and NSCC ceases to act on behalf of the Member, that Member’s positions would be closed out. Clearing agency close-out provisions are specifically permitted under both FDICIA and the Bankruptcy Code.

(f) Finality of transfers of funds and financial instruments

NSCC Rule 12 (Settlement) provides that securities deliveries/movements to participants are final at the "effective time." Generally, the “effective time” occurs when it is clear that NSCC has either been paid, or is in a credit position with respect to a participant or its settling bank. Funds transfers become final at the time of the funds’ movements, according to the Federal Reserve requirements regarding National Settlement Service (NSS) and Fedwire.

Enforceability of NSCC rules/procedures/contracts (Q3)

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (amending both the FDICIA and the U.S. Bankruptcy Code) contain provisions validating the rules/procedures/contracts of NSCC. Besides, the 2005 Act also provides that the close-out and netting of transactions under such agreements may not be stayed or avoided in any Amendments include provisions that validate the rules, procedures and contracts of NSCC, bankruptcy proceeding brought under the Code, FDIA, or SIPA (subject in the case of SIPA, to certain exceptions not relevant for clearing organizations).

Cross-border activities (Q4)

All full Members of NSCC are U.S.-regulated entities, except for CDS Clearing and Depository Services Inc., the Canadian central securities depository.

Historically, NSCC has required its non-domestic applicants to obtain legal opinions from applicants’ counsel, in which conflict of laws issues are addressed. The 2005 Amendments render consideration of foreign legal regimes less relevant by making clear that should a foreign receiver on behalf of a defaulting foreign member seek recognition in the U.S. Bankruptcy Courts, the same protections available to NSCC under the Code with respect to a domestic participant should also be available to it in any domestic proceeding brought on behalf of a foreign participant.

Assessment	Observed.
Comments	
Recommendation 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><i>Sufficient financial resources and robust operational reliability (Q1)</i></p> <p>NSCC establishes requirements for participants' financial resources and creditworthiness (set in NSCC's rules). Generally, financial requirements are based upon entity type (e.g., broker/dealer, bank/trust company, etc.), the types of services that the entity will use (e.g., whether the participant will utilize CNS, or will limit its use of service to other non-guaranteed services) and whether the entity intends to clear transactions for others. Full-service Members must have excess net capital over the minimum net capital requirement imposed by the SEC or such higher minimum capital requirement imposed by the broker/dealer's designated examining authority in the amount of (i) US\$500,000, or (ii) US\$100,000, if such applicant is a Municipal Securities Brokers' Broker (as defined in Rule 15c3-1(a) (8) of the Exchange Act) or (iii) US\$1,000,000 if such applicant clears for other broker/dealers.</p> <p>Moreover, NSCC Rule 4 provides that all members shall make a deposit to the Clearing Fund, with the amount required fixed by the Corporation in accordance with one or more formulas.</p> <p>NSCC assesses participants' operational capability. In particular, each participant should have: (a) sufficient financial ability to make anticipated contributions to the Clearing Fund and to meet obligations to NSCC; (b) an established business history of a minimum of six months or personnel with sufficient operational background and experience to ensure the ability of the firm to conduct such a business; (c) appropriate settling bank arrangements; and (d) appropriate communication procedures.</p> <p>NSCC Members must also be Participants of Deposit Trust Company (DTC) to effect settlement of CNS securities movements. Prior to activating membership, NSCC applicants are required to conduct testing with NSCC (e.g., connectivity testing).</p> <p><i>Monitor compliance with participation requirements (Q2)</i></p> <p>NSCC monitors that participation requirements are met on an ongoing basis. To this end, NSCC members must submit annual audited financial statements and monthly or quarterly regulatory reports. Members are required to provide these reports and other required financial information on a timely basis. NSCC may fine Members that fail to timely provide such information and such fines are reported to the SEC.</p> <p>As part of the ongoing monitoring of Member firms an internal credit risk rating matrix is utilized to risk rate bank and broker/dealer Members. This matrix is quantitatively driven and is produced systemically from data contained in the Members' regulatory reports. The SEC has evaluated this matrix when NSCC added it to its risk management and the matrix is subject to periodic regulatory review. The key financial elements focus on a Member's capital, leverage, liquidity and profitability. Once this rating is generated it is then reviewed by an analyst for possible downgrade due to qualitative factors such as regulatory history or the type of audit opinion issued and then a final rating is assigned. The rating determines the level of financial review that will be performed on each Member and may impact the Member's Clearing Fund requirement. Additionally, the Risk Management Department monitors the markets and news intra-day, so that action can be taken if warranted.</p> <p>Participants with a lower internal credit rating may be monitored more closely than those with a higher rating. In addition, NSCC staff continuously monitors the Clearing Fund</p>

requirements and operations monitors the operational proficiency of participants, as applicable.

Suspension and termination of participants' membership

NSCC's Rules contain provisions that facilitate the suspension and orderly exit of firms that no longer meet the participation requirements:

- NSCC has the right to restrict a Member's access to services, by limiting or excluding the Member's participation in one or more classes of transactions or services, or by ceasing to act for the Member generally. If NSCC ceases to act for a Member, the rules provide that NSCC must notify the affected Member, other Members (via important notice) and the SEC of NSCC's action.
- NSCC can facilitate the orderly wind-down of a Member's business when NSCC is notified by the Member that it intends to wind-down its business. If NSCC declares a Member to be a wind-down Member, NSCC will notify the Member, all other Members (via important notice) and the SEC of such a determination.
- A Member may voluntarily retire from membership by notifying NSCC in writing. Notwithstanding any such notification, a Member remains obligated to satisfy any open obligations and liabilities arising out of its membership existing at the time of such notification. NSCC issues an important notice to Members when a Member voluntarily retires from membership.

Section 17A of the Exchange Act requires that the rules of the clearing agency provide that (subject to any rule or order of the Commission pursuant to section 17(d) or 19(g)(2)) its participants shall be appropriately disciplined for violation of any provision of the rules of the clearing agency by expulsion, suspension, limitation of activities, functions, and operations, fine, censure, or any other fitting sanction. In addition, Section 17A requires that the rules of the clearing agency provide a fair procedure with respect to the disciplining of participants, the denial of participation to any person seeking participation therein, and the prohibition or limitation by the clearing agency of any person with respect to access to services offered by the clearing agency.

Open and fair access (Q3)

Participation requirements of NSCC are objective and clearly stated. They do not limit access on grounds other than risk. NSCC's participation requirements address: credit risk, operational capability, compliance risk and legal risk. NSCC membership types differ in terms of their access to NSCC services, level of reporting requirements, admission and continuance standards and, in some instances, their Clearing Fund requirements. Generally, all participants within the same membership category are subject to the same requirements.

Before denying a membership application, NSCC must provide the applicant with a concise written statement setting forth the specific grounds under which such denial may be based, and notify the applicant of its right to request a hearing to determine whether the application should be denied.

The framework of section 17A of the Exchange Act is designed to result in fair access to the clearing agency. Section 17A(b)(3) requires that the rules of a clearing agency provide that any (i) registered broker or dealer, (ii) other registered clearing agency, (iii) registered investment company, (iv) bank, (v) insurance company, or (vi) other person or class of persons as the Commission, by rule, may from time to time designate may become a participant in such clearing agency (although a clearing agency may deny participation to a person subject to a statutory disqualification or a person that does not meet such standards of financial responsibility, operational capability, experience, and competence as are prescribed by the rules of the clearing agency.) In addition, Section 17A(b)(3) provides that the rules of a clearing agency may not be designed to permit unfair discrimination in the admission of participants or among participants in the use of the clearing agency and may not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the

