



FIXED INCOME CLEARING CORPORATION
AND
NATIONAL SECURITIES CLEARING CORPORATION
PUBLIC QUANTITATIVE DISCLOSURES FOR CENTRAL COUNTERPARTIES

Q4 2021

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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**

Q4 2021 SUPPLEMENTAL EXPANATORY NOTE

Management Note

The U.S. equity markets continued to surge in the fourth quarter despite a weaker November, when fears over Omicron variant of COVID-19 and the speed of the Federal Reserve's asset tapering had weighed. The S&P 500 Index reached a new all-time high in late-December as these worries had largely subsided, and data continued to indicate the overall economy remains stable with strong corporate earnings. The U.S. 10-year Treasury yield was little changed for the fourth quarter of 2021, from 1.49% to 1.51%. The yield peaked at 1.7% in October and remained elevated in November amid high inflation and expectations of the monetary policy tightening. The yield declined to 1.36% in early December amid fears over the Omicron variant. The U.S. Treasury curve flattened as the U.S. 2-year yield increased from 0.28% to 0.73%.

Clearing Fund Backtesting Results

At DTCC, backtesting is conducted to measure the sufficiency of the overall Clearing Fund coverage by comparing a Member's Required Deposit to the 3-day observed P&L for the Member's portfolio and aggregated into the CCP-level backtesting coverage data that is provided in this disclosure. The backtesting assesses the adequacy of a 3-day liquidation period assumption in the event of Member default, and all VaR models at DTCC are currently calibrated at a minimum of 99% coverage.

FICC-Mortgage-Backed Securities Division (MBSD)

At the end of the fourth quarter of 2021, MBSD's 12-month backtesting coverage level was 99.9%. The 1-month coverage ratio at MBSD was 99.7% for October, 99.9% for November, and 100.0% for December, reflecting the continued stabilization in the fixed income markets. The median backtesting deficiency for the quarter was \$531 thousand.

FICC-Government Securities Division (GSD)

At the end of the fourth quarter of 2021, GSD's 12-month backtesting coverage level was 99.6%. The 1-month coverage ratio at GSD was 99.5% for October, 99.3% for November, and 99.6% for December, reflecting the continued stabilization in the fixed income markets. The median backtesting deficiency for the quarter was \$1.3 million.

National Securities Clearing Corporation (NSCC)

At the end of the fourth quarter of 2021, NSCC's 12-month backtesting coverage level was 99.7%, with the 1-month coverage ratio for October at 99.7%, 99.8% for November, and 99.7% for December. The median backtesting deficiency for the quarter was \$5.6 million. The largest deficiency incurred during the quarter was mainly driven by a concentrated security exhibiting idiosyncratic risk.

NSCC's volatility charge relies on a parametric VaR methodology for liquid equities and applies haircuts to other eligible products. NSCC's VaR methodology has both equal weighted and front weighted historical return calibrations. The VaR construct allows NSCC to address dynamic changes in equity risk premiums and idiosyncratic risks typically linked to uncertainty about economic fundamentals, such as economic outlook, earnings forecasts, interest rates and central bank actions.

Q4 2021 SUPPLEMENTAL EXPLANATORY NOTE CONT'D

Liquidity Results

Year-to-date 2021, the most significant liquidity exposures arise and coincide with options expiry dates. 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 has a diversified set of liquidity resources and uses metrics to assess the implications for sizing NSCC's liquidity resources.

NSCC received regulatory approval of a rule change to collect, when applicable, daily Supplemental Liquidity Deposits ("SLD") to NSCC's Clearing Fund on June 20, 2021 and implemented it on June 23, 2021. An SLD payment obligation is determined if 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.

