



FIXED INCOME CLEARING CORPORATION

AND

NATIONAL SECURITIES CLEARING CORPORATION

PUBLIC QUANTITATIVE DISCLOSURES FOR CENTRAL COUNTERPARTIES

**Q3 2023**

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## EXECUTIVE SUMMARY

In February 2015, CPMI-IOSCO issued its final report on Quantitative Disclosure Standards for Central Counterparties (“CCPs”), which provides specific quantitative disclosure requirements for CCPs relative to a number of the PFMI principles. These disclosures are intended to complement the narrative disclosures included in the CPMI-IOSCO Disclosure Framework\*. This document contains the quantitative disclosures for the two divisions of the Fixed Income Clearing Corporation (“FICC”) — the Government Securities Division (“GSD”) and Mortgage-Backed Securities Division (“MBSD”) — and the National Securities Clearing Corporation (“NSCC”). FICC and NSCC are wholly owned subsidiaries of The Depository Trust & Clearing Corporation (“DTCC”).

The attached disclosures include, in addition to those required by CPMI-IOSCO, some supplemental disclosures as proposed by the Payments Risk Committee’s Recommendations for Supporting Clearing Member Due Diligence of Central Counterparties (Feb 2013).

The information provided in this disclosure is reported as of the dates specified. For further information, please contact  
CPMI-IOSCO\_Quant@dtcc.com.

\* The Disclosure Frameworks for FICC and NSCC can be found at [www.dtcc.com](http://www.dtcc.com)

## Q3 2023 SUPPLEMENTAL EXPLANATORY NOTE

### **Management Note**

The U.S. equity markets fell during the third quarter of 2023, with the S&P 500 index declining by 3.6% in the quarter, as the bulk of the losses observed in September were driven by a surge in treasury yields following hawkish commentary from the Federal Reserve.

The yields on U.S. treasuries rose during the third quarter of 2023. The 10-year U.S. Treasury yield for the quarter peaked at 4.69% on September 28th due to the market's expectations of the prolonged period of high interest rates. The 2-year and 10-year U.S. Treasury curve has been slowly reducing its inversion since the beginning of July, with a negative spread that was exceeding -1.00% on July 3rd, 2023 shifting to -0.47% on September 29th, 2023.

### **Clearing Fund Backtesting Results**

At FICC and NSCC, backtesting is conducted to measure the sufficiency of the overall Clearing Fund coverage. More specifically, the backtests compare the Clearing Fund requirements with actual price changes in a portfolio. The portfolio values are calculated by using the actual positions in a Member's portfolio and the observed security price changes over the simulated liquidation period of three days. The results are aggregated into the CCP-level backtesting coverage data that is provided in this disclosure. The backtesting methodology assesses the adequacy of a 3-day liquidation period assumption for a simulated Member default, and the FICC and NSCC VaR models are currently calibrated at a minimum of 99% coverage.

A deficiency is identified when the simulated backtesting (default liquidation) losses are greater than the margin or clearing fund resource collected from a member. We conduct simulated backtests for every portfolio daily, calculate the amount of each deficiency and calculate the ratio to determine coverage (99% target for rolling twelve months).

#### **FICC-Government Securities Division (GSD)**

At the end of the third quarter of 2023, GSD's 12-month backtesting coverage level was 99.3%. The 1-month coverage ratio at GSD was 99.96% for July, 99.86% for August, and 99.92% for September. The largest deficiency for the quarter totaled \$18.3MM observed on 09/13/2023 and was driven by member's position change. The median backtesting deficiency for the quarter was \$4.5MM.

#### **FICC-Mortgage-Backed Securities Division (MBSD)**

At the end of the third quarter of 2023, MBSD's 12-month backtesting coverage level was 99.10%. The 1-month coverage ratio at MBSD was 99.83% for July, 99.93% for August, and 100% for September. The largest deficiency for the quarter totaled \$11.4MM observed on 07/10/2023 and was driven by market moves. The median backtesting deficiency for the quarter was \$10.2MM.

#### **National Securities Clearing Corporation (NSCC)**

At the end of the third quarter of 2023, NSCC's 12-month backtesting coverage level was 99.9%, with the 1-month coverage ratio for July at 99.96%, August at 99.90%, and September at 99.96%. The largest deficiency for the quarter was \$1.16BN which occurred on 08/28/2023, driven by an off-the-market correspondent clearing trade between two affiliates. The median backtesting deficiency for the quarter was \$149K.

### **Liquidity Results**

## Q3 2023 SUPPLEMENTAL EXPLANATORY NOTE

GSD, MBSD, and NSCC did not experience a default event nor did any Member fail to satisfy payment obligations in Q3 2023. No simulated default liquidity sufficiency shortfalls were observed in Q3 2023.

For GSD and MBSD, the values are estimated liquidity obligations, post netting that are based on trades that are due to settle the following business day. For NSCC, the values are estimated liquidity obligations that are based on multi-day obligations throughout the (T+2) settlement cycle plus the Long Allocation and CALM offsets. The total reflects, where relevant, intraday and multiday payment obligations that could be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions.

The liquidity results reflect NSCC's potential liquidity obligations in a Member default scenario. In a non-default scenario, NSCC's Members have cash obligations for all securities deliveries (buy positions). Those cash obligations are netted with cash received for all securities deliveries (sell positions). If a portfolio is balanced with buys/sells, these settlement amounts will largely offset.

In a default scenario, NSCC is responsible for the receipt of securities from, and payment of cash to, the contra side Members (buy positions). This represents the exposure that is published in this report. NSCC may also need to source securities that the defaulting Member was unable to deliver (sell positions). The liquidity obligations of the sell positions pair-off, as NSCC would exchange settlement proceeds between the two contra side Members. As such, the buy positions drive the potential default liquidity risk that is posed to NSCC, since NSCC would be responsible for the payment of cash required to settle those purchases. Therefore, NSCC's conservative liquidity results derived from a default scenario are not comparable to the non-default settlement obligations of its Members.

Liquidity results also reflect the fact that NSCC receives option activity from the Options Clearing Corporation ("OCC") each business day, but activity on non-expiry dates is not as significant as the activity observed around standard expiration periods. Liquidity needs are conservatively calculated and liquidity resources are measured assuming the guarantee for OCC options has been transferred to NSCC. Liquidity risk measurement is calibrated extremely conservatively to address uncertainty of potential outcomes; resources are likely to increase during periods of stress over a 4-day default period, but no such increases are taken into account as potential risk mitigation.