	<p>Act.</p> <p>Membership requirements, including the arrangements for orderly exit, are clearly stated in NSCC’s Rules which are available to the public at NSCC’s website, www.dtcc.com. NSCC issues a weekly Important Notice (“Changes in the List of Participants”) that, among other things, provides information regarding member retirements. Important Notices are available to the public at www.dtcc.com.</p>
Assessment	Observed.
Comments	
Recommendation 3.	A CCP should measure its credit exposure to its participants at least once a day. Through margin requirements, other risk control mechanisms or a combination of both, a CCP should limit its exposure to potential losses from defaults of its participants in normal market conditions so that the operation of the CCP would not be disrupted and non-defaulting participants would not be exposed to losses that they cannot anticipate or control.
Description	<p><i>Measurement of exposures (Q1)</i></p> <p>NSCC measures its exposures to Members using a risk-based margin methodology daily and requires payment of any Clearing Fund deficiencies by 10:00 a.m., each business day. The daily calculation uses the prior day’s closing market price. Margin methodology is part of NSCC’s rules and, as such, the methodology and any material changes thereto are reviewed and approved by the SEC. In addition, NSCC has the ability under its rules to call for additional Clearing Fund deposits on an intraday basis, as needed. Security pricing is updated on an intraday basis and additional charges may be collected to cover significant price movements from those Members with a significant exposure in the identified security. Also, DTCC Risk Management systems include routines that permit Risk Management to monitor Members’ overall trading activities throughout the trading day to determine whether exposures are building up that would require special actions to increase a Member’s Clearing Fund deposit.</p> <p><i>Risk mitigation tools (Q2)</i></p> <p>NSCC uses a risk-based margin methodology to limit its credit exposures to members. On a daily basis NSCC calculates a “Clearing Fund” requirement for each Member based upon their unsettled and pending transactions. This requirement constitutes “margin” for purposes of Recommendations 3 and 4 of this Assessment. The aggregate value of all such deposits is referred to collectively as the Clearing Fund, which operates as NSCC’s default fund in the event of a participant default.</p> <p>NSCC limits its exposure to potential losses from defaults by its participants as follows:</p> <ul style="list-style-type: none"> • By establishing membership standards and monitoring of Members’ adherence to those standards; • By requiring contributions to NSCC’s Clearing Fund (i.e., margin); • By monitoring Members’ daily trading activity; and • Through the existing cross-guarantee arrangements with other clearing agencies, including DTC, FICC and the Options Clearing Corporation (OCC). These arrangements are designed to provide a mechanism for the sharing of excess net collateral resources of a common defaulting participant held at one clearing agency to cover losses incurred at another clearing agency. <p>In addition, under NSCC Rule 15, NSCC may seek such assurances of financial responsibility and operational capability from a participant as it deems necessary or advisable to protect it and its participants.</p> <p>Furthermore, each morning for NSCC Risk Management runs various closeout (profit/loss) scenarios to determine the exposures resulting from the possible default of certain families of members, which is Risk Management’s view, present the highest risk to the organization. These closeout scenarios, which are calculated systemically, simulate the profit or loss upon</p>

	<p>liquidation of these Members' portfolios. By running these simulated closeouts on a daily basis, Risk Management is able to monitor the potential profit/loss of liquidating a Members' portfolio, including during volatile periods.</p> <p>In addition, on an intraday basis, Risk Management monitors the exposures resulting from the possible default of certain Members of NSCC. NSCC rates its broker/dealer and bank members on a 1 to 7 scale, with 1 being the strongest and 7 being the weakest. (Refer to Recommendation 2.) Risk Management runs various closeout scenarios twice daily for all NSCC Members rated 6 and 7 using intraday prices and intraday positions in order to determine the exposure from those Members' intraday portfolios if one of those Members were to default intraday. A Member's intraday exposure is compared to its clearing fund deposit to assess sufficiency of funds. By recalculating exposures intraday, NSCC captures both changes in a Member's positions as well as market volatility.</p>
Assessment	Observed.
Comments	The definition of margins and clearing funds in the public assessment should be made more consistent in line with international usage/practice and the definitions provided in the glossary of the Recommendation for Central Counterparties (RCCP). It will be beneficial (especially for non-U.S. CCPs that intend to establish links with NSCC and FICC-GSD) to clarify the terminology. NSCC management stated that they would clarify this terminology in the next revision of the self-assessment.
Recommendation 4.	If a CCP relies on margin requirements to limit its credit exposures to participants, these 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><i>Models and parameters to set margins (Q1)</i></p> <p>NSCC calculates Clearing Fund requirements assuming a three-day liquidation period in normal market conditions. The Clearing Fund requirement is calculated to achieve a confidence level of 99 percent and this is evidenced with regular back-testing studies (which assume no positions are liquidated until the third day, and over the past two years have, on this basis, reflected actual overall coverage exceeding 99 percent).</p> <p>NSCC can conduct a closeout over a longer liquidation period, should it deem appropriate. This model is back-tested internally on a monthly basis. The model was submitted to and approved by the SEC.</p> <p>NSCC calculates Clearing Fund requirements based upon most recently observed market conditions (i.e., using historical data of the most recent 153 days for equities and 250 days for bonds).</p> <p>Validation of the models and parameters used to determine the margin levels</p> <p>The models and parameters to set margins as well as NSCC's risk management procedures are periodically examined by NSCC's regulators and by its internal and external auditors. The model is also periodically validated by outside experts.</p> <p><i>Intraday margin calls (Q2)</i></p> <p>NSCC has the legal authority to call for intraday margin should the corporation deem it necessary or appropriate. Intra-day margin calls can be affected operationally, as necessary. Risk Management has discretion to make such calls, based upon, for example, market events and their effect on internally maintained predetermined thresholds.</p> <p><i>Assets accepted as margins and related haircuts (Q3)</i></p> <p>NSCC accepts cash (not less than 40 percent) and the following eligible securities as collateral for the Clearing Fund: U.S. Government Treasury securities, U.S. Agency</p>

	<p>securities guaranteed by the U.S. Government and certain U.S. Agency/Government Sponsored Enterprise pass-through securities. Under normal circumstances cash represents the overwhelming majority of the Clearing Fund.</p> <p><i>Assets (securities) are re-priced every night.</i></p> <p>Haircuts for all such securities pledged to the Clearing Fund are set forth in Procedure XV of NSCC's Rules. NSCC applies haircuts that reflect the potential of the Clearing Fund assets' value to decline. Initial haircut rates were determined based on a ten-year historical return volatility analysis using a 5 sigma confidence level, as well as the application of additional concentration factors for certain security types if the amount deposited exceeds a certain percent of total collateral. Haircut rates are reviewed quarterly.</p>
Assessment	Observed.
Comments	
Recommendation 5.	A CCP should maintain sufficient financial resources to withstand, at a minimum, the default of a participant to which it has the largest exposure in extreme but plausible market conditions.
Description	<p><i>Stress testing (Q1)</i></p> <p>NSCC now performs stress testing on a monthly basis. Stress tests cover 50 stress scenarios selected from the past 10 years of historical data and special event such as the 1987 market break. There are also 82 scenarios that are included in the stress testing that have at least some hypothetical component and are not solely based on historical performance. Results of stress tests are brought to the attention of executive management and the DTCC Board's Credit and Market Risk Management Committee. However they may not be made known to participants.</p> <p>NSCC engaged an external expert to conduct a comprehensive review of models, parameters, scenarios, frequency which was completed at the end of 2009. Going forward, NSCC will re-evaluate the model, parameters and scenarios annually.</p> <p>The stress testing criteria and assumptions are not disclosed to participants.</p> <p>Sufficiency of liquidity resources</p> <p>NSCC's committed liquidity resources are composed of:</p> <ol style="list-style-type: none"> i. the cash in the Clearing Fund (amounting to US\$6.2 billion); and ii. the funds available for NSCC's committed liquidity facility (in the current amount of US\$3.1 billion). If drawn, the line would be collateralized with Clearing Fund securities (US\$403 million in U.S. Treasury and Agency securities, end-2008) and the securities that would have been delivered to the defaulting member, had it not defaulted (or collateral supporting those allocations). <p>On a non-committed basis, NSCC could obtain additional liquidity by:</p> <ol style="list-style-type: none"> i. pledging to its end-of-day line banks (if they are willing to extend additional credit) or repoing the remaining securities, if any, in the Clearing Fund; and ii. repoing the remaining securities that would have been delivered to the defaulting member, had it not defaulted. <p>NSCC evaluates and reports on the adequacy of its liquidity resources on a daily and monthly basis. This evaluation uses a back test of actual settlement obligations (with historical CNS prices) to determine liquidity sufficiency. Beginning in 2009, NSCC began evaluating the sufficiency of its liquidity to cover the failure of the largest affiliated family. Affiliated family is defined the group of members which are under the control of the same organization, including the organization controlling all the others. A back test study of family liquidity requirements covering the period from January through April 2009, showed that there was sufficient liquidity (using the current committed facility amount) to cover the needs of the failure of the largest affiliated family 99.98 percent of the time.</p>