No shortfall was observed for Q4. The most significant liquidity exposures during the quarter coincided with options expiry dates which continue to have the largest impact on the liquidity profile. 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 Q4. SLD is part of NSCC's QLR that 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. With recent SLD rule change, NSCC is able to address its liquidity exposure each business day based on Members' settlement activity and limit liquidity shortfalls due to forecasts of upcoming liquidity exposures based on historical activity. The SLD rule is Rule 4A in the NSCC rulebook that can be accessed via https://www.dtcc.com/~media/Files/Downloads/legal/rules/nsccl_rules.pdf. Full text of the SLD filings may be obtained by visiting the DTCC website at www.dtcc.com/legal/sec-rule-filings.

The SLD collections fully mitigated NSCC liquidity exposure. The modified SLD rule allows intraday cash collections and also start-of-day SLD collections. For risk reporting and alignment to the QLR stress assumptions, any start-of-day SLD collections are reported as QLR shortfalls for that business day and do not account for additional liquidity resources in line with the additional option activity when NSCC assumes the trade guaranty from the OCC.

At FICC, there were no payment obligations greater than qualifying liquid resources during the quarter.

Disclosure Reference	Disclosure Description		Frequency	Data Type	FICC		NSCC	Explanatory Notes	
					GSD	MBSD			
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									
4.1.1	Prefunded - Own Capital Before		Quarterly/ Quarter End	USD \$MM	66.7		106.0	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	20,428	9,265	8,261	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.	
4.1.5	Prefunded - Aggregate Participant Contributions - Post-Haircut Posted			USD \$MM	28,269	11,239	14,734		
4.1.6	Prefunded - Other			USD \$MM	N/A	N/A	N/A	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.	
4.1.7	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		
Disclosure 4.2 - Kccp - Quarter End									
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	618	N/A	N/A		
Disclosure 4.3 - Value of pre-funded default resources (excluding initial and retained variation margin) held for each clearing service									
4.3.1	Cash deposited at a central bank of issue of the currency concerned	Pre Haircut	Quarterly/ Quarter End	USD \$MM	7,990	2,007	11,377		
		Post Haircut		USD \$MM	7,990	2,007	11,377		
4.3.2	Cash deposited at other central banks	Pre Haircut		USD \$MM	0	0	0		
		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	521	145	821		See Explanatory Note from 4.1
		Post Haircut		USD \$MM	521	145	821		
4.3.4.2	Unsecured cash invested in Money Market Mutual Funds	Pre Haircut		USD \$MM	1,243	670	1,744		See Explanatory Note from 4.1
		Post Haircut		USD \$MM	1,243	670	1,744		
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	17,265	7,975	821	See Explanatory Note from 4.1		
		Post Haircut	USD \$MM	16,634	7,749	798			

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
Disclosure 4.3 - Value of pre-funded default resources (excluding initial and retained variation margin) held for each clearing service - Cont'd								
4.3.6	Non-Cash Sovereign Government Bonds - Other	Pre Haircut	Quarterly/ Quarter End	USD \$MM	0	0	0	See Explanatory Note from 4.1
		Post Haircut		USD \$MM	0	0	0	
4.3.7	Non-Cash Agency Bonds	Pre Haircut		USD \$MM	2,045	723	0	
		Post Haircut		USD \$MM	1,902	672	0	
4.3.8	Non-Cash State/municipal bonds	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.9	Non-Cash Corporate bonds	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.10	Non-Cash Equities	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.11	Non-Cash Commodities - Gold	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.12	Non-Cash Commodities - Other	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.13	Non-Cash Commodities - Mutual Funds / UCITs	Pre Haircut		USD \$MM	0	0	0	
		Post Haircut		USD \$MM	0	0	0	
4.3.14	Non-Cash Commodities - Other	Pre Haircut		USD \$MM	0	0	0	
		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	29,064	11,520	14,762	
		Post Haircut		USD \$MM	28,290	11,243	14,739	
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	2,729	4,542	2,440	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	1,484	3,429	523	In October 2020, a rule filing related to MBSB's stress testing program was approved by regulators, henceforth MBSB results from October onwards are derived from a model that includes changes described in the rule filing.
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	1	1	928	Amount represents Peak/Average VaR model back test results.
		Avg/ Previous 12 Months		USD \$MM	1	1	36	
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	4,378	7,599	3,209	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	2,179	5,710	739	In October 2020, a rule filing related to MBSB's stress testing program was approved by regulators, henceforth MBSB results from October onwards are derived from a model that includes changes described in the rule filing.