NSCC uses Supplemental Liquidity Deposit ("SLD"), a payment obligation, determined by whether the daily liquidity need on a business day exceeds the sum of NSCC's qualifying liquid resources ("QLR") available to NSCC, after the application of a wide-range of stressed market assumptions. The SLD payment obligation is based on the calculated QLR and actual liquidity exposure over the upcoming settlement cycle that a Member's daily activity would pose to NSCC on that particular day in the event of that Member's default. NSCC collected SLD five times in Q3. SLD is part of NSCC's diversified set of liquidity resources; QLR includes cash deposits to the NSCC Clearing Fund; proceeds of the issuance and private placement of (a) short-term, unsecured notes in the form of commercial paper and extendable notes and (b) term debt; and cash that would be obtained by drawing on NSCC's committed 364-day credit facility with a consortium of banks. The SLD rule is Rule 4A in the NSCC rulebook that can be accessed via [https://www.dtcc.com/~media/Files/Downloads/legal/rules/nscc\\_rules.pdf](https://www.dtcc.com/~media/Files/Downloads/legal/rules/nscc_rules.pdf). Full text of the SLD filings may be obtained by visiting the DTCC website at [www.dtcc.com/legal/sec-rule-filings](http://www.dtcc.com/legal/sec-rule-filings).

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
<b>Disclosure 4.1 - Total value of default resources (excluding initial and retained variation margin), split by clearing service if default funds are segregated by clearing service</b>								
4.1.1	Prefunded - Own Capital Before	Quarterly/ Quarter End	USD \$MM	79		119	The Company maintains an amount referred to as the corporate contribution, to be applied to losses of the Company as provided in the clearing agency rules. The amount of the corporate contribution is generally equal to 50% of the Company's general business risk capital requirement.	
4.1.2	Prefunded - Own Capital Alongside		USD \$MM	N/A	N/A	N/A		
4.1.3	Prefunded - Own Capital After		USD \$MM	N/A	N/A	N/A		
4.1.4	Prefunded - Aggregate Participant Contributions - Required		USD \$MM	40,071	10,516	10,088	NSCC and each FICC Division calculates and collects Clearing Fund from its Members using a risk-based margin methodology. These amounts (a Member's "Required Fund Deposit") operate as the Member's margin, and the aggregate of all such Members' deposits is, collectively, the Clearing Fund, which operates as NSCC's/FICC (with respect to each division's) default fund. For NSCC, on September 5, 2017, the US cash equities markets moved to a T+2 settlement cycle. Accordingly, after that date, the clearing fund has been calculated to take into account the shortened settlement cycle.	
4.1.5	Prefunded - Aggregate Participant Contributions - Post-Haircut Posted		USD \$MM	49,418	12,553	11,106		
4.1.6	Prefunded - Other		USD \$MM	N/A	N/A	N/A		
4.1.7	Committed - Own/parent funds that are committed to address a participant default (or round of participant defaults)		USD \$MM	N/A	N/A	N/A		
4.1.8	Committed - Aggregate participant commitments to address an initial participant default (or initial round of participant defaults)		USD \$MM	N/A	N/A	N/A		
4.1.9	Committed - Aggregate participant commitments to replenish the default fund to deal with a subsequent participant default (or round of participant defaults) after the initial participant default (or round of participant defaults) has been addressed.		USD \$MM	N/A	N/A	N/A		
4.1.10	Committed - Other		USD \$MM	N/A	N/A	N/A		
<b>Disclosure 4.2 - Kccp - Quarter End</b>								
4.2.1	Kccp - Kccp need only be reported by those CCPs which are, or seek to be a "qualifying CCP" under relevant law.	Quarterly	USD \$MM	620	N/A	N/A		
<b>Disclosure 4.3 - Value of pre-funded default resources (excluding initial and retained variation margin) held for each clearing service</b>								
4.3.1	Cash deposited at a central bank of issue of the currency concerned	Pre Haircut	Quarterly/ Quarter End	USD \$MM	15,486	4,264	10,479	
		Post Haircut		USD \$MM	15,486	4,264	10,479	
4.3.2	Cash deposited at other central banks	Pre Haircut		USD \$MM	0	0	0	



Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes
					GSD	MBSD		
		Post Haircut		USD \$MM	0	0	0	
4.3.3	Secured cash deposited at commercial banks (including reverse repo)	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.4	Unsecured cash deposited at commercial banks	Pre Haircut		USD \$MM	500	125	500	See Explanatory Note from 4.1
		Post Haircut		USD \$MM	500	125	500	
4.3.4.2	Unsecured cash invested in Money Market Mutual Funds	Pre Haircut		USD \$MM	0	0	0	See Explanatory Note from 4.1
		Post Haircut		USD \$MM	0	0	0	
4.3.4.3	Unsecured cash invested in US Treasury Bills	Pre Haircut		USD \$MM	0	0	0	See Explanatory Note from 4.1
		Post Haircut		USD \$MM	0	0	0	
4.3.5	Non-Cash Sovereign Government Bonds - Domestic	Pre Haircut		USD \$MM	30,181	8,388	859	See Explanatory Note from 4.1
	Non-Cash Sovereign Government Bonds - Domestic; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	29,086	8,094	828	
4.3.6	Non-Cash Sovereign Government Bonds - Other	Pre Haircut	Quarterly/ Quarter End	USD \$MM	0	0	0	
	Non-Cash Sovereign Government Bonds - Other; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	0	0	0	
4.3.7	Non-Cash Agency Bonds	Pre Haircut		USD \$MM	4,706	89	0	See Explanatory Note from 4.1
	Non-Cash Agency Bonds; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	4,377	83	0	
4.3.8	Non-Cash State/municipal bonds	Pre Haircut		USD \$MM	0	0	0	
	Non-Cash State/municipal bonds; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	0	0	0	
4.3.9	Non-Cash Corporate bonds	Pre Haircut		USD \$MM	0	0	0	
	Non-Cash Corporate bonds; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	0	0	0	
4.3.10	Non-Cash Equities	Pre Haircut		USD \$MM	0	0	0	
	Non-Cash Equities; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	0	0	0	
4.3.11	Non-Cash Commodities - Gold	Pre Haircut		USD \$MM	0	0	0	
	Non-Cash Commodities - Gold; Reported as at quarter end; Pre-Haircut and Post-Haircut	Post Haircut		USD \$MM	0	0	0	

Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes
					GSD	MBSD		
4.3.12	Non-Cash Commodities - Other		Pre Haircut	USD \$MM	0	0	0	
	Non-Cash Commodities - Other; Reported as at quarter end; Pre-Haircut and Post-Haircut		Post Haircut	USD \$MM	0	0	0	
4.3.13	Non-Cash Commodities - Mutual Funds / UCITs		Pre Haircut	USD \$MM	0	0	0	
	Non-Cash Commodities - Mutual Funds / UCITs; Reported as at quarter end; Pre-Haircut and Post-Haircut		Post Haircut	USD \$MM	0	0	0	
4.3.14	Non-Cash Commodities - Other		Pre Haircut	USD \$MM	0	0	0	
	Non-Cash Commodities - Other; Reported as at quarter end; Pre-Haircut and Post-Haircut		Post Haircut	USD \$MM	0	0	0	
4.3.15	In total. Reported as at quarter end; Pre-Haircut and Post-Haircut		Pre Haircut	USD \$MM	50,872	12,866	11,838	
			Post Haircut	USD \$MM	49,448	12,566	11,807	