	<p><i>Sufficiency of resources to cover losses</i></p> <p>In the event of a Member failure, NSCC would close out the member’s open positions (see RCCP 6 for further details). As detailed in NSCC Rule 4, if after closing out a defaulting Member’s positions NSCC were to suffer a loss that was not satisfied from the defaulting Member’s Clearing Fund deposit (which has not happened, to date), such loss would be satisfied from:</p> <ol style="list-style-type: none"> 1. resources available under applicable cross-guaranty agreements <ul style="list-style-type: none"> – NSCC has entered into a multilateral netting contract and limited cross-guaranty agreement with DTC, FICC and OCC, under which these clearing agencies have agreed to make payments to each other for any remaining unsatisfied obligations of a common defaulting participant to the extent that these clearing agencies have excess resources belonging to the defaulting participant. – NSCC and OCC also have entered into an agreement providing for payments to each other relating to the settlement of certain option exercises and assignments in the event of a mutual participant’s failure. 2. use of NSCC retained earnings 3. use of non-defaulting members’ clearing fund deposits <p>As noted above, NSCC back and stress tests its Clearing Fund monthly to measure sufficiency of resources to cover losses in the event of the failure of its largest Member under extreme but plausible circumstances. Up to now, the Member with the largest exposure identified in the stress test scenarios has been adequately covered by NSCC Clearing Fund. 2009 back test results showed that the sum of all back test losses of NSCC Members was less than the sum of the required Clearing Fund deposits of Members.</p> <p><i>Ability to draw on financial resources (Q2)</i></p> <p>The legal enforceability of NSCC’s collateral arrangements is supported by the UCC and generally New York contract law. Although relevant insolvency laws can limit a secured party’s rights to access and liquidate its collateral, the FDICIA provisions, the Code, FDIA and SIPA contain specific provisions to protect the clearing agency close-outs (including access to and retention of collateral).</p> <p><i>Immediate availability of financial resources (Q3)</i></p> <p>According to NSCC, all of the resources that NSCC is relying upon to cover losses from default are liquid and readily available to meet NSCC’s obligations. For liquidity purposes, the Clearing Fund cash is held in a tri-party repurchase agreement overnight and returned to an NSCC bank account during the day for immediate access, if needed.</p> <p>Securities in the Clearing Fund and the collateral supporting the long allocations of the defaulting Member are held at DTC and immediate access is available, if the line needs to be drawn upon. NSCC has a US\$3.1 billion committed end-of-day line of credit with a consortium of banks.</p> <p>NSCC conducts tests with its liquidity provider banks to ensure drawings can be made timely. In addition, as noted in Recommendation 3, NSCC also has cross-guarantee arrangements with other clearing agencies to provide a mechanism for sharing excess net collateral of a common defaulting Member held at one clearing agency to cover losses incurred at another clearing agency.</p>
Assessment	Broadly observed.
Comments	<p>In order to be fully compliant with the recommendation, NSCC should:</p> <ol style="list-style-type: none"> 1. consider additional liquid financial resources to use in case of extreme situations where repo market would not be available; 2. consider conducting more frequent stress testing than once a month, in particular, in

	<p>times of unusual market volatility; and</p> <p>3. disclose stress testing assumptions to participants.</p> <p>NSCC's liquidity can be increased by reposing the securities in the Clearing Fund or the unpaid allocations of the defaulting members. However, this arrangement cannot be considered as a committed line, since there is no complete assurance that the repo markets would be effective in extreme market situations.</p>
Recommendation 6.	<p>A CCP's default procedures should be clearly stated, and should ensure that the CCP can take timely action to contain losses and liquidity pressure and to continue meeting its obligations. Key aspects of the default procedures should be publicly available.</p>
Description	<p><i>Definition of default and clarity of default procedures (Q1)</i></p> <p>NSCC's default procedures clearly state what constitutes a default. The NSCC Board of Directors, or a Board Committee to which such authority is delegated, may suspend a participant or prohibit or limit such participant with respect to access to NSCC's services in enumerated circumstances, which provide NSCC with some discretion in determining what constitutes adequate cause to cease to act. Enumerated circumstances include expulsion or suspension from a regulatory (e.g., SEC) or self-regulatory (e.g., FINRA) organization, default in delivering funds or securities to the corporation, and experiencing extreme financial or operational difficulties.</p> <p>NSCC's rules provide it with the authority to promptly close out and manage the positions of a defaulting Member and to apply the defaulting Member's collateral. NSCC Rule 22A, entitled "Procedures for When the Corporation Ceases to Act," provides that the close-out procedure shall be completed as promptly as possible after the NSCC has given notice that it has ceased to act for a Member. The Rule provides the NSCC with the ability to apply the proceeds of the liquidation, as well as all other funds and assets of the defaulting Member, to meet the defaulting Member's obligations to the NSCC.</p> <p>Mechanisms outside of the CCP (the NSCC treats its Members as principals) permit the transfer and liquidation of the positions and margin of customers of a defaulting participant. Specifically, the Securities Investor Protection Corporation (SIPC) which has been created by the SIPA, protects securities investors from financial harm if their broker-dealer fails. In the event of a failure of a broker-dealer, SIPC's primary responsibility is to organize the distribution of customer cash and securities to investors, and if the cash and securities are not available, SIPC provides insurance coverage of up to US\$500,000 of the customer's net equity balance.</p> <p>The rules and procedures empower the NSCC to draw promptly on the available financial resources. The types of financial resources available to NSCC are described in Recommendation 5.</p> <p><i>(Legal) enforceability of default procedures (Q2)</i></p> <p>The legal framework supports default procedures with a high degree of assurance. The 2005 Amendments (see response to key question 2(c) of Recommendation 1 above) provide that the close-out and netting of transactions arising under the protected transactions may not be stayed or avoided in any bankruptcy proceeding brought under the Code, FDIA, or the SIPA (subject in the case of the SIPA, to certain exceptions not relevant for clearing organizations). In addition, legal comfort for the validity of the NSCC's lien and collateral protections is found principally in the Uniform Commercial Code (Articles 8 and 9), and general New York contract law. Although relevant insolvency laws can limit a secured party's rights to access and liquidate its collateral, the FDICIA provision referred to above, the Code, FDIA, and SIPA contain specific provisions that would generally be applicable to NSCC, to protect clearing agency close-outs (including access to and retention of collateral).</p>

	<p>U.S. insolvency law permits the identification and separate treatment of customer and proprietary assets. For example, the insolvency of a U.S. broker-dealer with customer accounts will be handled by the Securities Investor Protection Corporation under the SIPA.</p> <p><i>Internal plans for managing defaults (Q3)</i> NSCC maintains a comprehensive closeout management framework to managing the insolvency and closeout of a participant. In addition, there are appropriate internal procedures in the event that NSCC determines to cease to act on behalf of a participant. Periodic tests are conducted both for closing out a test broker's account, as well as testing borrowing under the company's liquidity arrangements. Each instance where NSCC determines to cease to act is unique, and both NSCC's Rules and internal procedures take this into consideration.</p> <p>The need for coordination in cases where more than one CCP, authority or a separate market operator is involved is addressed. For example, the multilateral cross-guaranty agreement among NSCC, OCC, FICC, and DTC contemplates coordination in the event of the default of a common participant.</p> <p>The NSCC closeout procedures are subject to ongoing review and development, including incorporating knowledge gained from actual closeouts and internal tests, which occur at least once per year.</p> <p><i>Transparency / publicity of default procedures (Q4)</i> The key aspects of the close-out procedures are in the NSCC's Rules, which are available to Members and to the public generally at www.dtcc.com. In addition, if the NSCC were to make a determination to cease to act on behalf of a Member, the NSCC would provide notice of that action to Members via Important Notice and also communicate relevant details as to the resolution of open transactions to Members in the same manner. Important Notices are posted by NSCC on its website, and are available to the public.</p>
Assessment	Observed.
Comments	
Recommendation 7.	A CCP should hold assets in a manner whereby risks of loss or of delay in its access to them are minimized. Assets invested by a CCP should be held in instruments with minimal credit, market and liquidity risks.
Description	<p><i>Monitoring of custody risk for CCP assets (Q1)</i> NSCC's Clearing Fund cash is held in NSCC's accounts at two private commercial banks, while securities that participants deposit as Clearing Fund collateral are held at DTC and pledged to NSCC. On an intraday basis and to facilitate participants' automated management of their Clearing Fund deposits, a portion of the Clearing Fund cash may be held in a DTC sub-account (designated internally for NSCC use) at the Federal Reserve Bank of New York. NSCC relies on the regulatory framework governing these entities and DTC to ensure the safety and accessibility of its clearing fund deposits. This includes regulation regarding the protection of customer securities from theft, loss, or misuse, and in the event of insolvency.</p> <p>Risk Management monitors the financial condition of the custodian banks on an ongoing basis, and would notify Treasury Operations if a significant change in any custodian's financial condition occurred.</p> <p><i>Investments of CCP resources (Q2)</i> Permitted cash investments are authorized under the Investment Policy, approved by the Audit Committee of the Board of Directors. Any such direct investments can be readily accessed for liquidity, should the need arise, as pledged securities under NSCC's committed liquidity facilities.</p>

