



Asian Trading Hours

FAQ: MX/CDCC Further Extension of Trading & Clearing Hours

1. What does the Further Extension of Trading & Clearing hours refer to?

The further extension of trading and clearing hours to include Asian hours refers to advancing the opening of trading at the Bourse de Montréal Inc. (“**MX**”) and clearing at the Canadian Derivatives Clearing Corporation (“**CDCC**”) from the current 2:00 am ET (T) to 8:00 pm ET (T-1) for the following products (as of April, 2021):

- Interest Rate Derivatives (CRA, BAX, OBX, CGZ, CGF, CGB, OGB, LGB)
- Index Futures & Sector Index Futures (SXF, SXM, SMJ, SCF, SXA, SXB, SXH, S XK, SXU, SXY, SEG)

2. How do I participate in the further extension of clearing hours?

All current CDCC futures clearing members are initially eligible to participate in the further extension of clearing hours.

Futures clearing members who may be active between 8:00 pm (T-1) and 6:00 am ET, i.e. the “**Overnight clearing cycle**”, through the execution of open orders in the order book should ensure that adequate pre-funding is available and/or that additional payment capacity is available (see below Question 5) in the event that a margin call is generated overnight.

3. Are there any impacts on my existing clearing membership?

Yes. All clearing members supporting the clearing of Futures contracts will be subject to additional monitoring requirements related to the further extension of trading and clearing hours to include Asian hours. CDCC is of the opinion that a robust risk measurement and management framework for the mutual protection of all of its clearing members is important to support overnight trading and clearing capabilities.

Should an overnight margin call occur, clearing members who wish to have additional payment capacity recognized overnight will need to demonstrate their ability to pay margin in non-CAD currencies (HKD, EUR, GBP, or USD) to CDCC’s designated account at the Bank of New York Mellon (BNYM), and/or pledge securities through CDSX between 12:30 am and 4:00 am ET (see Question 5), and/or pledge CAD to CDCC’s account at the BoC through LVTS.

4. Will there be any impacts and limitations with regards to clearing functionalities?

No. All clearing functionalities will remain available during the extended trading hours for the products in scope.

5. How do I ensure my funding readiness in preparation for the Overnight clearing cycle?

By default, clearing members will be considered as part of the Pre-funding solution, which requires minimal additional operational setup.

Clearing members who wish to qualify for the Payment solution to cover “**Asian hours**” (i.e. 8:00 pm (T-1) to 1:00 am ET) AND “**European hours**” (i.e. 1:00 am to 6:00 am ET) will need to set up a correspondent banking account with the demonstrated ability to pay margin in EUR, GBP, HKD, or USD.

Alternatively, if clearing members wish to qualify as part of the Payment solution for **European hours** only, they need only demonstrate the ability to access the CDSX overnight securities pledging window (12:30 am to 4:00 am ET) and/or pledge CAD at the Bank of Canada through LVTS.

CDCC’s primary bank account for foreign currency deposits in respect of margin calls occurring during the Overnight cycle will be held at Bank of New York Mellon (BNYM).

For further clarity, clearing members who qualify as being part of the Payment solution will have the flexibility to meet a potential margin call occurring during the Overnight clearing cycle using either HKD, EUR, GBP, USD, any form of eligible securities pledged through CDSX, or CAD through LVTS at the BoC.

Please note that although CDCC has confirmed with the Bank of Canada that CDCC can receive LVTS payments in CAD between the hours of 12:30 am ET and 6:00 am ET (Monday to Friday), CDCC would like to remind clearing members of the importance of a contingency payment method, in the unlikely event that the BoC is unable to process transactions and/or process them in a timely manner during an operational incident or crisis.

Please also note that all specified non-CAD currencies will be considered eligible collateral at any time during the Overnight clearing cycle.

6. How do I ensure my operational readiness in preparation for the Overnight clearing cycle?

Clearing members should ensure availability of the Overnight clearing cycle with the following stakeholders:

- Any service providers
- Internal IT department
- FCM or brokerage firm
- Any providers of market data

Clearing members who wish to be considered as part of the Payment solution during either Asian hours or European hours will need to demonstrate their ability to transfer non-CAD funds to CDCC's selected correspondent banks and/or their ability to pledge securities in CDSX and/or their ability to pay CAD to CDCC's account at the BoC through LVTS.

Participation in a CDCC test to confirm that the payment solution is well-functioning will be required prior to go-live for clearing members under the Payment solution. CDCC may also require regular or spontaneous testing to ensure that operational readiness is maintained after go-live.