Disclosure 4.4 - Credit Risk Disclosures									
4.4.1	State whether the CCP is subject to a minimum "Cover 1" or "Cover 2" requirement in relation to total pre-funded default resources.		Quarterly		Cover 1	Cover 1	Cover 1		
4.4.2	For each clearing service, state the number of business days within which the CCP assumes it will close out the default when calculating credit exposures that would potentially need to be covered by the default fund.			Bus. Days	3	3	3	This is our risk horizon for liquidation and hedging of market risk.	
4.4.3	For each clearing service, the estimated largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions. (Previous 12 Months)			Peak Day/ Previous 12 Months	USD \$MM	2,531	3,597	2,993	Amounts correspond to largest Cover 1 ratio. This may not correspond to the largest stress loss amount observed during the look-back period.
				Mean Avg/ Previous 12 Months	USD \$MM	1,454	1,758	552	In November 2022, a rule filing related to GSD's stress testing program was approved by regulators, henceforth GSD results from December 2022 onwards are derived from a model that includes changes described in the rule filing. GSD ST results are the combined average of outputs before and after the described changes.
4.4.4	Report the number of business days, if any, on which the above amount (4.4.3) exceeded actual pre-funded default resources (in excess of initial margin).			Bus. Days	0	0	0		
4.4.5	The amount in 4.4.3 which exceeded actual pre-funded default resources (in excess of initial margin) (Previous 12 Months)			Amt Exceeded/ Previous 12 Months	USD \$MM	0	0	0	
4.4.6	For each clearing service, the actual largest aggregate credit exposure (in excess of initial margin) to any single participant and its affiliates (including transactions cleared for indirect participants) (Previous 12 Months)			Peak Day/ Previous 12 Months	USD \$MM	596	200	82	Amount represents Peak/Average VaR model back test results.
				Avg/ Previous 12 Months	USD \$MM	56	68	7	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
4.4.7	For each clearing service, the estimated largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any two participants and their affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions (Previous 12 Months)		Peak Day/ Previous 12 Months	USD \$MM	3,408	5,039	2,993	Amounts correspond to largest Cover 2 ratio. This may not correspond to the largest Cover-2 stress loss amount observed during the look-back period.
			Mean Avg/ Previous 12 Months	USD \$MM	2,455	2,888	781	In November 2022, a rule filing related to GSD's stress testing program was approved by regulators, henceforth GSD results from December 2022 onwards are derived from a model that includes changes described in the rule filing. GSD ST results are the combined average of outputs before and after the described changes.
4.4.8	Number of business days, if any, on which the above amount (4.4.7) exceeded actual pre-funded default resources (in excess of initial margin) and by how much.		Bus. Days	0	0	0	Total number of business days where the largest Cover 2 ratio per day exceeded 100% for the last 12 months of this test period. Excess amounts above pre-funded default resources (in excess of initial margin) corresponding to these business days are referenced below in 4.4.9 explanatory notes, when applicable.	
4.4.9	The amount in 4.4.7 which exceeded actual pre-funded default resources (in excess of initial margin) (Previous 12 Months)		Amt Exceeded/ Previous 12 Months	USD \$MM	0	0	0	
4.4.10	For each clearing service, what was the actual largest aggregate credit exposure (in excess of initial margin) to any two participants and their affiliates (including transactions cleared for indirect participants)? (Previous 12 Months)		Peak Day/ Previous 12 Months	USD \$MM	1,046	343	109	Amount represents Peak/Average VaR model back test results.
			Avg/ Previous 12 Months	USD \$MM	91	120	9	

**Disclosure 5.1 - Assets eligible as initial margin, and the respective haircuts applied**

5.1.1	Assets eligible as initial margin and the respective haircuts applied	Update as changes are made	Website/ Hyperlink	<a href="http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_gov_rules.pdf">http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_gov_rules.pdf</a>	<a href="http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_mbsd_rules.pdf">http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_mbsd_rules.pdf</a>	<a href="http://www.dtcc.com/~media/Files/Downloads/legal/rules/nsc_rule_s.pdf">http://www.dtcc.com/~media/Files/Downloads/legal/rules/nsc_rule_s.pdf</a>	GSD: Section: "SCHEDULE OF HAIRCUTS FOR ELIGIBLE CLEARING FUND SECURITIES" MBSD: Section: "SCHEDULE OF HAIRCUTS FOR ELIGIBLE CLEARING FUND SECURITIES" NSCC: Section: "PROCEDURE XV", "III. Collateral Value of Eligible Clearing Fund Securities"
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**Disclosure 5.2 - Assets Eligible for pre-funded participant contributions to the default resources, and the respective haircuts applied (if different from 5.1)**

5.2.1	Assets Eligible for pre-funded participant contributions to the default resources, and the respective haircuts applied (if different from 5.1)	Update as changes are made		See 5.1	See 5.1	See 5.1	
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**Disclosure 5.3 - Results of testing of haircuts**

5.3.1	Confidence interval targeted through the calculation of haircuts	Quarterly	Percentage	99.0%	99.0%	99.0%	
5.3.2	Assumed holding/liquidation period for the assets accepted		Bus. Days	3	3	3	See Explanatory Note from 4.4.2

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
5.3.3	Look-back period used for testing the haircuts			10+ years	10+ years	10+ years	For Treasury and Agencies the lookback period, "10+ years", starts Jan 1, 2008 and continues to the last day of this quarter tested & reported herewith. Similar to current scenario selection or retention approach, where Historic Stress Scenario Dates are selected from a timespan of more than 10 years (utilizing a fixed start date and extending the end date), or retained for all Historic Scenario Dates previously derived which are on or after Jan 1, 2008. For Mortgages, Historic Stress Scenarios are selected from a 10+ years look-back period starting in 2002 and applied to CUSIPs selected from the 3 months of the quarterly test period.
5.3.4	Number of days during the look-back period on which the fall in value during the assumed holding/liquidation period exceeded the haircut on an asset.		Bus. Days	Treasury total of 3 days. Mortgages total of 63 days. Agency 0 days.	Treasury total of 3 days. Mortgages total of 63 days. Agency 0 days.	Treasury total of 3 days. Mortgages total of 63 days. Agency 0 days.	See 5.1 for list of eligible assets and the respective haircuts applied. For Treasuries, based on the "10 years +" lookback period (including 2008 and onward), 1 days for 20 yrs. and 3 days for 30 yrs. tenors were observed, where a change in rate caused a breach of respective HC. The total day count for Treasuries is 3 (of which 1 days caused a breach for both tenors, 20 & 30 yrs.). For Mortgages there were 63 days in Q3 2023 where at least one breach occurred. In total, the stress return (loss) for 26 CUSIPs under two historic stress scenarios breached the current HC. For Agencies no breaches were observed under current HCs.