	<p>Funds are generally invested in debt obligations of the U.S. Government or those U.S. Government Agencies guaranteed by the U.S. Government subject to reverse repurchase agreements (“repos”). Investments may also include direct purchase of debt obligations of the U.S. Government.</p> <p>The risk of loss is minimized in a number of ways. First, repo investments are generally placed with financial institutions acting as principal rather than as agent, and with maturity limited to the next business day (with return of funds being required well before settlement) and are held under tri-party custodial agreements. Second, NSCC invests only with those repo counterparties assigned a long-term debt rating of A or better from one of the rating agencies, and does so under custodial undertaking arrangements. Third, reverse repo investments are secured; collateral must have a market value greater than or equal to 102 percent of the cash invested (an industry standard) and investment limits are placed on counterparties.</p> <p>When repos are not available, funds may be invested in overnight commercial paper in bank sweep accounts. The funds which are invested in the overnight domestic commercial paper issued by the deposit bank are unsecured. The risks of losses are minimized in a number of ways. First, to the extent that funds are invested in overnight commercial paper sweep accounts, the deposit bank will be a bank as approved by Risk Management. A thorough financial review is performed on the custodian banks. This review includes the analysis of the custodians’ quarterly regulatory reports, the application of certain financial parameters on a quarterly basis and the review of the custodians’ annual reports. Depending upon the results of these financial reviews, discussions will be held with appropriate staff of the custodian firms.</p> <p><i>Concentration limits (Q3)</i></p> <p>The overall exposure to a counterparty is considered when placing an investment. The Investment Policy establishes the credit limits by counterparty. The credit limits have been established to ensure that investments do not exceed an acceptable level of concentration with any single counterparty. The credit limits are monitored daily across all DTCC subsidiaries.</p>
Assessment	Observed.
Comments	NSCC should continue to monitor and mitigate the potential risks which result from holding assets at only two commercial banks. Furthermore, NSCC should avoid to the largest extent possible unsecured investments.
Recommendation 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.
Description	<p>The description for this recommendation is very similar to the one of DTC and FICC given that business continuity arrangements are organized at the holding company level.</p> <p><i>Identification and management of operational risk (Q1)</i></p> <p>Business continuity requirements, sound practices, and objectives for U.S. infrastructure are established in the “Interagency Paper on Sound Practices to Strengthen the Resiliency of the U.S. Financial System.” In principle, DTC, NSCC, and FICC are different applications in the same mainframe. This does not create undue operational risk or interdependences on operational reliability since the applications of the various systems are clearly separated. There is a central Corporate Business Continuity function, which coordinates BCP activities and planning for DTCC and all its subsidiaries.</p>

DTCC identifies sources and mitigation tools for operational risks through a number of dedicated permanent groups: the Operational Risk Group (develops and oversees operational risk management program), the Internal Risk Management Committee (evaluates and coordinates the risk management activities within the company), a high-level Security Committee (addresses key areas of security risks associated with information services), the Internal Audit Department (reviews the adequacy of internal controls, procedures and records of the company with respect to operational risk), and independent accountants.

Contingency plans and back-up facilities (Q2)

DTCC has a formal BCP aimed at addressing events posing a significant risk of disrupting its operations. DTCC operates data centers and staff in multiple locations. The BCP are tested several times in a year both from the technological and from the business perspective. In particular, DTCC contingency plans and back-up facilities for the failure of key systems are regularly tested. The out-of-region data centre is a warm site with 2 hour recovery capability. The site is fully staffed requiring no movement of personnel. Out of region business operations sites are hot sites. Contingency plans for the failure of the key systems are not tested with the participants. DTCC data centers in the New York region act as a single data centre vis-à-vis participants and therefore although the failure of one key system would be visible to participants, should the failure occur no action would be needed by participants to resume. Therefore, this test is not considered relevant for the participants. It should be noted that while the connectivity test (from NSCC and participants first and secondary sites) is conducted with all NSCC participants when they join the system; this test is then conducted on an annual basis only with participants deemed critical by NSCC. However, DTCC does not test its back-up sites to participant backup sites for the critical participants.

DTCC currently uses the Banking, Infrastructure and Technology Services (BITS) Shared Assessments Program to both describe DTCC's Business Continuity and Information Security control structure in response to participant inquiries and to evaluate DTCC's Service providers' Information Security controls.

Each year DTCC updates a white paper describing the DTCC BCP program and make it available to participants on DTCC's website. In addition, DTCC has produced an "Out-of-Region" guide to aid clients in reconciling transactions in the unlikely event that DTCC is forced to move to its out-of-region processing site. Data centre failover tests are conducted 3-4 times per year. Business Operations tests are conducted throughout the year.

Adequate management controls and periodic independent audit

Operational reliability issues are regularly reviewed by DTCC's senior management, including managers not responsible for the relevant operations of DTCC. Operational issues are also reviewed by internal audit as well as review by certified public accountants. Deloitte LLC issued the most recent report for NSCC on October 30, 2009, for the year ended June 30, 2009. These reports are available on the DTCC website.

Availability and scalability of the system

According to DTCC, no NSCC key system has failed (nor any data lost) during the last year. NSCC informed that the system availability for NSCC systems is 100percent year to date. However, NSCC did not provide figures on the capacity utilization of the system (percent of fully available operating capacity as defined by an average of volume) to the assessor.

DTCC has dedicated capacity planning staff and ensures that NSCC has sufficient capacity to meet operational needs in all data centers. With respect to processing capacity, NSCC maintains sufficient capacity to meet processing demands in stressful market conditions.

For clearance and settlement purposes, NSCC can process in excess of 2 times their respective historical peaks in a processing day. In particular, capacity/utilization reports are generated and reviewed by the Infrastructure Department to track growth against projections

