TMX/CDS Atlas:
Business Requirements for Continuous Net Settlement (CNS) and related functionality
January 9, 2019

Introduction

CDS has proposed several significant changes to the CNS and related functionality that Atlas will provide when compared with the current CDSX functionality. This document outlines CDS' participants' business requirements with respect to these functions. In other words this defines "What" the Atlas participants require in terms of functionality. "How" CDS chooses to deliver this functionality is up to CDS to find the right solution.

Principals for Financial Market Infrastructures (April 2012) and Bank of Canada Risk management Standards

The participants recognize that both the current CDSX, and the design of Atlas, must meet or exceed the Principals for Financial Market Infrastructure (PFMI- April 2012) and the Bank of Canada's Risk Management Standards for Designated FMI's.   The CDSX system was originally designed to comply with the "Group of Thirty" (G30) standards that later evolved into the PFMI's.   Compliance with the PFMI's and Bank standards cannot be achieved through just the design of the computer system; it requires system design along with supporting rules and procedures, legislation and risk management criteria.   At the same time, Atlas must deliver critical business functionality to its participants/users that provides efficient clearing and settlement of securities transactions.

Atlas Business Requirements for CNS and Related Functionality

CDS' recent proposals for the design of the Atlas CNS and related functionality (in particular "buy-ins") has prompted the participants to articulate some of their business requirements that this functionality must deliver. These requirements are summarized in the following three points: **CNS "Central Ledger", CNS "Holds", and Buy-Ins/Extensions**

CNS "Central Ledger"

CDS has stated that in the current CDSX system, settlement of CNS transactions "…has occurred between a deliverer and a receiver, and not between the respective parties and a CNS central ledger". That is incorrect. If it were correct then every CNS Settlement done in the past 20 years would be subject to reversal.   A CNS transaction in CDSX settles between the "deliverer" and CDS and, separately, between CDS and the "receiver" and CDSX, separately notifies the "deliverer" and "receiver" that they have delivered securities to CDS and received securities from CDS respectively and eliminates the amount delivered/received from the two separate counterparties CNS outstanding positions with CDS.   There is no record anywhere in CDSX of a CNS transaction settling directly between a deliverer and a receiver. CDS Rule 7.3.3 specifically says:

"7.3.7 Settlement of CNS Obligations: Each CNS obligation shall be Settled on its Value Date by a Trade between the Participant and CDS, effected by appropriate debits and credits to the Securities Account and Funds Account of CDS and of the participant, subject to the same edits and restrictions as any other Trade of that Participant."

The existing CDSX system and rules for CNS already adhere to PFMI Principal 1 (Legal Basis) in that the netting and novation of CNS positions are clearly defined; the point at which CNS transactions settle are also precisely defined and the irrevocability of settlement is central to all activity in CDSX. Legal opinions have been obtained that the netting, novation and settlement used through the CNS process are enforceable under Canadian law.

PFMI Principal 8 (Settlement Finality) speaks to the irrevocability of the actual "'settlement" of CNS transactions, not when those CNS transactions must be settled. Both the CDSX system design and rules and procedures make it perfectly clear that once a CNS transaction has been "settled" out of/into the accounts of a participant, those transactions, like any other "settled" CDSX transaction, cannot be reversed under any circumstances. The text of the Settlement Finality PFMI specifically says that it is not to be interpreted as a reason to prevent CNS fails:

"This principal is not intended to eliminate fails to deliver in securities trades. The occurrence of non-systemic amounts of such failures, though potentially undesirable, should not by itself be interpreted as a failure to satisfy this principal"

The CDSX "repo netting" does use a CDSX ledger that was established for CDCC as the Central Counterparty (CCP) for those transactions. That design was chosen strictly for its expediency. The use of the CDCC ledger for repo netting was chosen because it was an approach that could meet a very short timeframe to design, build, test and implement that functionality. It was and still is not a design that makes sense for the industry, and it has led to several unintended consequences, costs and operational inefficiencies.

The current CDSX design and rules/procedures for CNS already deliver a "central ledger" concept and properly delivers   the business functionality required by the participants. The CDS participants see no reason to change the existing design. To the extent that Atlas replicates this functionality, exactly, then the participants' requirements will have been satisfied.   If CDS chooses to utilize a "central ledger" for CNS as CDS has proposed, that might also meet the participants' requirements, as long as that approach is not used as a reason to degrade the existing functionality or performance of the system. The use of a central ledger cannot include a "liquidity trap" whereby securities are retained in the "central ledger" intra-day for any period of time. Canada is a relatively small and concentrated market and removing securities from circulation amongst the participants, even for short periods of time, will increase the cost and risk of fails in both CNS and Trade for Trade activity. It is far better from both an efficiency and overall risk reduction point of view, to leave securities temporarily in the ledger of a CNS-

to-deliver participant, where they may be able to settle another Trade-for-Transaction, rather than move and hold them in a CDS/CNS "central ledger" because a CNS-to-receive participant has a temporary funds or collateral deficiency. Participants plan to settle their transactions "on value date", not during the first attempt to settle on value date. There are no PFMI's or Bank standards which enforce or even suggest that the transactions must settle on their first attempt. The industry believes that CDS' existing procedures for dealing with a CNS "receiving" participant that fails to receive securities by the end of the business day because of insufficient funds/credit or ACV are sufficient from both an operational and risk-to-CDS point of view.