More details of the correspondent bank account(s) as well as the (SSI) instructions for wire transfers of the eligible non-CAD funds will be provided by CDCC prior to the payment test (Q2 2021 TBC).

Clearing members will also be required to provide and maintain a contact list for overnight back office activities, as well as an escalation contact for the management of the overnight uncovered risks.

The contact list will need to disclose 3 levels of contact within the clearing member organization:

- Clearing member Level 1 contact shall be an Operation Specialist, its equivalent or higher;
- Clearing member Level 2 contact shall be a Senior Manager, its equivalent or higher; and
- Clearing member Level 3 contact shall be a Senior Executive reporting directly to the President of the clearing member, or to its equivalent in the absence of a Senior Executive of the clearing member bearing the title "President".

The contact list will be required for every clearing member, active or not.

The overnight operational process will be specified under the "overnight uncovered risk procedure" of CDCC's Operations Manual (See Question 18).

7. What should I do if I do not want to participate in the Overnight clearing cycle?

Clearing members who do not wish to participate in the Overnight clearing cycle should ensure that there are no position movements during the Overnight clearing cycle. Please note that open orders including Good-'til-Cancelled (“**GTC**”) orders that remain in the order book could get executed during extended trading and clearing hours.

CDCC will only consider clearing members as having participated in the Overnight clearing cycle if at least one position movement is captured, allowing clearing members to elect whether or not to participate in Asian hours (8:00 pm to 1:00 am ET), European hours (1:00 am to 6:00 am ET), or both. In other words, clearing members will be considered inactive up until one position movement is captured, after which the clearing member will be considered active for the rest of the Overnight clearing cycle (for the sake of clarity, thresholds will only apply if at least one position movement is captured).

8. Will there be any scheduled overnight margin calls throughout the extended trading hours?

No. CDCC acknowledges that operational capabilities are limited during the Overnight clearing cycle and therefore proposes to strengthen its overnight monitoring process rather than adding scheduled margin calls. While minimizing the probability of an overnight margin call, CDCC will retain the right to issue margin calls throughout the entire trading day, including during extended trading hours.

In the context of the hourly monitoring, the first monitoring snapshot will occur at 9:00 pm ET (T-1) and the last one will be evaluated at 5:00 am ET, where the total margin requirement will be systemically updated with movements in Initial Margin, but only updated once with movements in Variation Margin (at the 1:00 am ET monitoring snapshot).

Under the Payment solution, margin calls will only be issued for clearing members whose “**Uncovered Exposure**” (Margin Fund collateral minus total margin requirement) reaches the maximum acceptable level of uncovered risk. This level has been calibrated as a function of CDCC’s risk appetite under a Margin Call threshold, i.e.10% (subject to review from time to time) and will apply as a proportion of the clearing member’s total margin requirement at the time of the snapshot. Should the clearing member reach the Margin Call threshold, a margin call will be issued for the total Uncovered Exposure amount and the clearing member will have 2 hours to meet its obligation.

Under the Pre-funding solution, no margin calls will be issued but the clearing member will be subject to the Restricted status. In other words, should the clearing member reach the Trading threshold (same calibration as the Margin Call threshold), the clearing member may enter the Restricted status, which implies that the participation of the clearing member (including all Approved Participants and Foreign Approved Participants it clears) to the overnight market will be halted for the rest of the Overnight clearing cycle, i.e. trading access and give-up agreements will be cut off, and any orders in the order book will be cancelled.

In the absence of a proven payment capacity and the substantial increase of uncovered

exposure, CDCC will have to consider whether the restriction of a clearing member's access is required in order to ensure that no further exposure will be voluntarily built-up and to guarantee mutual protection of all clearing members. Once entered, the Restricted status will be maintained until the 7:15 am ET margin call, when the clearing member will have 1 hour to meet its obligations. Based on the interaction with the clearing member and all other information gathered regarding the clearing member's solvability and liquidity conditions, CDCC's level 3 Contact (CRO or equivalent) will have the discretion to lift the Restricted status before the 7:15 am ET margin call or may also launch the default management process, as provided in CDCC's current Rules.

9. How can a potential margin call be fulfilled during the Overnight clearing cycle?

Margin calls during the Overnight clearing cycle can be fulfilled in HKD, EUR, GBP, USD, or CAD (through LVTS).

Although non-CAD currencies will be considered eligible collateral at any time during the Overnight clearing cycle, CDCC's specified criteria to qualify for the Payment solution in Asian and/or European hours (described in Question 5) should be considered. In addition, CDCC will be in the capacity to process any form of pre-configured eligible securities pledged through CDSX between 12:30 am and 4:00 am ET, as provided in the current Rules of the Canadian Depository for Securities (CDS).