	and a yearly annual Capacity Planning Report is produced and presented to the Board of Directors, and to NSCC's regulator, the SEC.
Assessment	Observed.
Comments	<p>Contingency plans and backup facilities for the failure of key systems are not tested and reviewed with participants (only connectivity is tested with the critical participants). NSCC explained that the data centers in the New York region act as a single data centre and provide secondary back-up to both systems and the entire facility. In the event that New York region data centers are not available, the out of region recovery site is available to cover all critical systems. Failover and recovery of any data centre does not require changes by participants. The network automatically reroutes the client traffic from their primary or backup sites to the recovered data centre. Therefore, it is not reliant to test the failure of one key system with the participants.</p> <p>DTCC should test its back-up sites to critical participants' backup sites.</p>
Recommendation 9.	A CCP should employ money settlement arrangements that should eliminate or strictly limit its settlement bank risks, that is, its credit and liquidity risk from the use of banks to effect money settlements with its participants. Funds transfers to a CCP should be final when effected.
Description	<p><i>Use of central bank money (Q1)</i> NSCC uses the central bank model with a tiered settlement arrangement, relying on DTC as settlement agent, for its end-of-day funds settlement. The end-of-day settlement process occurs on the Federal Reserve's NSS. (CCP is always in a flat position). NSCC participants are required to engage a settling bank (of their choosing) that meets NSCC's settling bank criteria to effect money settlement on the central bank's NSS on behalf of the participants. NSS is governed by Federal Reserve Operating Circular 12 "Multilateral Settlement" ("OC 12"). More specifically, NSCC and DTC each separately calculate the net money position for each of their respective participants. NSCC and DTC then net the money settlement balances of each DTC participant who also is a member of NSCC (common participants). Once final net-net money settlement figures have been calculated and acknowledged by the designated settling bank for each participant, DTC (acting as "Settlement Agent" under OC 12) submits a file of money debits and credits by settlement bank to the FRBNY in order to complete money settlement. This file lists debit or credit entries for particular depository institutions ("settlers" under OC 12) that are acting as settling banks under DTC and NSCC's rules. The Federal Reserve then processes the file, checking to see that settlement banks with a net debit entry have sufficient funds or credit in their Federal Reserve account to settle and if so, transferring the money to a temporary (technical) settlement account for the arrangement. Once all debits have been collected, funds are then credited to settlement banks in a net credit position. All debits and credits are final at the time they are made by the Federal Reserve.</p> <p><i>Finality of transfers (Q2)</i> The funds transfers for NSCC end-of-day money settlement occur at the Federal Reserve via NSS, with DTC acting as settlement agent. Funds transfers are immediately final when payment is effected on the Federal Reserve's NSS. The arrangement with the central bank is supported by applicable laws and rules, including the applicable Federal Reserve operating circular (OC 12).</p> <p><i>Criteria for selection of settlement banks (Q3)</i> In addition to the initial and ongoing membership requirements, settlement banks must apply and be approved as Settling Bank Only Members following the requirements of Rule 2, Rule 2A, Rule 2B and Addendum B of NSCC's Rules and Procedures. Settling Bank Only Members must be a bank or trust company member, have direct access to a Federal Reserve account and the Federal Reserve Fedwire Funds and National Settlement Services, and meet</p>

	<p>standards of financial responsibility and operational capability promulgated by NSCC, including a Tier 1 risk-based capital ratio for regulatory purpose of a least 6 percent.</p> <p><i>Monitor distribution of exposures among settlement banks (Q4)</i> NSCC does not monitor the distribution of exposures among settlement banks.</p>
Assessment	Observed.
Comments	As a systemically important CCP, NSCC should have direct access to Federal Reserve accounts and services. However, due to current legal constraint, this recommendation can only be met by either NSCC being chartered as a bank or statutory changes to grant the Federal Reserve legal authority to provide accounts and services to NSCC.
Recommendation 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><i>CCP obligations for physical delivery (Q1)</i> As explained in Recommendation 1, NSCC becomes counterparty in the transaction at the time it becomes subject to the trade guaranty. However, the obligation to deliver securities only arises after having received the assets from the original counterparty (unless default rules are activated).</p> <p>Securities delivered to NSCC are promptly redelivered to parties that are entitled to receive them through an allocation algorithm. Members are obligated to take and pay for securities allocated to them in the CNS process.</p> <p><i>Delivery-versus-Payment (DVP) of mitigation of principal risks (Q2)</i> NSCC utilizes the “modified” delivery versus payment mechanism. Within this framework, when a Member delivers securities to NSCC the Member gets a credit and when NSCC delivers to the long side (a long allocation), securities deliveries/movements are not final until the “effective time.” The “effective time” generally occurs when it is clear that NSCC has either been paid, or is in a credit position with respect to a Member or its settling bank. End of day net funds payments for these deliveries are made over NSS as described above in RCCP 9.</p> <p><i>Liquidity, storage and delivery (other than principal) risks (Q3)</i> Storage and delivery risks for physical certificates (such as, e.g., warehousing and transport of instruments) do not arise for CNS security movements, which are made via book-entry.</p>
Assessment	Observed.
Comments	
Recommendation 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 among the relevant regulators and overseers.
Description	<p><i>Sources of risks in links and compliance with RCCPs (Q1)</i> The following arrangements are in operation:</p> <p><u>Arrangements with OCC: description and risk analysis</u> OCC is not a Member of NSCC, but is a DTC Participant. As indicated in Recommendation 6, NSCC has an arrangement with OCC (the “Accord”) providing for the settlement of exercises and assignments of options on securities which are cleared and settled through NSCC. The arrangement facilitates the settlement of the underlying securities upon the exercise or assignment of such options. The Accord provides for a two-way guaranty between OCC and NSCC determined in accordance with a formula set forth in the Accord in the event of a mutual participants’ failure.</p>

Pursuant to the Third Restated Agreement, the formula for payment by OCC under its guarantee to NSCC provides that if NSCC were to suspend a common member, OCC would owe NSCC the lesser of the common member's (i) net member debit to NSCC or (ii) calculated margin requirement. The formula for payment by NSCC under its guarantee to OCC provides that if OCC were to suspend a common member, NSCC would owe OCC the lesser of the common member's (i) net member debit to OCC or (ii) calculated margin Credit. The term net member debit to NSCC is defined to mean the actual net overall debit or loss, if any, realized by NSCC from its close-out of the common member (i.e., the debit or loss after application of all assets available to NSCC including the common member's contribution to NSCC's clearing fund). The term net member debit to OCC is defined to mean the actual net overall debit or loss, if any, realized by OCC from its close-out of the common member (i.e., the debit or loss after application of all assets available to OCC including the common member's margin deposits and contribution to OCC's clearing fund). The term calculated margin credit is defined to mean the algebraic sum of the mark-to-market amounts calculated by OCC's margin system relating to settlements arising from E&A activity with respect to which NSCC has become unconditionally obligated to settle and the mark-to-market amounts calculated by NSCC's system for offsetting activity in NSCC's system in the same underlying stocks if the algebraic sum is positive (i.e., if the sum represents a net positive value of the settlements). The term calculated margin requirement is defined to mean the same algebraic sum if the algebraic sum is negative (i.e., if the sum represents a net negative value of the settlements).

OCC can make the guarantee to NSCC because it continues to margin E&A activity through the settlement date. Similarly, NSCC can make this guarantee because it collects risk-based margin on the member's entire portfolio of E&A activity. NSCC and OCC recently amended the Accord to reduce the burden of such duplicative margin requirements by allowing clearing members to use stock deposited as margin with OCC to meet settlement obligations at NSCC.

The Accord and amendments thereto have been reviewed and approved by the SEC. The Accord is a comprehensive document that describes the operational and risk management arrangements between OCC and NSCC regarding effecting settlement with respect to the exercise and assignment of options by delivery and receipt of securities through the facilities of NSCC. The Accord was first entered into by OCC, the Stock Clearing Corporation (NSCC's predecessor), and other clearing corporations 1976. It has been periodically restated or amended to reflect changes in risk management as analyzed and agreed to by OCC and NSCC.

Arrangements with the Canadian CDS: description and risk analysis

CDS Clearing and Depository Services Inc. ("CDS") is both Member of NSCC and a DTC Participant. CDS operates the New York Link Service, which enables CDS Participants to clear and settle OTC trades with U.S. broker-dealers through sponsored accounts maintained by CDS with DTC and NSCC and entitles them to all the privileges of direct membership in both organizations. However, only CDS is a member of NSCC. Its participants are not members and NSCC looks only to CDS for satisfaction of clearance and settlement obligations. In other words, if a CDS participant defaults on its obligation to NSCC, CDS is required to meet the settlement obligation to NSCC. CDS mitigates its exposure to potential losses by requiring participants to commit collateral to CDS much as they are required to commit collateral to NSCC.