**Disclosure 6.1 - Total initial margin required split by house, client gross, client net and total (if not segregated)**

6.1.1	Total initial margin required split by house, client gross, client net and total (if not segregated)	House (Net)	Quarterly	USD \$MM	40,071	10,516	10,088	See Explanatory Note from 4.1.41 Not applicable. GSD/MBSD/NSCC does not hold client margin. See NSCC/FICC's Disclosure Frameworks, Principle 14 discussion.
		Client (Gross)		USD \$MM	N/A	N/A	N/A	
		Client (Net)		USD \$MM	N/A	N/A	N/A	
		Total		USD \$MM	40,071	10,516	10,088	

**Disclosure 6.2 - For each clearing service, total initial margin required, split by house and client (or combined total if not segregated)**

*Not applicable. GSD/MBSD/NSCC does not hold client margin. See NSCC/FICC's Disclosure Frameworks, Principle 14 discussion. For aggregate numbers, see 6.1.1 above.*

**Disclosure 6.3 - Initial Margin rates on individual contracts, where the CCP sets such rates**

6.3.1	Initial Margin rates on individual contracts where the CCP sets such rates	Update as changes are made		N/A	N/A	N/A	
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**Disclosure 6.4 - Type of initial margin model used (e.g. portfolio simulation or risk aggregation) for each clearing service and the key model design parameters for each initial margin model applied to that clearing service**

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
6.4.1	Type of initial margin model used (e.g. portfolio simulation or risk aggregation) for each clearing service and the key model design parameters for each initial margin model applied to that clearing service	Update as changes are made		Historical Simulation + Haircut	Historical Simulation + Haircut	Parametric VaR + Haircut		
<b>Disclosure 6.5 - Results of back-testing of initial margin. At a minimum, this should include, for each clearing service and each initial margin model applied to that clearing service</b>								
6.5.1	Number of times over the past twelve months that margin coverage held against any account fell below the actual mark-to-market exposure of that member account – based on daily back-testing results	Once-a-day/ Previous 12 Months	Quarterly	Count	219	147	43	
6.5.2	Number of observations ([Number of accounts * number of days])	Previous 12 Months		Count	30613	16262	31930	
6.5.3	Achieved coverage level [aggregate CCP-level backtest coverage]	Previous 12 Months		Percentage	99.28%	99.1%	99.86%	Aggregate CCP-level backtest coverage (SEC Mthly Back Test report)
6.5.4	Where breaches of initial margin coverage (as defined in 6.5(a)) have occurred, report on size of uncovered exposure	Peak Size/ Previous 12 Months		USD \$MM	417	173	1,162	Peak Coverage Level at CC Level over the last 12-month at the quarter-end
		Average Size/ Previous 12 Months	USD \$MM	33	16	32	Average magnitude of Backtest deficiencies over last 12 months	
<b>Disclosure 6.6 - Average Total Variation Margin Paid to the CCP by participants each business</b>								
6.6.1	Average Total Variation Margin Paid to the CCP by participants each business day	Average	Quarterly	USD \$MM	7,124	646	767	For GSD and MBSD, VM is a cash pass-through process across the Members; for NSCC, VM charges are included as part of the Clearing Fund requirements.  MTM debits were aggregated across all Members to reflect the variation margin paid to all Members.
<b>Disclosure 6.7 - Maximum total variation margin paid to the CCP on any given business day over the period</b>								
6.7.1	Maximum total variation margin paid to the CCP on any given business day over the period	Maximum	Quarterly	USD \$MM	9,508	1,953	2,205	See Explanatory Note from 6.6
<b>Disclosure 6.8 - Maximum aggregate initial margin call on any given business day over the period</b>								
6.8.1	Maximum aggregate initial margin call on any given business day over the period	Maximum	Quarterly	USD \$MM	4,308	1,586	4,356	Amount represents the largest aggregate deficit over amounts on deposit. This is the actual call made, to be reduced by any excess collateral that was held. Call amount would be inclusive of any intraday calls made.
<b>Disclosure 7.1 - Liquidity Risk</b>								
7.1.1	State whether the clearing service maintains sufficient liquid resources to 'Cover 1' or 'Cover 2'.		Quarterly/ Quarter End		Cover 1	Cover 1	Cover 1	
7.1.2	Size and composition of qualifying liquid resources for each clearing service; (a) Cash deposited at a central bank of issue of the currency concerned			USD \$MM	15,486	4,264	21,999	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
7.1.3	Size and composition of qualifying liquid resources for each clearing service; (b) Cash deposited at other central banks		USD \$MM	0	0	0	
7.1.4	Size and composition of qualifying liquid resources for each clearing service; (c) Secured cash deposited at commercial banks (including reverse repo)		USD \$MM	0	0	0	
7.1.5	Size and composition of qualifying liquid resources for each clearing service; (d) Unsecured cash deposited at commercial banks		USD \$MM	500	125	1,500	
		Repo Only	USD \$MM	0	0	0	
		Commercial Bank Deposits	USD \$MM	0	0	0	
		Money Market Funds	USD \$MM	0	0	0	
		US Treasury Bills	USD \$MM	0	0	0	
7.1.6	Size and composition of qualifying liquid resources for each clearing service; (e) secured committed lines of credit (ie those for which collateral/security will be provided by the CCP if drawn) including committed foreign exchange swaps and committed repos		USD \$MM	86,313	61,752	9,495	For FICC, amount represents the assigned total amount of rules-based facility, Capped Contingency Liquidity Facility ("CCLF") for the reported quarter. For NSCC, the amount represents a secured line of credit with a syndicate of lenders.
7.1.7	Size and composition of qualifying liquid resources for each clearing service; (f) unsecured committed lines of credit (ie which the CCP may draw without providing collateral/security)		USD \$MM	N/A	N/A	N/A	
7.1.8	Size and composition of qualifying liquid resources for each clearing service; (g) highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements even in extreme but plausible market conditions		USD \$MM	N/A	N/A	N/A	
7.1.9	Size and composition of qualifying liquid resources for each clearing service; (h) other		USD \$MM	N/A	N/A	700	For GSD and MBSD, the portfolio of a defaulting member, comprised of highly marketable collateral would also be available as a liquidity resource. Value and composition of that portfolio would vary by day and by member. For GSD/MBSD, amount represents the Repo Value of Underlying Securities.  NSCC's Supplemental Liquidity Deposit ("SLD") program provides for additional rules-based liquidity resources around monthly option expiry periods. Option expiry settlement cycles typically present elevated liquidity needs to NSCC. Members may be required to provide additional funding based on historical activity or may voluntarily pre-fund outside liquidity needs. Sizing of supplemental liquidity resources will vary based on the historical activity presented by NSCC's largest members as well as market dynamics during the current settlement cycle. Please see Supplemental Note for additional information.  Resources reported in Section 7.1 are as of 9/29/23 and do not correspond to the dates of the actual largest obligations.
7.1.10	State whether the CCP has routine access to central bank liquidity or facilities.			N/A	N/A	N/A	
7.1.11	Details regarding the schedule of payments or priority for allocating payments, if such exists, and any applicable rule, policy, procedure, and governance arrangement around such decision making.			N/A	N/A	N/A	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
<b>Disclosure 7.2 - Size and composition of any supplementary liquidity risk resources for each clearing service above those qualifying liquid resources above.</b>							
7.2.1	Size and composition of any supplementary liquidity risk resources for each clearing service above those qualifying liquid resources in 7.1	Quarterly/ Quarter End	USD \$MM	0	0	N/A	FICC has entered into uncommitted master repurchase agreements (“MRAs”) which it may look to as a liquidity source in addition to the resources discussed in the explanatory note from 7.1. These are not designated as qualifying liquid resources. Amounts available under the MRAs cannot be quantified.
<b>Disclosure 7.3 - Liquidity Risk</b>							
7.3.1	Estimated largest same-day and, where relevant, intraday and multiday payment obligation in total that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions	Forward looking/ Quarterly	USD \$MM	65,636	19,263	36,625	GSD/MBSD/NSCC did not experience a default event nor did any Member fail to satisfy payment obligations. See Supplemental Note.
7.3.2	Number of business days, if any, on which the above amount exceeded its qualifying liquid resources (identified as in 7.1, and available at the point the breach occurred), and by how much.	Quarterly	Bus. Days	0	0	0	See Supplemental Note
			USD \$MM	0	0	0	NSCC reflects multi-day settlement obligations. GSD obligations that are based on trades that are due to settle the following business day plus FOS. MBSD obligations are based on bilateral trades due to settle the next business day plus FOS.
7.3.4	Actual largest intraday and multiday payment obligation of a single participant and its affiliates (including transactions cleared for indirect participants) over the past twelve months; Peak day amount in previous twelve months	Previous 12 Months	USD \$MM	66,394	34,958	42,328	GSD/MBSD/NSCC did not experience a default event nor did any Member fail to satisfy payment obligations. See Supplemental Note.
7.3.5	Estimated largest same-day and, where relevant, intraday and multiday payment obligation in each relevant currency that would be caused by the default of any single participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions	Forward looking/ Quarterly	USD \$MM	65,636	19,263	36,625	See Explanatory Note from 7.3.1
7.3.6	Number of business days, if any, on which the above amounts exceeded its qualifying liquid resources in each relevant currency (as identified in 7.1 and available at the point the breach occurred), and by how much	Quarterly	Bus. Days	0	0	0	See Supplemental Note
			USD \$MM	0	0	0	
<b>Disclosure 12.1 - Percentage of settlements by value effected using a DvP, DvD or PvP settlement mechanism</b>							
12.1.1	Percentage of settlements by value effected using a DvP settlement mechanism	Quarterly	Percentage	100.0%	100.0%	100%	FICC data provided with respect to GSD GCF Repo and non-GCF Repo CCP services and MBSD clearing services.  NSCC data provided with respect to CNS, NSCC's CCP service, which uses a model 2 DvP Settlement mechanism.
12.1.2	Percentage of settlements by value effected using a DvD settlement mechanism		Percentage	N/A	N/A	N/A	
12.1.3	Percentage of settlements by value effected using a PvP settlement mechanism		Percentage	N/A	N/A	N/A	
<b>Disclosure 12.2 - Percentage of settlements by volume effected using a DvP, DvD or PvP settlement mechanism</b>							