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSB			
Disclosure 4.4 - Credit Risk Disclosures - Cont'd								
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.	Quarterly	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.	
4.4.9	The amount in 4.4.7 which exceeded actual pre-funded default resources (in excess of initial margin) (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		Peak Day/ Previous 12 Months	USD \$MM	1	2	1,365	Amount represents Peak/Average VaR model back test results.
		Avg/ Previous 12 Months	USD \$MM	1	1	47		
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	http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_gov_rules.pdf	http://www.dtcc.com/~media/Files/Downloads/legal/rules/ficc_mbsd_rules.pdf	http://www.dtcc.com/~media/Files/Downloads/legal/rules/nscc_rules.pdf	GSD: Section: "SCHEDULE OF HAIRCUTS FOR ELIGIBLE CLEARING FUND SECURITIES" MBSB: Section: "SCHEDULE OF HAIRCUTS FOR ELIGIBLE CLEARING FUND SECURITIES" NSCC: Section: "PROCEDURE XV", "III. Collateral Value of Eligible Clearing Fund Securities"	
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		
Disclosure 5.3 - Results of testing of haircuts								
5.3.1	Confidence interval targeted through the calculation of haircuts	Quarterly	Percentage	99%	99%	99%	See Explanatory Note from 4.4.2	
5.3.2	Assumed holding/liquidation period for the assets accepted		Bus. Days	3	3	3		
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 20 days. Mortgages total of 26 days. Agency 0 days.	Treasury total of 20 days. Mortgages total of 26 days. Agency 0 days.	Treasury total of 20 days. Mortgages total of 26 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), 4 days for 20 yrs. and 20 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 20 (of which 4 days caused a breach for both tenors, 20 & 30 yrs.). For Mortgages there were 26 days in Q4 2021 where at least one breach occurred. In total, the stress return (loss) for 4 CUSIPs under one 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	20,428	9,265	8,261	See Explanatory Note from 4.1.4 ¹ Not applicable. GSD/MBSB/NSCC does not hold client margin. See NSCC/FICC's Disclosure Frameworks, Principle 14 discussion.
		Client (Gross)	USD \$MM	n/a ¹	n/a ¹	n/a ¹		
		Client (Net)	USD \$MM	n/a ¹	n/a ¹	n/a ¹		
		Total	USD \$MM	20,428	9,265	8,261		

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
Disclosure 6.2 - For each clearing service, total initial margin required, split by house and client (or combined total if not segregated)							<i>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.</i>	
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		
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								
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		
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								
6.5.1	Number of times over the past twelve months that margin coverage held against any account fell below the actual marked-to-market exposure of that member account – based on daily back-testing results	Once-a-day/ Previous 12 Months	Quarterly	Count	106	21	104	
6.5.2	Number of observations ((Number of accounts * number of days))	Previous 12 Months		Count	29,367	16,047	31,585	
6.5.3	Achieved coverage level [aggregate CCP-level backtest coverage]	Previous 12 Months		Percentage	99.6%	99.9%	99.7%	
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	178	13	1,061	
6.5.5	Where breaches of initial margin coverage (as defined in 6.5(a)) have occurred, report on size of uncovered exposure	Average Size/ Previous 12 Months		USD \$MM	10	1	29	
Disclosure 6.6 - Average Total Variation Margin Paid to the CCP by participants each business								
6.6.1	Average Total Variation Margin Paid to the CCP by participants each business day	Average	Quarterly	USD \$MM	3,399	1,061	962	For GSD, VM is a cash pass-through process across the members; for MBSD and 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.
Disclosure 6.7 - Maximum total variation margin paid to the CCP on any given business day over the period								
6.7.1	Maximum total variation margin paid to the CCP on any given business day over the period	Maximum	Quarterly	USD \$MM	8,760	2,541	4,254	See Explanatory Note from 6.6
Disclosure 6.8 - Maximum aggregate initial margin call on any given business day over the period								
6.8.1	Maximum aggregate initial margin call on any given business day over the period	Maximum	Quarterly	USD \$MM	3,352	1,286	6,868	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.