As an NSCC member, CDS is bound by NSCC's rules and procedures including a requirement to contribute to NSCC's clearing fund. NSCC collects Clearing Fund from CDS. In addition, in 2009 NSCC began calculating CDS's Clearing Fund requirement using a risk-based margining methodology rather than a volume based formula. CDS members fund their NSCC deficit with CDS on a daily basis. NSCC holds all the risk-based Clearing Fund collateral from CDS's sponsored participants. For its own protection, CDS will

	<p>maintain a clearing fund based on contributions from its participants that use NSCC services. That clearing fund is governed and used in substantially the same manner as NSCC's own clearing fund and protects CDS against any one participant's default. As a result, New York Participants have to meet expanded collateral requirements, which may be up to twice the normal requirement, in order to participant in the NSCC/CDS link.</p> <p>Because CDS is a regular participant in NSCC, there is not a separate risk methodology for assessing the link with CDS. However, as a full service Member, CDS was reviewed and is monitored through the membership process. As part of NSCC's rules and procedures, it may apply enhanced requirements to non-U.S. participants. For example, CDS was required to provide a legal opinion addressing legal issues, including conflict of laws.</p> <p><i>Legal support for links (Q2)</i> OCC – the Accord is governed by New York law. It was reviewed and approved by the SEC under the rule approval process.</p> <p>CDS – it is subject to NSCC's Rules, which are governed by New York law and are approved by the SEC.</p> <p><i>Ongoing monitoring of operational, liquidity and credit risk (Q3)</i> For the Accord with OCC, the following mechanisms are in place to monitor and manage the risks.</p> <p>Risk Management staff (a) has conducted discussions with their OCC counterparts regarding the methods that OCC utilizes to collateralize risk from transactions of its members, so as to be aware of OCC's risk mitigation procedures; (b) subscribes to reports and information from a third party analysts/rating organization, which currently rates OCC as AAA; (c) reviews OCC's financial condition annually; and (d) has an ongoing dialogue with their OCC counterparts regarding the arrangement with OCC providing for the settlement of exercises and assignments of options on securities which are cleared and settled through NSCC, and common members of NSCC and OCC.</p> <p>For the arrangement with CDS, Risk Management staff (a) has conducted discussions with their CDS counterparts regarding the methods that CDS utilizes to collateralize risk from transactions of its participants (including from use of NSCC's link), so as to be aware of CDS' risk mitigation procedures; (b) subscribes to reports and information from third party analysts/rating organizations that rate securities' depositories—which currently rates CDS as low risk; and (c) reviews CDS's financial condition annually.</p> <p><i>Co-operative (cross-border) oversight on links (Q4)</i> The legal framework supports cooperation. There is a Memorandum of Understanding between the United States and Canada that provides such a framework with respect to CDS. OCC, like NSCC, is a registered clearing agency and a Self Regulatory Organizations (SROs) subject to oversight by the SEC.</p>
Assessment	Observed.
Comments	
Recommendation 12.	While maintaining safe and secure operations, CCPs should be cost-effective in meeting the requirements of participants.
Description	<p>The description for this recommendation is very similar to the one of DTC and FICC given that the procedures for controlling and reviewing risks and pricing are the same between the three subsidiaries of the DTCC group.</p> <p><i>Procedures to control risks and pricing (Q1)</i> NSCC's fees are cost based and NSCC returns to its users excess net revenues not needed to</p>

	<p>fund its operations via rebates or refunds. DTCC performs periodic benchmarking studies to assess cost effectiveness in the market place. Pricing levels are reviewed against the cost of operations during the annual budget process in order to provide guidance to the Board of the price impact.</p> <p><i>Regular review of service levels and operational reliability (Q2)</i> NSCC surveys its participants to test and help ensure adherence to service levels on an annual basis. As described in RCCP13, some of the Committees of the Board of Directors are overseeing different aspects, covering the systems' operations. Besides, operational reliability is the subject of regular monitoring, the result of which is transmitted to IT, product and senior management on a monthly basis. An annual Capacity Planning Report considering the projected capacity growth for the year to come is submitted to the Board of Directors of DTCC and to its regulators.</p>
Assessment	Observed.
Comments	
Recommendation 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	<p>The description for this recommendation is very similar to the one of DTC and FICC given that there is a single governance structure organized at the holding company level.</p> <p><i>Clarity and transparency of governance arrangements (Q1)</i> DTCC is a holding company of DTC, FICC and NSCC, which are independent legal subsidiaries. There is a single governance structure for the three clearing agencies. DTCC governance arrangements are available publicly and updated on a yearly basis (last update October 2009). DTCC common shareholders include approximately 362 banks, broker-dealers, mutual funds and other companies in the financial services industry participating in one or more of DTCC's clearing agency subsidiaries, including NSCC.</p> <p>Certain governance information is publicly disclosed and other information is not because it is confidential and proprietary in nature. At the time of this assessment only limited information is available to the public. DTCC is currently reviewing its corporate governance structure and anticipates that once any changes have been duly approved and publication authorized, certain information will be made publicly available. It would be inappropriate for DTCC to publish such information in advance of all of the necessary approvals.</p> <p><i>Separation between reporting lines for risk management and other operations (Q2)</i> There is a clear separation in the reporting lines between risk management and other operations of NSCC and FICC. The Chief Risk Officer reports directly to the Chairman and CEO. The board of directors has appointed a number of standing committees including a credit and market risk management committee, compliance and operational risk management committee, and core services operations and planning committee.</p> <p><i>Management incentives skills and accountability (Q3)</i> DTCC Management and the Board establish formal corporate goals yearly based on consultation with individual participants, members of the Board, Board committees, advisory committees, industry associations, regulators, and others. Management's performance is assessed by the Board against these goals through the review of status reports from the management and Board Committees. Through evaluation of management performance, and by linking compensation to performance (via the Board's Compensation Committee which is composed of non-management directors), the Board seeks to ensure that management has the incentives and skills needed to achieve the clearing agency's objectives, and that management is accountable for its performance.</p> <p>Auditors have ensured that: 1) each service does not cross subsidize the operating expenses</p>

	<p>and revenues of the others neither within each of the systems (DTC, NSCC and FICC) nor amongst them; and 2) the risk management financial resources (clearing funds, collateral, margins, etc.) are separately maintained and not co-mingled.</p> <p><i>Board composition, expertise and relevant interest' representation</i></p> <p>Currently the Board of DTCC is composed of 18 members. Fourteen of those members are designated by the shareholders and are employees of DTCC's shareholding firms. Two of those members are DTCC executives (CEO and COO). Two of the members are designated by the preferred shareholders (NYSE and FINRA). FINRA is not a participant of DTCC or its subsidiaries.</p> <p>The members of the Board are elected for a one-year term, usually at the April shareholders meeting on the basis of the following procedure. Each year, the Board appoints members of the Governance Committee, who in turn, recommend nominees for directors to the Board after soliciting from participants of each clearing agency suggested nominees for election by common shareholders. The Committee standards in recommending nominees are designed to satisfy the fair representation requirement of Section 17A of the Exchange Act, and reflect other governance best practices. The Governance Committee has the responsibility to nominate persons for election as directors ensuring they meet the following criterion: ability to represent users of the services of each of DTCC's clearing and depository subsidiaries; ownership of DTCC common stock; expertise; with respect to current directors, their length of service, attendance at Board and Committee meetings, and effectiveness; and adequate diversity on the Board.</p> <p><i>Public interest objectives</i></p> <p>NSCC's public interest objectives are based upon section 17 A of the Securities Exchange Act following which the SEC is directed by the Congress, "having due regard for the public interest," to facilitate the establishment of a national system for the prompt and accurate clearance and settlement of securities transactions by, among other things, the registration of clearing agencies that have been determined by the SEC to meet the statutory standards of the Exchange Act.</p> <p>The public's interest is taken into account by the SEC in its review of each proposed rule change filed by NSCC, i.e., the SEC has an obligation to receive and consider public comments on each filing. SEC rules provide that the public comment period for proposed rule changes is at least 21 days from the date a proposal is published in the Federal Register (unless the proposal meets the criteria for accelerated approval or immediate effectiveness). However, all the clearing agencies (DTC, NSCC, and FICC) publish notices of their proposed rule changes on their websites at the same time as they are filed with the SEC, with contact information for participants should they wish to provide comments to the clearing agencies directly (which the affected clearing agency would then forward to the SEC). This effectively provides participants with a longer period to review and consider specific proposals.</p> <p>Moreover, NSCC indicated that in case it is known that an issue with a proposal that may have significant impact, the proposal is discussed with participants or participant groups (such as, for example, the relevant divisions of Securities Industry and Financial Markets Association (SIFMA), and NSCC consults with its regulators before filing it formally. In addition to posting important notices on DTCC's website that advise Participants of the submission/approval of proposed rule changes, NSCC staff participates in various industry groups where information is shared, both in advance of submitting a particular proposed rule change, or after the filing is submitted (for example, as the implementation date of an approved change approaches).</p>
Assessment	Broadly observed.