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
12.2.1	Percentage of settlements by volume effected using a DvP settlement mechanism	Quarterly	Percentage	100.0%	100.0%	100%	FICC data provided with respect to GSD GCF Repo and non-GCF Repo CCP services and MBSD clearing services. NSCC data provided with respect to CNS, NSCC's CCP service, which uses a model 2 DvP Settlement mechanism.
12.2.2	Percentage of settlements by volume effected using a DvD settlement mechanism		Percentage	N/A	N/A	N/A	
12.2.3	Percentage of settlements by volume effected using a PVP settlement mechanism		Percentage	N/A	N/A	N/A	

Disclosure 13.1 - Quantitative information related to defaults							
13.1.1	Quantitative information related to defaults; Amount of loss versus amount of initial margin	Ad-hoc		N/A	N/A	N/A	
13.1.2	Quantitative information related to defaults; Amount of other financial resources used to cover losses			N/A	N/A	N/A	
13.1.3.1	Quantitative information related to defaults; Proportion of client positions closed-out			N/A	N/A	N/A	
13.1.3.2	Quantitative information related to defaults; Proportion of client positions ported			N/A	N/A	N/A	
13.1.4	Quantitative information related to defaults; Appropriate references to other published material related to the defaults			N/A	N/A	N/A	

Disclosure 14.1 - Total Client Positions held as a share of notional values cleared or of the settlement value of securities transactions							
14.1.1	Total Client Positions held in individually segregated accounts	Quarterly/ Quarter End		N/A	N/A	N/A	Not applicable for the US cash markets. GSD/MBSD/NSCC does not maintain separate "house" and "client" accounts for its Members. See NSCC and FICC Disclosure Frameworks, Principle 14 discussion.
14.1.2	Total Client Positions held in omnibus client-only accounts, other than LSOC accounts			N/A	N/A	N/A	
14.1.3	Total Client Positions held in legally segregated but operationally comingled (LSOC) accounts			N/A	N/A	N/A	
14.1.4	Total Client Positions held in comingled house and client accounts			N/A	N/A	N/A	

Disclosure 15.1 - General business risk							
15.1.1	Value of liquid net assets funded by equity	Annual	USD \$MM	374	778	Quarter-end	
15.1.2	Six months of current operating expenses		USD \$MM	159	237	Quarter-end	

Disclosure 15.2 - General business risk; Financial Disclosures							
15.2.1	Total Revenue	Annual	USD \$MM	371	602	Calculated on a trailing 12-month basis	
15.2.2	Total Expenditure		USD \$MM	337	494	Calculated on a trailing 12-month basis	
15.2.3	Profits		USD \$MM	34	108	Calculated on a trailing 12-month basis	
15.2.4	Total Assets		USD \$MM	63,712	25,365	Quarter-end	



Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
15.2.5	Total Liabilities		USD \$MM	63,338		24,587	Quarter-end
15.2.6	Explain if collateral posted by clearing participants is held on or off the CCP's balance sheet			Collateral is held on Balance Sheet		Collateral is held on Balance Sheet	
15.2.7	Additional items as necessary		USD \$MM	n/a		N/A	

Disclosure 15.3 - General business risk; Income breakdown							
15.3.1	Percentage of total income that comes from fees related to provision of clearing services	Annual	Percentage	99.6%	98.5%	Calculated on a trailing 12-month basis	
15.3.2	Percentage of total income that comes from the reinvestment (or rehypothecation) of assets provided by clearing participants		Percentage	n/a	N/A	Calculated on a trailing 12-month basis	

Disclosure 16.1 - Total cash (but not securities) received from participants, regardless of the form in which it is held, deposited or invested, split by whether it was received as initial margin or default fund contribution							
16.1.1	Total cash (but not securities) received from participants, regardless of the form in which it is held, deposited or invested, received as initial margin	Quarterly/Quarter End	USD \$MM	15,986	4,389	10,979	See Explanatory Note from 4.1
16.1.2	Total cash (but not securities) received from participants, regardless of the form in which it is held, deposited or invested, received as default fund contribution			0	0	0	