CNS Holds
Each participant starts each day intending to settle all of their CNS and Trade for Trade transactions. To settle all of these transactions in an efficient manner requires tools that allow the participants to manage their settlement activity. For example, it may be necessary to temporarily "delay" the settlement of a CNS delivery of a small number shares so that a larger Trade for Trade transaction for a large number of shares can be completed earlier. Since CNS provides the flexibility of "partial" settlements whereas Trade for Trade activity does not, it often makes sense from both an overall efficiency and risk reduction point of view, to settle the Trade-for-Trade transaction first. The CNS Hold functionality is an important tool for the management of settlement activity. It is used sparingly by the participants. And the CNS Hold cannot be used when the participant already has a Buy-in Intent logged against it. Prior to that functionality being available, participants achieved the same result through other means (such as segregating their security positions out of their GA to make the securities unavailable, temporarily, to CNS). If Atlas eliminates the CNS Hold function, participants will revert back to these less-efficient methods of managing their settlements with all of unintended consequences that those other methods generate.

We do not believe that there is anything within the PFMI's nor in the Bank standards that stipulate "when" a CNS/CCP Position must be settled during a business day. The Bank standards say:

> *"An FMI is expected to provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time."*

And as noted above in the section on "Central ledger", the PFMI's themselves specifically allow for "fails to deliver" and contemplate that "queuing" may be helpful to reduce liquidity needs. The CNS Hold function is a tool used by participants to manage the "queuing" or sequencing of their settlements. And the CNS Hold function is used by the participants to manage regulatory obligations in Canada, the USA and other markets. CDS does not have access to detailed information such, as beneficial owner account positions, nor knowledge of counterparty intentions that is required to properly manage the sequence of a participant's settlement activity. CDS should not be giving itself, as the CCP, priority in

the settlement of transactions over everyone else. That should be left to the participants themselves to manage.   We agree that there should be sanctions or disincentives on participant who fails to take receipt of securities from CNS by the end of the business day due to insufficient funds or ACV.

CNS Buy-Ins

The Canadian equity markets are an "anonymous" matching market. Market participants do not know and can't control who their counterparty(s) will be when they send an order to an exchange or trading venue. In such a market, a CCP is almost mandatory because of the lack of an ability to control counterparty risk.

All participants would prefer to settle all of their CNS outstanding positions every day. But there are several aspects of the Canadian Capital markets that regulators have long approved of and even promoted. For example, Canadian market participants are allowed to trade short. Regulations require that securities sold short be "borrowable" but not actually borrowed by value date. Securities with "legends" have been promoted by some CSA regulators, even though they can prevent those securities from being deposited into CDS. These as well as the simple "friction" of arranging settlement (client instructions, moving securities out of segregation; timing differences, holiday differences between markets) all contribute to temporary fails in CNS settlement.

Netting out of CNS Buy-ins

The current CDSX does not remove the obligation of a "to-deliver" participant from a Buy-in even when that participant has netted themselves out of their to-deliver position. This leads to an unusual situation where a participant can owe nothing to CNS but can still have a buy-in executed against them. Atlas needs to correct this design.

Timing of Buy-ins

"Buy-Ins" are the method by which a participant waiting to receive their securities from CNS can try to speed up settlement. When a receiving participant enters a Buy-in, the current CDSX system increases that participant's priority to receive securities delivered to CDS via CNS. However, since most participants know this, many participants enter a buy-in every day, for every position, so as to maintain their relative priority amongst the other participants.

 The timing is further complicated by the overnight "batch" processing that CDS currently employs (and, as we understand plans to continue to employ in Atlas) for exchange trades. Exchange Trades are not loaded into CDSX until the start of T+1 (the same timing is planned for Atlas). But participants have to enter Buy-in Intent requests at the end of Settlement date (S) if they are to be executable on S+2 (settlement date +2). Because of this batch processing, many participants enter a buy-in every day, "just in case".   If CDSX or Atlas were to process the exchange trades in real time, then participants could predict more accurately (not perfectly) their CNS positions for T+2 (settlement date) and be more selective in their use of Buy-ins. However, even though the functionality exists, at this time it appears

that CDS has no plans on the books to coordinate with the exchanges the changes required to report exchange executions in real-time to CDSX or Atlas.

Buy-in Extensions

In addition to the practical reasons to enter a Buy-in (increase the probability of settlement), there are regulatory reasons (such as Seg Requirements within IIROC rules, or Reg Sho Rules in the USA) why a participant may need to register a Buy-in for a particular security. Participants who on Settlement Date (S) thought that they might need a Buy-in in place may decide not to execute the Buy-in on S+2. But some Buy-ins will be executed when they finally reach S+2.   Yet all participants understand the legitimate reasons why a CNS settlement might be delayed (all participants are both delivers to, and receivers from CNS). The "Buy-in extension request" is the functionality whereby a CNS-to-deliver participant can communicate efficiently with the CNS-to-receive participant(s) who until that point have been anonymous. The communication usually includes the reason for the delay (e.g. legend removal) and the expected settlement period. In most cases it is advantageous for the CNS to-receive participant, having received this information from the to-deliver participant, to agree to delay the Buy-in (grant the extension) rather than to proceed with its execution. The Buy-in extension request allows both the CNS to-receive and CNS to-deliver participants to communicate with the other party so that both can make a more informed decision about execution of the buy-in. The execution of a buy-in with its allotment to Trade for Trade is operationally messy for both parties and can cost the to-deliver participant excessive amounts to complete the transaction. Whereas a slight delay in settlement would usually satisfy both parties. Atlas must have some mechanism to facilitate this communication and decision making by the CNS participants before a Buy-in is actually executed. The use of a "central ledger", should CDS chose to use one, is irrelevant to this communication process. The required communication is simply between a participant expecting to receive from CNS and a participant required to deliver to CNS. Atlas will know who these participants are and can facilitate the required communication.