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
Disclosure 7.1 - Liquidity Risk								
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	7,990	2,007	22,350		
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)		Repo Only	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		Commercial Bank Deposits	USD \$MM	521	145	1,866	
			Money Market Funds	USD \$MM	1,243	670	1,744	
			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	92,825	72,198	9,300	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	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>		
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	19,310	8,698	821	Amounts include Clearing Fund securities.	
7.1.9	Size and composition of qualifying liquid resources for each clearing service; (h) other		USD \$MM	0	0	0	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. At quarter end, GSD observed \$40,635MM and MBSD observed \$1,098MM in repo value of Underlying Securities. 12/31/21 was not an MBSD class-settlement day. For NSCC, Supplemental Liquidity Deposit ('SLD') program provides for additional rules-based liquidity resources. As of 12/31/21 there were no SLD deposits on hand. Please see Supplemental Note for additional information. Resources reported in Section 7.1 are as of 12/31/21 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.		<i>N/A</i>	<i>N/A</i>	<i>N/A</i>			
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.		<i>N/A</i>	<i>N/A</i>	<i>N/A</i>			

Disclosure 7.2 - Size and composition of any supplementary liquidity risk resources for each clearing service above those qualifying liquid resources above.

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	GSD can use collateralized loans from clearing banks as additional liquidity resources.	MBSD can use collateralized loans from clearing banks as additional liquidity resources.	NSCC can use collateralized loans/equity repo utilizing the cash market securities that were destined to defaulter as collateral.	
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Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
Disclosure 7.3 - Liquidity Risk							
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	57,849	27,086	37,604	For GSD and MBSD, values are estimated liquidity obligations post netting that are based on trades that are due to settle the following business day. For NSCC, 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.
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
7.3.3			USD \$MM	0	0	0	
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	71,404	54,346	40,680	GSD/MBSD/NSCC did not utilize any of its liquidity resources to cover any member payment obligations. NSCC reflects multi-day settlement obligations. GSD obligations that are based on trades that are due to settle the following business day. MBSD obligations are based on bilateral trades due to settle the next business day.
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	57,849	27,086	37,604	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
7.3.7			USD \$MM	0	0	0	
Disclosure 12.1 - Percentage of settlements by value effected using a DvP, DvD or PvP settlement mechanism							
12.1.1	Percentage of settlements by value effected using a DvP settlement mechanism	Quarterly	Percentage	100%	100%	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	
Disclosure 12.2 - Percentage of settlements by volume effected using a DvP, DvD or PvP settlement mechanism							
12.2.1	Percentage of settlements by volume effected using a DvP settlement mechanism	Quarterly	Percentage	100%	100%	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 Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
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. GSD/MBSD/NSCC does not maintain separate "house" and "client" accounts for its Members. See NSCC/FICC's 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								
						Values representative of the 2020 Annual Audited Financial Statements. Values will remain static until publication of the 2021 Annual Audited Financial Statements (Q4 2021).		
15.1.1	Value of liquid net assets funded by equity	Annual	USD \$MM	329	570			
15.1.2	Six months of current operating expenses		USD \$MM	139	197			
Disclosure 15.2 - General business risk; Financial Disclosures								
						Values representative of the 2020 Annual Audited Financial Statements. Values will remain static until publication of the 2021 Annual Audited Financial Statements (Q4 2021).		
15.2.1	Total Revenue	Annual	USD \$MM	310	572			
15.2.2	Total Expenditure		USD \$MM	295	409			
15.2.3	Profits		USD \$MM	16	163			
15.2.4	Total Assets		USD \$MM	40,197	27,585			
15.2.5	Total Liabilities		USD \$MM	39,866	27,015			
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								
						Values representative of the 2020 Annual Audited Financial Statements. Values will remain static until publication of the 2021 Annual Audited Financial Statements (Q4 2021).		
15.3.1	Percentage of total income that comes from fees related to provision of clearing services	Annual	Percentage	99.9%	98.7%			
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			
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	9,754	2,822	13,942	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		USD	N/A	N/A	N/A		