Disclosure 16.2 - How total cash received from participants (16.1) is held/deposited/invested, including:							
16.2.1	Percentage of total participant cash held as cash deposits (including through reverse repo)	Quarterly/Quarter End	Percentage	100.0%	100.0%	100.0%	
16.2.2	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at central banks of issue of the currency deposited		Percentage	96.9%	97.2%	95.4%	
16.2.3	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at other central banks		Percentage	N/A	N/A	N/A	
16.2.4	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at commercial banks (Secured, including through reverse repo)		Percentage	N/A	N/A	N/A	
16.2.5	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at commercial banks (Unsecured)		Percentage	3.1%	2.8%	4.6%	
16.2.6	Percentage of total participant cash held as cash deposits (including through reverse repo); in money market funds		Percentage	N/A	N/A	N/A	
16.2.7	Percentage of total participant cash held as cash deposits (including through reverse repo); in other forms		Percentage	N/A	N/A	N/A	
16.2.8	Percentage of total participant cash held as cash deposits (including through reverse repo); percentage split by currency of these cash deposits (including reverse repo) and money market funds by CCY; Specify local currency in comments		Percentage	100.0%	100.0%	100.0%	All investments are in USD
16.2.9	Weighted average maturity of these cash deposits (including reverse repo) and money market funds		Bus. Days	1	1	1	All investments are overnight
16.2.10	Percentage of total participant cash invested in securities; Domestic sovereign government bonds		Percentage	N/A	N/A	N/A	
16.2.11	Percentage of total participant cash invested in securities; Other sovereign government bonds		Percentage	N/A	N/A	N/A	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
16.2.12	Percentage of total participant cash invested in securities; Agency Bonds		Percentage	N/A	N/A	N/A	
16.2.13	Percentage of total participant cash invested in securities; State/municipal bonds		Percentage	N/A	N/A	N/A	
16.2.14	Percentage of total participant cash invested in securities; Other instruments		Percentage	N/A	N/A	N/A	
16.2.15	Percentage of total participant cash invested in securities; percentage split by currency of these securities; Specify local currency in comments;		Percentage	N/A	N/A	N/A	All investments are in USD
16.2.16	Weighted average maturity of cash received from participants invested in securities. The maturity should be reported as number of days.		Bus. Days	N/A	N/A	N/A	
16.2.17	Provide an estimate of the risk on the investment portfolio (excluding central bank and commercial bank deposits) (99% one-day VaR, or equivalent)		USD \$MM	<1	<1	<1	
16.2.18	State if the CCP investment policy sets a limit on the proportion of the investment portfolio that may be allocated to a single counterparty, and the size of that limit.			Yes	Yes	Yes	Size of limits will vary depending on credit rating and other factors.
16.2.19	State the number of times over the previous quarter in which this limit has been exceeded.		Count	0	0	0	

**Disclosure 16.3 - Rehypothecation of participant assets (ie non-cash)**

16.3.1	Total value of participant non-cash rehypothecated (Initial margin)		Quarterly/ Quarter End	USD \$MM	N/A	N/A	N/A	
16.3.2	Total value of participant non-cash rehypothecated (Default fund)			USD \$MM	0	0	0	Rehypothecation of clearing fund securities used for liquidity purposes only in the event of a default
16.3.3	Rehypothecation of participant assets (ie non-cash) by the CCP where allowed; initial margin; over the following maturities: Overnight/one day; one day and up to one week; One week and up to one month; One month and up to one year; One year and up to two years; Over two years	ON_1D		USD \$MM	N/A	N/A	N/A	
		1D_1W		USD \$MM	N/A	N/A	N/A	
		1W_1M		USD \$MM	N/A	N/A	N/A	
		1M_1Y		USD \$MM	N/A	N/A	N/A	
		1Y_2Y		USD \$MM	N/A	N/A	N/A	
		2Y+		USD \$MM	N/A	N/A	N/A	
16.3.4	Rehypothecation of participant assets (ie non-cash); default fund; over the following maturities: Overnight/one day; one day and up to one week; One week and up to one month; One month and up to one year; One year and up to two years; Over two years	ON_1D		USD \$MM	0	0	0	Rehypothecation of clearing fund securities used for liquidity purposes only in the event of a default
		1D_1W		USD \$MM	0	0	0	
		1W_1M		USD \$MM	0	0	0	
		1M_1Y		USD \$MM	0	0	0	
				USD \$MM	0	0	0	

Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes
					GSD	MBSD		
		1Y_2Y		USD \$MM	0	0	0	
		2Y+		USD \$MM	0	0	0	
<b>Disclosure 17.1 - Operational availability target for the core system(s) involved in clearing (whether or not outsourced) over specified period for the system</b>								
17.1.1	Operational availability target for the core system(s) involved in clearing (whether or not outsourced) over specified period for the system		Quarterly	Percentage	99.6%	99.6%	99.6%	This target and the actual results below are calculated at the individual product-line level and then averaged across all of the systems identified below, in accordance with the established calculation for the applicable SLA.
<b>Disclosure 17.2 - Actual availability of the core system(s) over the previous twelve month period</b>								
17.2.1	Actual availability of the core system(s) over the previous twelve month period		Quarterly	Percentage	99.9%	N/A	99.6%	Availability is calculated across multiple systems. Specifically, CMU, CNS, NSCC Risk Management, FICC Risk Management, GSD, MBSD and Trade Capture.
<b>Disclosure 17.3 - Total number of failures</b>								

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
17.3.1	Total number of failures and duration affecting the core system(s) involved in clearing over the previous twelve month period (Duration of Failure)	Quarterly	Count / hh:mm:ss	9 / 13:52:00			<p>Regulation Systems Compliance and Integrity (Regulation SCI) events for NSCC, GSD, and MBSD over the previous twelve month period are reviewed for Disclosure 17.3 reporting. Regulation SCI events that impact core systems used in clearing that enable the acceptance and novation of trades, and enable the calculation of margin and settlement obligations are assessed by Risk Management, Product Management, Regulation SCI personnel, and Legal to confirm total number of incidents and duration of failures. Incidents that do not result in a direct business impact to clients are not reported as a failure for Disclosure 17.3.</p> <p>During Q3, duplicate valued settlement transactions were ingested, creating out of balance conditions for clients. Executing reversals to remediate this condition delayed both the NSCC output from night cycle by approximately 6 hours as well as the NSCC Clearing Fund requirements by 58 minutes. Although night cycle was delayed, NSCC maintained its ability to accept transactions. Therefore, the availability calculation is limited to the 58 minutes. In Q2 2023, there were three instances where Clearing Fund Letters breached the SLA, two times within NSCC for 18 minutes and 13 minutes and one time within GSD for 52 minutes. During Q1 2023, processing issues were encountered on DTCC's mainframe impacting ATP and other systems for 4 hours and 34 minutes. In Q4 2022, on two separate occasions, Clearing Fund Letters were regenerated after the client delivery SLA time by 2 hours and 10 minutes and then 8 minutes. In another instance, a network disruption caused the delay of settling bank acknowledgement by 1 hour and 54 minutes. Manual processing caused the unavailability of intraday VaR calculations for 2 hours and 45 minutes.</p>
<b>Disclosure 17.4 - Recovery time objective(s)</b>							
17.4.1	Recovery time objective(s) (e.g. within two hours)	Quarterly	Time	Within 2 Hours	Within 2 Hours	Within 2 Hours	Recovery time objective is within 2 hours.
<b>Disclosure 18.1 - Number of clearing members, by clearing service</b>							<p><i>For GSD, there are Broker/Dealers, Government Sponsored Entities, Banks, and Hedge Funds</i></p> <p><i>For MBSD, there are Broker/Dealers, Hedge Fund, Mortgage Companies, Government Sponsored Entities, Registered Investment Companies, etc.</i></p> <p><i>For NSCC there are Broker/Dealers, certain stock exchanges (for omnibus account reporting), and one CSD.</i></p>
18.1.1.1	Number of general clearing members	Quarterly/ Quarter End	Count	140	74	66	FICC does not distinguish membership categories between members that clear for others and self-clearing. Accordingly, the total number of FICC members are reported here.