As the Canadian banking system is closed overnight, cash payments in CAD with respect to overnight margin calls are generally not possible until the first scheduled intra-day margin collection at 7:15 am ET. However, for those clearing members who are direct participants of LVTS and/or are able to arrange CAD payments through LVTS between the hours of 12:30 am and 6:00 am ET (Monday to Friday), CDCC can receive LVTS payments in CAD in respect of margin calls that occur during the Overnight clearing cycle.

10. Are there any limitations on the use of non-CAD currencies as eligible collateral at CDCC?

Yes. Although non-CAD currencies will be considered as eligible collateral for risk exposure calculations over the entire business day, CDCC will only accept posting of non-CAD currencies during the Overnight clearing cycle.

Risk concentration limits will apply for non-CAD currencies. CDCC has limited the Total amount of foreign currency collateral in EUR, GBP, and USD that Clearing Members can provide on a sustained basis to the lesser of: 5% of a Clearing Member's total margin requirement OR \$100MM Canadian equivalent value. Should a Clearing Member exceed this concentration limit, they will be required to substitute the foreign currency(ies) into CAD by 11:45 AM Eastern Time on the day they receive the Assets Concentration Limits breach notification report at 7:30 a.m Eastern Time.

Please note that CDCC will require that all Hong Kong dollar collateral deposited be fully substituted by 11:45 AM Eastern Time on the first business day immediately following the day of deposit of HKD.

Like any other eligible collateral, CDCC will calibrate appropriate haircuts and evaluate the latest value in Canadian dollars. Note that margin requirements will always be denominated in Canadian dollars.

11. How can clearing members withdraw/substitute a non-CAD currency pledged?

Requests for withdrawals of eligible non-CAD currencies should follow the regular operational deadlines for cash withdrawals specified in Section 2 of CDCC's Operations Manual. https://www.cdcc.ca/f_rules_en/cdcc_operations_manual_en.pdf.

12. How can clearing members avoid overnight margin calls?

Clearing members can reduce the risk of reaching monitoring thresholds, and therefore the probability of receiving an overnight margin call, by:

- Pledging excess-collateral with CDCC on the preceding business day;
- Pledging additional collateral with CDCC during the Overnight clearing cycle (see Question 9);
- Using pre-trade risk tools to proactively manage their strategy and control the needs of their clients in terms of position movements and the build-up of overnight risk.

Alternatively, clearing members can choose to stay in the Pre-funding solution and consequently accept the risk of entering the Restricted status, rather than facing the risk of receiving a margin call, should the clearing member reach maximum acceptable levels of uncovered risk (see Question 8).

Finally, clearing members can choose not to participate in the Asian hours (8:00 pm (T-1) to 1:00 am ET), the European hours (1:00 am to 6:00 am ET), or both, by making sure that no position movement is captured by the clearing system at any point during the Overnight clearing cycle (see Question 7).

13. How will the overnight monitoring be determined and which risk measures will be captured?

The Overnight clearing cycle will be dedicated to the clearing of products traded between 8:00 pm (T-1) and 6:00 am ET, i.e. a selection of Futures and Options on Futures as established by MX (see Question 1).

By setting an hourly monitoring process and allowing for more transparency, CDCC believes that providing Futures clearing members with the exact points in time when real-time monitoring may trigger a margin call will foster operational readiness, while potentially helping Futures clearing members adjust sudden exposure from unexpected position movements such as give-ups.

Under near real-time monitoring, the thresholds will apply as a proportion of each clearing members' total margin requirement (threshold (%) times total margin requirement) and will be compared to the individual Uncovered Exposure (Margin Fund collateral minus total margin requirement), therefore triggering actions on a per clearing member basis. The total margin requirement includes all positions held by the clearing member.

In the context of the hourly monitoring, the first monitoring snapshot will occur at 9:00 pm ET (T-1) and the last one will be evaluated at 5:00 am ET, where the total margin requirement will be systemically updated with movements in Initial Margin, but only updated once with movements in Variation Margin (at the 1:00 am ET monitoring snapshot). In other words, the Variation Margin will only be re-evaluated at the 1:00 am ET monitoring snapshot and will therefore remain constant until the first intra-day margin run of the business day (7:15 am ET). Please refer to the next three questions for more details regarding margin and collateral calculations (Questions 14, 15 and 16).