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
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%	100%	100%	
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	82%	71%	82%	
16.2.3	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at other central banks		Percentage	0%	0%	0%	
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	0%	0%	0%	
16.2.5	Percentage of total participant cash held as cash deposits (including through reverse repo); as cash deposits at commercial banks (Unsecured)		Percentage	5%	5%	6%	
16.2.6	Percentage of total participant cash held as cash deposits (including through reverse repo); in money market funds		Percentage	13%	24%	13%	
16.2.7	Percentage of total participant cash held as cash deposits (including through reverse repo); in other forms		Percentage	0%	0%	0%	
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%	100%	100%	
16.2.9	Percentage of total participant cash held as cash deposits (including through reverse repo); weighted average maturity of these cash deposits (including reverse repo) and money market funds		Bus. Days	1	1	1	
16.2.10	Percentage of total participant cash invested in securities; Domestic sovereign government bonds		Percentage	0%	100%	0%	
16.2.11	Percentage of total participant cash invested in securities; Other sovereign government bonds		Percentage	0%	0%	0%	
16.2.12	Percentage of total participant cash invested in securities; Agency Bonds		Percentage	0%	0%	0%	
16.2.13	Percentage of total participant cash invested in securities; State/municipal bonds		Percentage	0%	0%	0%	
16.2.14	Percentage of total participant cash invested in securities; Other instruments		Percentage	0%	0%	0%	
16.2.15	Percentage of total participant cash invested in securities; percentage split by currency of these securities; Specify local currency in comments;		Percentage	0%	100%	0%	
16.2.16	Percentage of total participant cash invested in securities; weighted average maturity of securities; Specify local currency in comments;		Bus. Days	0	0	0	
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	0	0	0	Rehypothecation used for liquidity purposes only in the event of a default.
16.3.2	Total value of participant non-cash rehypothecated (Default fund)			USD \$MM	0	0	0	
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	0	0	0	
		1D_1W		USD \$MM	0	0	0	
		1W_1M		USD \$MM	0	0	0	
		1M_1Y		USD \$MM	0	0	0	
		1Y_2Y		USD \$MM	0	0	0	
		2Y+		USD \$MM	0	0	0	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSB			
Disclosure 16.3 - Rehypothecation of participant assets (ie non-cash) cont'd								
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	Quarterly/ Quarter End	USD \$MM	0	0	0	
		1D_1W		USD \$MM	0	0	0	
		1W_1M		USD \$MM	0	0	0	
		1M_1Y		USD \$MM	0	0	0	
		1Y_2Y		USD \$MM	0	0	0	
		2Y+		USD \$MM	0	0	0	
Disclosure 17.1 - Operational availability target for the core system(s) involved in clearing (whether or not outsourced) over specified period for the system								
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.	
Disclosure 17.2 - Actual availability of the core system(s) over the previous twelve month period								
17.2.1	Actual availability of the core system(s) over the previous twelve month period	Quarterly	Percentage	99.94%		Availability is calculated across multiple systems. Specifically, CMU, CNS, Risk Management, GSD, MBSB and Trade Capture. Since Risk Management is across FICC and NSCC, actual availability cannot be captured at the individual entity level. Actual availability is across all three in total.		
Disclosure 17.3 - Total number of failures								
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	2 / 1:25:00		Regulation Systems Compliance and Integrity (Regulation SCI) events for NSCC, GSD, and MBSB 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. File processing delays caused FICC Clearing Fund Requirements reporting delays to clients on two occasions by 45 minutes and by 40 minutes, but all clearing fund requirements were satisfied within the required collection time.		
Disclosure 17.4 - Recovery time objective(s)								
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.	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes	
				GSD	MBSD			
Disclosure 18.1 - Number of clearing members, by clearing service							For GSD, there are Broker/Dealers, Government Sponsored Entities, Banks, and Hedge Funds For MBSD, there are Broker/Dealers, Hedge Fund, Mortgage Companies, Government Sponsored Entities, Registered Investment Companies, etc. For NSCC there are Broker/Dealers, certain stock exchanges (for omnibus account reporting), and one CSD.	
18.1.1.1	Number of general clearing members	Quarterly/ Quarter End	Count	134	77	65	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.	
18.1.1.2	Number of direct clearing members		Count	0	0	81		
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	16	14		
18.1.2.4	Number of other participants (Describe in comments)		Count	88	61	132	Includes Broker/dealers, Stock Exchanges, CSD's and Trust members. Excludes Banks.	
18.1.3.1	Number of domestic participants		Count	91	74	144		
18.1.3.2	Number of foreign participants		Count	43	3	2	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	Amount represents Peak/Average Open positions based on the top five/ten members' daily sum compared to the overall daily sum in the period.
		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	25%	40%	35%		
		Peak End of Day	Percentage	26%	42%	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	40%	63%	54%		
		Peak End of Day	Percentage	42%	65%	58%		
Disclosure 18.3 - Initial Margin Concentration								
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	Average End of Day	Quarterly	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. Amount represents Peak/Average Deposits based on the top five/ten members' daily sum compared to the overall daily sum in the period * 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	Average End of Day	Percentage	35%	50%	34%		
		Peak End of Day	Percentage	39%	58%	54%		
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	Average End of Day	Percentage	52%	71%	48%		
		Peak End of Day	Percentage	55%	78%	63%		