Comments	For the observance of this recommendation, the governance arrangements for NSCC should be more clearly specified and transparent, including criteria for the composition and selection of Board members.
Recommendation 14.	A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the costs and risks associated with using its services.
Description	<p><i>Disclosure of risk management information (Q1)</i> NSCC's rules and procedure are publicly available on DTCC's website. NSCC's rules are explicit as to when NSCC assumes counterparty exposure. The rules also provide information on default procedures. Information such as explanatory service bulletins and guidelines on risk management measures is communicated via Important Notices posted on DTCC's website, along with any rule filings. Information about key financial and operational risk is also publicly disclosed.</p> <p>In addition, SEC standards and NSCC Rule 35 require that, after the end of each calendar year, NSCC provide its participants with annual audited financial statements prepared by an independent public accountant. NSCC also provides its participants and the SEC unaudited financial statements for each of the first three calendar quarters of each calendar year. The annual audited financial statements of NSCC as well as consolidated financial statements of DTCC are available on the DTCC website, www.dtcc.com.</p> <p><i>Accessibility of information (Q2)</i> Information is provided in English and made available on NSCC's website. Moreover, the system's management also responds to inquiries from participants and meets with them as may be requested to assist them to understand the rules and the risk implications thereof.</p> <p><i>Completion and disclosure of the answers to the key questions of RCCPs (Q3)</i> NSCC completed and disclosed the answers to the key questions from this assessment methodology. The self assessment based on the RCCP assessment methodology is published on DTCC's website. NSCC's self-assessment is reviewed by its senior management and approved by its Board of Directors prior to the publication. The review is conducted at least every two years, unless necessary before as a result of any material change to NSCC's system or environment.</p>
Assessment	Observed.
Comments	
Recommendation 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.
Description	<p>The description for this recommendation is very similar to the one of FICC as both CCPs have similar legal status and subsidiaries of the DTCC group.</p> <p><i>Effective regulation and oversight (Q1)</i> NSCC is a clearing agency as defined by the Exchange Act and, like all clearing agencies, is required to register with the SEC under Section 17A of the Exchange Act unless granted an exemption from registration by the SEC. As a result, NSCC is subject to full regulation under the Exchange Act (including but not limited to Section 17A) and is a self-regulatory organization that must meet all requirements with respect to SROs under the Exchange Act.</p> <p>In addition, pursuant to the Federal Reserve Act, the Federal Reserve has the authority to examine NSCC because it is an affiliate of a state member bank, DTC, which is a member of the Federal Reserve System. The Federal Reserve is also interested in NSCC's observance of the RCCPs given the important role NSCC plays in the overall financial system.</p>

Sufficient legal capacity and resources

As a clearing agency, NSCC is subject to comprehensive oversight by the SEC pursuant to the Exchange Act. The Federal Reserve coordinates with the SEC to conduct oversight, but the United States currently does not have a statute providing formal oversight authority to the central bank for payment, clearing, and settlement systems that are non-bank clearing agencies such as NSCC.

At the SEC, an estimated 51 staff are involved in whole or in part in clearing oversight (approximately 23 full-time equivalent staff positions). The SEC's oversight program encompasses staff from 7 different offices, including offices involved in legal and policy, examination and compliance, and automation review.

Between FRBNY and the Board, about 20 budgeted officers and staff work full time on policy and oversight with respect to payment, clearing and settlement. In addition, about 15 supervisory staff is dedicated full time to specific private sector systems; 9 examiners broadly dedicated to payment and settlement infrastructure and 10 more focused on systemically important clearing activities by banks and affiliates.

Definition and disclosure of objectives of central banks and securities regulators (Q2)

The SEC's regulatory objectives, responsibilities, and main policies are defined and publicly disclosed. For example, the scope of the SEC's regulation of clearing agencies is defined by the Exchange Act, including but not limited to Sections 17A and 19. The SEC has adopted rules to carry out these statutory responsibilities, such as the review of all rule changes and with limited exceptions the approval of proposed rule changes. In order to assist registrants in meeting their statutory responsibilities, the SEC's Division of Trading and Markets has published standards regarding the objectives, and requirements of clearing agency registration under Section 17A. In addition the SEC also publishes concept releases and policy statements to educate industry participants as to the Commission's positions on different issues, such as straight-through processing, confirmation of trades, operational outages, and business continuity. These materials are publicly available from several sources, including the SEC's website www.sec.gov.

The Federal Reserve also publishes policy statements which are readily available to the public. For example, the Federal Reserve's Policy on Payments System Risk is available at www.federalreserve.gov. Operating Circulars governing Reserve Bank services are available online at the Federal Reserve's Financial Services website at <http://www.frbservices.org/>. Other service related information, such as services offered, forms, agreements, schedules, and fees, can be obtained on this site.

As noted above, NSCC is required to file with the SEC and make public all proposed rule changes. The information in each filing is required to be presented by NSCC in a clear and comprehensible manner in order to enable the public to provide meaningful comment on the proposal and for the SEC to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act. SEC staff also maintains an active dialogue with NSCC management.

Timely provision of oversight information to relevant authorities (Q3).

NSCC must submit proposed changes to rules and a description of the purpose of the proposed rule change to SEC. The term rule is defined broadly under the Exchange Act to include the constitution, articles of incorporation, bylaws, and rules, or instruments corresponding to the foregoing, of a clearing agency.

NSCC is statutorily required to comply with several recordkeeping requirements set forth in the Exchange Act (Section 17) and SEC rules (Rule 17a-1 et. seq.). For example, NSCC must make and keep for prescribed periods such records, furnish such copies thereof, and make and disseminate such reports as the SEC, by rule, prescribes as necessary or

	<p>appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of this Exchange Act. SEC rules require that NSCC keep and preserve at least one copy of all documents, including all correspondence, memoranda, papers, books, notices, accounts, and other such records as shall be made or received by it in the course of its business as such and in the conduct of its self-regulatory activity. These materials must be held for a period of not less than five years, with the first two years in an “easily accessible place.” SEC Rule 17a-6 sets forth the manner by which NSCC may destroy/dispose of such documentation. All of these records are subject at anytime, or from time to time, to such reasonable periodic, special, or other examinations by representatives of the SEC. In certain instances, NSCC also may be asked to furnish copies of materials upon request from its participants, other self-regulatory organizations, or other regulators. NSCC is also required to notify the SEC of disciplinary actions it takes with respect to its participants, including but not limited to ceasing to act for a participant or denying access to services to a participant.</p> <p>SEC staff conducts onsite examinations of registered clearing agencies, including NSCC. Examination reviews may include such areas as internal audit, membership, member financial surveillance, clearing fund and collateral risk, risk assessment and risk management systems, clearance and settlement processes, and liquidity. During examinations, NSCC is required to provide examiners with documentation requested as part of the examination.</p> <p>NSCC is required to notify the SEC if it imposes a final disciplinary sanction on a participant, denies participation, limits access to services, or ceases to act for a participant and indicate the actions taken by NSCC to resolve outstanding obligations. In addition, NSCC is required to submit all rule changes to the SEC for review, comment, and in all but limited circumstances approval. Section 19 of the Exchange Act and the rules there under define the circumstances under and means by which Self Regulated organizations (SROs) must file proposed rule changes and by which the SEC may approve or disapprove proposed rule changes. Certain proposed rule changes that (i) constitute a stated policy, practice, or interpretation with respect to the meaning, administration, or enforcement of an existing rule, (ii) establish or change a due, fee, or other charge, or (iii) are concerned solely with the administration of the self-regulatory organization may be effective upon filing, but all other proposed rule changes are approved by the SEC. In most cases, the proposed rule changes are approved by the SEC’s Division Trading and Markets, pursuant to delegated authority.</p> <p>In addition, the SEC has established an Automation Review Policy (ARP) applicable to SROs, including NSCC. Under the policy, SROs voluntarily establish comprehensive planning and assessment programs to determine systems capacity and vulnerability. ARP also requests that SROs provide SEC staff with real-time notifications of significant system outages. ARP staff at the SEC also conducts IT-specific onsite examinations of NSCC.</p> <p><i>Domestic and cross-border cooperation (Q4)</i></p> <p>The legal framework supports cooperation and coordination among the authorities. At the domestic level, the SEC and the Federal Reserve have signed exam-specific information-sharing arrangements regarding the oversight of NSCC. The main principle underlying this framework is to provide for consolidated supervision and to stem systemic risk.</p> <p>At the cross-border level, the SEC has entered into memoranda of understanding (MoU) with regulators from non domestic information in particular for the exchange of information. The MoU can be found on the SEC website.</p>
Assessment	Observed.
Comments	The SEC has not formally required NSCC to perform a self-assessment with respect to the