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
18.1.1.2	Number of direct clearing members		Count	0	0	83	
18.1.1.3	Number of others category (Describe in comments)		Count	0	0	0	Numbers do not include types of members that are not eligible for CCP services: GSD Comparison-Only members, MBSD Electronic Pool Notification (EPN)-only members, and NSCC has several limited membership categories that are not reported here.
18.1.2.1	Number of central bank participants		Count	0	0	0	
18.1.2.2	Number of CCP participants		Count	0	0	0	
18.1.2.3	Number of bank participants		Count	46	15	14	
18.1.2.4	Number of other participants (Describe in comments)		Count	94	59	135	Includes Broker/dealers, Stock Exchanges, CSD's and Trust members. Excludes Banks.
18.1.3.1	Number of domestic participants		Count	97	70	146	
18.1.3.2	Number of foreign participants		Count	43	4	3	US Branches/Agencies of Non US legal entities will be considered Non-US (foreign)

Disclosure 18.2 - Open Position Concentration								
18.2.1	For each clearing service with ten or more members, but fewer than 25 members; Percentage of open positions held by the largest five clearing members, including both house and client, in aggregate	Average End of Day	Quarterly	Percentage	N/A	N/A	N/A	
		Peak End of Day		Percentage	N/A	N/A	N/A	
18.2.2	For each clearing service with 25 or more members; Percentage of open positions held by the largest five clearing members, including both house and client, in aggregate	Average End of Day		Percentage	27.17%	48.74%	37.23%	
		Peak End of Day		Percentage	29.15%	51.74%	41.38%	
18.2.3	For each clearing service with 25 or more members; Percentage of open positions held by the largest ten clearing members, including both house and client, in aggregate	Average End of Day		Percentage	42.7%	71.46%	54.8%	
		Peak End of Day		Percentage	44.04%	73%	58.65%	

**Disclosure 18.3 - Initial Margin Concentration**

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
18.3.1	For each clearing service with ten or more members, but fewer than 25 members; Percentage of initial margin posted by the largest five clearing members, including both house and client, in aggregate	Quarterly	Average End of Day	Percentage	N/A	N/A	N/A	Under NSCC's and each of FICC Division's current rules and structure, they do not maintain separate Guaranty Funds. NSCC and each FICC Division collect Clearing Fund deposits from their Members using a risk-based margin methodology. These amounts operate, individually, as the Member's margin, and the aggregate of all such Members' deposits* is referred to, collectively, as the Clearing Fund, which operates as NSCC's and each of FICC Division's default fund. * Member's deposits include excess deposits exceeding the requirement that can be withdrawn by members.
	Peak End of Day		Percentage	N/A	N/A	N/A		
18.3.2	For each clearing service with 25 or more members; Percentage of initial margin posted by the largest five clearing members, including both house and client, in aggregate	Quarterly	Average End of Day	Percentage	35.39%	46.32%	32.25%	
	Peak End of Day		Percentage	36.81%	49.37%	41.15%		
18.3.3	For each clearing service with 25 or more members; Percentage of initial margin posted by the largest ten clearing members, including both house and client, in aggregate	Quarterly	Average End of Day	Percentage	52.86%	65.03%	48.77%	
	Peak End of Day		Percentage	54.55%	67.91%	57.42%		

Disclosure 18.4 - Segregated Default Fund Concentration							
18.4.1	For each segregated default fund with ten or more members, but fewer than 25 members; Percentage of participant contributions to the default fund contributed by largest five clearing members in aggregate	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	See Explanatory Note from 18.3
18.4.2	For each segregated default fund with 25 or more members; Percentage of participant contributions to the default fund contributed by largest five clearing members in aggregate	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	
18.4.3	For each segregated default fund with 25 or more members; Percentage of participant contributions to the default fund contributed by largest ten clearing members in aggregate	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	

Disclosure 19.1 - Tiered participation arrangements, measures of concentration of client clearing							
19.1.1	Number of clients (if known)	Quarterly/ Quarter End	Count	N/A	N/A	N/A	See Explanatory Note from 14.1
19.1.2	Number of direct members that clear for clients	Quarterly/ Quarter End	Count	N/A	N/A	66	NSCC: Number denotes members that clear for other Broker/Dealers.
19.1.3.1	Percent of client transactions attributable to the top five clearing members (if CCP has 10+ clearing members); Peak	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	See Explanatory Note from 14.1
19.1.3.2	Percent of client transactions attributable to the top ten clearing members (if CCP has 10+ clearing members); Average	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	See Explanatory Note from 14.1
19.1.4.1	Percent of client transactions attributable to the top five clearing members (if CCP has 25+ clearing members); Peak	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	See Explanatory Note from 14.1
19.1.4.2	Percent of client transactions attributable to the top ten clearing members (if CCP has 25+ clearing members); Average	Quarterly/ Quarter End	Percentage	N/A	N/A	N/A	See Explanatory Note from 14.1