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
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		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		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		Count	N/A	N/A	65	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		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		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		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		Percentage	N/A	N/A	N/A	See Explanatory Note from 14.1
Disclosure 20.1 - FMI Links, Value of Trades							
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	N/A	N/A	N/A	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.
Disclosure 20.2 - FMI Links, Initial Margin or equivalent financial resources provided						See Explanatory Note from 20.1	
Disclosure 20.3 - FMI Links, Initial Margin or equivalent financial resources collected						See Explanatory Note from 20.1	
Disclosure 20.4 - FMI Links, Results of Back-testing coverage						See Explanatory Note from 20.1	
Disclosure 20.5 - FMI Links, Additional pre-funded financial resources provided to						See Explanatory Note from 20.1	
Disclosure 20.6 - FMI Links, Additional pre-funded financial resources collected from						See Explanatory Note from 20.1	

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
Disclosure 20.7 - FMI Links, Cross Margining							
20.7.1	Value of trades subject to cross margining, by clearing service, as a percentage of total trade values/total notional values cleared	Quarterly/ Quarter End	Percentage	18%	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 quarterly averages.
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	0.16%	N/A	N/A	

Disclosure 23.1 - Disclosure of rules, key procedures, and market data; Average Daily Volumes

23.1.1	Average Daily Volumes by Asset Class, CCY and OTC/ETD	OTC	Quarterly		316,762	14,008	86,229,601	For GSD/MBSD and NSCC, average daily volume data is based on sides (as opposed to trades). Omnibus Accounts are excluded for NSCC. NSCC - OTC includes CORP/UIT BONDS, CORR CLEAR, ECN/Q.S.R., ETF CR/RD, FINRA ORF, I&RS APP, MUNI BONDS, NASDAQ TRF, O.C.C., OMGEO NSCC - Exchanges includes BATS, BATS BYX, C.H.X., DIRECT EDGE A, DIRECT EDGE X, IEX EXCHANGE, LTSE EXCHANGE, MEMX EXCHANGE, MIAAX PEARL, NASDAQ, NASDAQ BX, NASDAQ PHLX, NYSE, NYSE 2, NYSE AMEX, NYSE ARCA, NYSE NATIONAL
		NSCC_Exchange			-	-	110,746,668	
23.1.2	Average Notional Value of trades cleared by Asset Class, CCY and OTC/ETD	OTC	USD \$MM	4,393,225	352,094	1,340,909		
		NSCC_Exchange	USD \$MM	-	-	779,126		