	<p>CPSS-IOSCO recommendations. However, the SEC reviews the self-assessments currently prepared by the clearing agencies. Furthermore, compliance with SEC rules ensures compliance with most of the recommendations. SEC staff stated that it would consider recommending to the Commission that clearing agencies be required to perform self-assessments against the CPSS-IOSCO recommendations by rule or by policy statement. SEC is encouraged to do so, also with a view to encouraging consistency in the assessment of globally relevant systems and to facilitate co-operation with other authorities.</p> <p>The Federal Reserve should be provided a legal mandate to oversee NSCC which is systemically important system as a complementary function to the existing SEC regulation and supervision.</p>
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Table 2. Summary of the Detailed Assessment of the Observance of the National Securities Clearing Corporation (NSCC) with the CPSS-IOSCO Recommendations for Central Counterparties

Responsibility	Grading	Comments
Legal risk		
1. Central counterparties should have a well-founded, clear and transparent legal basis in the relevant jurisdiction.	O	
Participation requirement		
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 in an on-going basis. A CCP's participation requirements should be objectives, publicly disclosed, and permit fair and open access.	O	
Measurement and management of credit exposures		
3. A CCP should measure its credit exposure to its participants at least once a day. Through margin requirements, other risk control mechanisms or a combination of both, a CCP should limit its exposure to potential losses from defaults of its participants in normal market conditions so that the operation of the CCP would not be disrupted and non-defaulting participants would not be exposed to losses that they cannot anticipate or control.	O	The definition of margins and clearing funds in the public assessment should be made more consistent in line with international usage/practice and the definitions provided in the glossary of the RCCP. It will be beneficial (especially for non-U.S. CCPs that intend to establish links with NSCC and FICC-GSD) to clarify the terminology. NSCC management stated that they would clarify this terminology in the next revision of the self-assessment.

Responsibility	Grading	Comments
Margin requirements		
4. If a CCP relies on margin requirements to limit its credit exposures to participants, these 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.	O	
Financial resources		
5. A CCP should maintain sufficient financial resources to withstand, at a minimum, the default of a participant to which it has the largest exposure in extreme but plausible market conditions.	BO	<p>In order to be fully compliant with the recommendation, NSCC should:</p> <ol style="list-style-type: none"> 1. consider additional liquid financial resources to use in case of extreme situations where repo market would not be available; 2. consider conducting more frequent stress testing than once a month, in particular, in times of unusual market volatility; and 3. disclose stress testing assumptions to participants. <p>NSCC's liquidity can be increased by reposing the securities in the Clearing Fund or the unpaid allocations of the defaulting members. However, this arrangement cannot be considered as a committed line, since there is no complete assurance that the repo markets would be effective in extreme market situations.</p>
Default procedures		
6. A CCP default procedures should be clearly stated, and should ensure that the CCP can take timely action to contain losses and liquidity pressure and to continue meeting its obligations. Key aspects of the default procedures should be publicly available.	O	
Custody and investment risk		
7. A CCP should hold assets in a manner whereby risks 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.	O	NSCC should continue to monitor and mitigate the potential risks which result from holding assets at only two commercial banks. Furthermore, NSCC should avoid to the largest extent possible unsecured investments.
Operational risk		
8. A CCP should identify sources of operational risk and minimize them through	O	Contingency plans and backup facilities for the failure of key systems are not tested and reviewed with participants (only connectivity is tested with the critical participants).

Responsibility	Grading	Comments
the development of appropriate systems, controls and procedures 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>NSCC explained that the data centers in the New York region act as a single data centre and provide secondary back-up to both systems and the entire facility. In the event that New York region data centers are not available, the out of region recovery site is available to cover all critical systems. Failover and recovery of any data centre does not require changes by participants. The network automatically reroutes the client traffic from their primary or backup sites to the recovered data centre. Therefore, it is not reliant to test the failure of one key system with the participants.</p> <p>DTCC should test its back-up sites to critical participants' backup sites.</p>
Money settlements		
9. A CCP should employ money settlement arrangements that should eliminate or strictly limit its settlement bank risks, that is, its credit and liquidity risk from the use of banks to effect money settlements with its participants. Funds transfers to a CCP should be final when effected.	O	As a systemically important CCP, NSCC should have direct access to Federal Reserve accounts and services. However, due to current legal constraint, this recommendation can only be met by either NSCC being chartered as a bank or statutory changes to grant the Federal Reserve legal authority to provide accounts and services to NSCC.
Physical deliveries		
10. A CCP should clearly state its obligations with respect to physical deliveries. The risks from these obligations should be identified and managed.	O	
Risks in links between CCPs		
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 among the relevant regulators and overseers.	O	
Efficiency		
12. While maintaining safe and secure operations, CCPs should be cost-effective in meeting the requirements of participants.	O	
Governance		
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.	BO	For the observance of this recommendation, the governance arrangements for NSCC should be more clearly specified and transparent, including criteria for the composition and selection of Board members.

Responsibility	Grading	Comments
Transparency		
14. A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the costs and risks associated with using its services.	O	
Regulation and oversight		
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 co-operate with each other and with other relevant authorities.	O	<p>The SEC has not formally required NSCC to perform a self-assessment with respect to the CPSS-IOSCO recommendations. However, the SEC reviews the self-assessments currently prepared by the clearing agencies. Furthermore, compliance with SEC rules ensures compliance with most of the RCCPs. SEC staff stated that it would consider recommending to the Commission that clearing agencies be required to perform self-assessments against the CPSS-IOSCO recommendations by rule or by policy statement. SEC is encouraged to do so, also with a view to encouraging consistency in the assessment of globally relevant systems and to facilitate co-operation with other authorities.</p> <p>The Federal Reserve should be provided a legal mandate to oversee NSCC which is systemically important system as a complementary function to the existing SEC regulation and supervision.</p>

Table 3. Actions to Improve Compliance

<i>Reference Recommendation</i>	<i>Recommended Action</i>
Recommendation 3: Credit exposures management	Align the definitions of margins and clearing funds with international ones.
Recommendation 5: Financial resources	<p>Consider additional liquid financial resources to use in case of extreme situations where repo agreements cannot be used.</p> <p>Minimize its exposure and concentration risk vis-à-vis the two banks.</p> <p>Consider conducting more frequent stress testing than one a month, in particular, in times of unusual market volatility.</p> <p>Disclose stress testing assumptions to participants.</p>
Recommendation 7: Custody and investment risk	<p>Continue to monitor and mitigate the potential risks, which result from holding assets at only two commercial banks.</p> <p>Avoid to the largest extent possible unsecured investments.</p>
Recommendation 8: Operational risk	Test and review NSCC backup sites to critical participants' backup sites.
Recommendation 9: Money settlements	Provide NSCC direct access to Fedwire Securities to settle DVP transactions in central bank money.

<i>Reference Recommendation</i>	<i>Recommended Action</i>
Recommendation 13: Governance	NSCC's governance arrangements should be more clearly specified and transparent, including criteria for the composition and selection of Board members.
Recommendation 15: Transparency	SEC should formally required NSCC to perform a self-assessment with respect to the CPSS-IOSCO recommendations. Ensure the compliance of the SEC rules with the CPSS/IOSCO Recommendations. Provide legal mandate to the Federal Reserve to oversee NSCC, which is systemically important system, as a complementary function to the existing SEC regulation and supervision.

Authorities' response to the assessment

1. The U.S. authorities welcome the IMF's assessment of the National Securities Clearing Corporation (NSCC) against the CPSS-IOSCO Recommendations for Central Counterparties (RCCP). We appreciate the significant undertaking associated with an FSAP review of the biggest financial sector in the world, as well as the challenges that accompany the first assessment of a large advanced country in the wake of the crisis.
2. The authorities are pleased to note that the IMF's assessment reflects the high degree of compliance of NSCC with the RCCPs, and will work with NSCC in considering the assessment's specific comments and recommendations.
3. Again, the authorities appreciate the significant undertaking associated with the assessment of NSCC and the contribution that the assessment process makes to the stability and effective regulation and oversight of systemically-important payment, clearing and settlement systems.