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
<b>Disclosure 20.1 - FMI Links, Value of Trades</b>								
20.1.1	Value of trades cleared through each link – as a share of total trade values/total notional values cleared in that service	Quarterly	USD \$MM				NSCC does not maintain any interoperable links as described by these items. CDS Clearing and Depository Services, Inc. (the Canadian CSD) is a full service member of NSCC, and is subject to margining and the other requirements of membership as a member. The CDS relationship is described in NSCC’s Disclosure Framework under Principle 20. The GSD/CME Cross-Margining Agreement, which is described in GSD’s disclosure with respect to PFMI Principle 20, is not an interoperable link as described by sections 20.1 through 20.6 of the quantitative disclosure.	
<b>Disclosure 20.2 - FMI Links, Initial Margin or equivalent financial resources provided</b> <b>Disclosure 20.3 - FMI Links, Initial Margin or equivalent financial resources collected</b> <b>Disclosure 20.4 - FMI Links, Results of Back-testing coverage</b> <b>Disclosure 20.5 - FMI Links, Additional pre-funded financial resources provided to</b> <b>Disclosure 20.6 - FMI Links, Additional pre-funded financial resources collected from</b> <b>Disclosure 20.7 - FMI Links, Cross Margining</b>							<i>See Explanatory Note from 20.1</i> <i>See Explanatory Note from 20.1</i> <i>See Explanatory Note from 20.1</i> <i>See Explanatory Note from 20.1</i> <i>See Explanatory Note from 20.1</i>	
20.7.1	Value of trades subject to cross margining, by clearing service, as a percentage of total trade values/total notional values cleared	Quarter End	Percentage	16.8%	N/A	N/A	NSCC does not maintain any cross margining arrangements. NSCC does maintain an arrangement with OCC for the settlement of exercised and assigned options, which is described in NSCC’s Disclosure Framework under Principle 20. GSD has a cross-margining arrangement with the Chicago Mercantile Exchange. For GSD under section 20.7, disclosures are quarter end.	
20.7.2	Reduction in total initial margin held by the CCP as a result of cross margining, as a percentage of total initial margin that would otherwise have been held.		Percentage	0.07%	N/A	N/A		
<b>Disclosure 23.1 - Disclosure of rules, key procedures, and market data; Average Daily Volumes</b>								
23.1.1	Average Daily Volumes by Asset Class, CCY and OTC/ETD	Quarterly	OTC		460,829	11,987	90,182,342	For GSD/MBSD and NSCC, average daily volume data is based on sides (as opposed to trades). For NSCC: Includes Exchange-based and OTC trades. Omnibus Accounts are excluded for NSCC.
			NSCC_Exchange		N/A	N/A	102,050,726	
23.1.2	Average Notional Value of trades cleared by Asset Class, CCY and OTC/ETD	Quarterly	OTC	USD \$MM	6,030,771	330,241	1,272,528	
			NSCC_Exchange	USD \$MM	N/A	N/A	615,024	
<b>Disclosure 23.2 - Disclosure of rules, key procedures, and market data; Non-Yet-Settled</b>								

Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes	
					GSD	MBSD			
23.2.1	Gross notional outstanding/total settlement value of novated but not-yet settled securities transactions by Asset Class, CCY and OTC/ETD		CDS_OTC	Quarterly/ Quarter End	USD \$BN	1,699	381	230	Values located in the FICC and NSCC financial statements, under the Notes to Financial Statements – Guarantees <a href="http://www.dtcc.com/legal/financial-statements">http://www.dtcc.com/legal/financial-statements</a> .
<b>Disclosure 23.3 - Disclosure of rules, key procedures, and market data; Execution Facility</b>									
23.3.1	Average daily volumes submitted by Execution facility or matching/confirmation venue			Quarterly		N/A	N/A	See 23.1	See comment from 23.1
23.3.2	Notional contract values submitted by Execution facility or matching/confirmation venue				USD \$MM	N/A	N/A	See 23.1	
<b>Disclosure PRC 1 - Payment Risk Committee Disclosure 1 - Concentration Measures</b>									
	Initial Margin Required		Top 3 Members	Quarterly/ Quarter End	USD \$MM	8,518	3,868	2,379	
24.1	Number of Members with x% of Initial Margin Requirement		> 20%		Count	0	0	0	Aggregated by deposit account.
			15% to 20%		Count	0	1	0	
			10% to 15%		Count	0	1	0	
			5% to 10%		Count	4	3	5	
			< 5%		Count	177	101	144	
24.2	Total Initial Margin Posted (Market Value)		Total		USD \$MM	50,453	12,645	11,133	
<b>Disclosure PRC 2 - Payment Risk Committee Disclosure 2 - Initial Margin Detail</b>									
	Initial Margin Breakdown by Component		VaR / Volatility	Quarterly/ Quarter End	USD \$MM	32,723	8,591	5,919	The Value-at-Risk (VaR) and Volatility components are based on the potential price fluctuations of unsettled positions.
			Coverage Component (CC)		USD \$MM	N/A	N/A	11	With the implementation of SVaR for FICC, Margin Proxy is now used as a backup VaR methodology in the event of a significant vendor data disruption. The Coverage Component is a back-test-like component that is meant to address potential model deficiencies. The Coverage Component is designed by NSCC to mitigate the risks associated with a Member's Required Deposit being insufficient to cover projected liquidation losses to the Coverage Target by adjusting a Member's Required Deposit towards the Coverage Target.
			Margin Liquidity Deposit (MLA)		USD \$MM	934	337	532	The Margin Liquidity Adjustment Charge (MLA), addresses the risk presented to the Clearing Corp when a Member's portfolio contains large Net Unsettled Positions in the particular group of securities with a similar risk profile or in a particular asset type.



Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes
					GSD	MBSD		
		Blackout Period Exposure Adjustment		USD \$MM	23	N/A	N/A	Blackout Period Exposure: Refers to the exposure to GSD and Reverse Repo participants of the potential overvaluation of MBS Collateral in GCF Repos during the Blackout Period. An adjustment to Clearing Fund Requirements (increase to Repo participants and decrease to Reverse Repo participants) is made based on MBS positions in Member's GCF portfolios during the Blackout Period. The adjustment is based on the average realized pay-down rate transactions. The adjustment is made during the Blackout Period, the first 5 to 7 business days each month.
		CME Cross Margin		USD \$MM	-30	N/A	N/A	GSD has a cross-margining arrangement with the Chicago Mercantile Exchange. The amount represents the aggregate margin savings for common members who elect to participate in the cross-margining arrangement.
		Margin Req. Differential (MRD)		USD \$MM	N/A	N/A	2,059	The NSCC MRD is designed to address position-variability risk by estimating the shortfall of end-of-day VaR and mark-to-market compared with the next day's intraday risk and the risk that the next margin call will not be satisfied.
		Mark-to-Market (MtM)		USD \$MM	N/A	N/A	635	As a cash market CCP, NSCC uses a continuous net system where securities within the settlement system are marked daily to the prior night's closing price. Net portfolio debits per Member are collected as part of the Member's Required Deposit; net portfolio credits are not included. Value also includes 'When Issues MtM'. In FICC, GSD and MBSD maintain a pass-through MtM process whereby it collects MTM debits from those Members with debits and passes those to the Members with MTM credits.
		Special Charge		USD \$MM	6,420	1,583	76	GSD includes: Back Test Charges, Intraday Supp. Fund Deposit, Minimum Deposit, and Special Charges MBSD includes: Back Test Charges, Intraday MTM Charges, Intraday VaR Charges, Adequate Assurance, and Special Charges NSCC includes: Back Test Charges, Adequate Assurance, Intraday Mark-to-Market Charge, and Intraday VaR Charge.
		Other Charges		USD \$MM	0	5	855	GSD includes: Minimum Requirement Adjustments, Excess Capital Premium, and Falling Below Minimum Requirement MBSD includes: 6 Day Fails Interest, Excess Capital Premium, Falling Below Minimum Requirement, and Minimum Requirement Adjustments NSCC includes: Family Issued Securities, CNS Fails, Non-CNS Requirements, CF Premium, and Minimum Requirement Adjustments