Disclosure 23.2 - Disclosure of rules, key procedures, and market data; Non-Yet-Settled

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 \$MM	1,150	434	185	Sources: FICC and NSCC financial statements, as available in the DTCC public website
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Disclosure 23.3 - Disclosure of rules, key procedures, and market data; Execution Facility

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	

Payment Risk Committee Disclosure 1 - Concentration Measures

	Initial Margin Required	Top 3 Members	Quarterly/ Quarter End	USD \$MM	4,667	3,019	1,730	Aggregated by deposit account.
	Number of Members with x% of Initial Margin Requirement	> 20%		Count	0	0	0	
		15% to 20%		Count	0	0	0	
		10% to 15%		Count	0	2	0	
		5% to 10%		Count	3	5	3	
		< 5%		Count	166	87	143	
	Total Initial Margin Posted (Market Value)	Total	USD \$MM	28,357	11,397	14,748		

Disclosure Reference	Disclosure Description	Frequency	Data Type	FICC		NSCC	Explanatory Notes
				GSD	MBSD		
Payment Risk Committee Disclosure 2 - Initial Margin Detail							
	Initial Margin Breakdown by Component						
	VaR / Volatility	Quarterly/ Quarter End	USD \$MM	19,919	9,259	4,500	The Value-at-Risk (VaR) and Volatility components are based on the potential price fluctuations of unsettled positions. 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.
	Coverage Component (CC)		USD \$MM	<i>N/A</i>	<i>N/A</i>	90	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	149	0	258	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.
	Blackout Period Exposure Adjustment		USD \$MM	42	<i>N/A</i>	<i>N/A</i>	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	-33	<i>N/A</i>	<i>N/A</i>	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	<i>N/A</i>	<i>N/A</i>	2,082	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	<i>N/A</i>	0	560	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 maintains a pass-through MtM process whereby it collects MTM debits from those Members with debits and passes those to the Members with MTM credits. For MBSD, there is a Deterministic Risk Component ("DRC") in the Clearing Fund Requirement that reflects mark-to-market results on outstanding positions, regardless of settlement date, cash items and adjustments that are the result of netting, and principal and interest exposure on failed positions. At least once daily, MBSD calculates the DRC that reflects the mark-to-market of the portfolio to account for the difference between the contract price and current market prices, interest and other cash settlement obligations. DRC can be a credit or debit amount. If the DRC is a debit, this amount will increase the Clearing Fund requirement. If the DRC is a credit, it can be used to reduce the amount of the Required Fund requirement (subject to the VaR Floor).
	Special Charge		USD \$MM	61	2	122	GSD includes: Back Test Charges, Intraday Supp. Fund Deposit, Minimum Deposit, and Intraday Charge MBSD includes: Back Test Charges, Intraday Charges, and Adequate Assurance NSCC includes: Back Test Charges, Adequate Assurance, and Intraday Mark-to-Market
	Other Charges		USD \$MM	290	4	648	GSD includes: Minimum Requirement Adjustments, Excess Capital Premium, and Falling Below Minimum Requirement MBSD includes: Principal & Interest Related Charges, Cash Obligation Items, Excess Capital Premium, Falling Below Minimum Requirement, and Minimum Requirement Adjustments NSCC includes: Family Issued Securities, CNS Fails, Non-CNS Requirements, FundSERV, CF Premium, and Minimum Requirement Adjustments