Under the Payment solution, a margin call will be issued if the clearing member reaches the Margin Call threshold (10%, subject to review from time to time), while under the Pre-funding solution, the clearing member may enter the Restricted status if the Trading threshold is reached (same calibration), which implies that the participation of the clearing member (including all Approved Participants and Foreign Approved Participants it clears) to the overnight market will be halted for the rest of the Overnight clearing cycle, i.e. trading access and give-up agreements will be cut off, and any orders in the order book will be cancelled. A clearing member under the Payment solution may also enter the Restricted status if margin call obligations are not met within 2 hours.

To foster clearing member readiness, the Warning threshold (same calibration as the Margin Call threshold) will follow the evolution of the Variation Margin at each monitoring snapshot (along with updates of the Initial Margin), in anticipation of the 1:00 am ET monitoring snapshot and the 7:15 am ET margin call where the Variation Margin will be re-evaluated (also called the "**Live margin check**"). A communication will be sent to clearing members whose estimated exposure reaches the Warning threshold with a clear breakdown of their credit exposure with respect to the Initial Margin and Variation Margin. In that situation, CDCC will also make sure that the clearing member takes action to control the build-up of credit exposure, and/or assess the clearing member's readiness to face obligations at the 1:00 am ET monitoring snapshot (should the clearing member trigger the Margin Call or Trading threshold), or at the 7:15 am ET margin call, when the Variation Margin will be re-evaluated and included in the margin requirement. Every futures clearing member is subject to the Warning threshold, whether active or not.

14. How will the Variation Margin be evaluated under the hourly monitoring?

The Variation Margin will be evaluated through the Additional Margin for Intra-Day Variation Margin Risk ("**VM Add-on**"), as set forth in Section 1.1 of CDCC's Risk Manual. The VM Add-on

will be collateralized and subject to a 25% threshold, as it is currently the case during the Regular clearing cycle (the threshold applies as a proportion of the Base Initial Margin requirement).

CDCC will maintain a single settlement for Variation Margin per day, calculated at end-of-day. The Variation Margin settlement is a daily payment process that allows for the reset of the Variation Margin risk. In other words, the Variation Margin risk is reset to zero at end-of-day when a new daily reference price is set. The following trading session should therefore open without any Variation Margin risk (zero), until market prices start fluctuating.

With the further extension to Asian hours, the trading session will start at 8:00 pm ET (T-1) rather than 2:00 am ET but, the methodology remains the same: the Variation Margin risk is always calculated on the entire portfolio and collateralized under the VM Add-on until the next end-of-day settlement process is reached again.

15. How will the Initial Margin be evaluated under the hourly monitoring?

The Initial Margin will be evaluated through the Base Initial Margin for Futures and Options on Futures, plus any applicable Additional Margins, as set forth in Section 1.1 of CDCC's Risk Manual. The Base Initial Margin is always calculated on the entire portfolio (to allow for margin netting) and it is a function of variable risk parameters, as it is currently the case during the Regular clearing cycle.

Note that the VM Add-on is part of the Initial Margin and that all other Additional Margins will remain constant during the hourly monitoring.

16. Will the end-of-day margin process impact the evaluation of the collateral under the monitoring process?

The end-of-day margin process will remain unchanged and the current end-of-day payment process will be maintained and executed the next morning (before 7:45 am ET). The Variation Margin settlement process takes the form of an independent cash payment instruction, whereas the margin call process generates a collateral excess or deficit.

CDCC considers that the Regular and the Overnight clearing cycle should maintain a certain degree of independence with regards to collateral management (given the major differences in payment solutions and capacities) and consequently, that no deficit generated during the day should be carried forward to the hourly monitoring.

In light of the foregoing, any collateral deficit generated by the end-of-day margin call process will be considered as pending collateral until the regular payment process is executed the next morning. The calculation of the collateral under the hourly monitoring will therefore incorporate a

provision for pending collateral along with the available collateral value (should a collateral deficit be generated at end-of-day). See examples below:

| END-OF-DAY MARGIN PROCESS | | | | |
|--|-------|-------|-------|-------|
| <i>Margin Calculation</i> | Case1 | Case2 | Case3 | Case4 |
| IM Requirement (including the VM Add-on) | 110 | 110 | 90 | 90 |
| VM Settlement (cash payment) | -20 | 20 | -20 | 20 |
| <i>Collateral Calculation</i> | | | | |
| Collateral Value | 100 | 100 | 100 | 100 |
| <i>Collateral Payment</i> | | | | |
| Excess/Deficit Amount | -10 | -10 | 10 | 10 |
| Margin Call Amount | 10 | 10 | 0 | 0 |

| HOURLY MONITORING | | | | |
|--|-------|-------|-------|-------|
| <i>Margin Calculation</i> | Case1 | Case2 | Case3 | Case4 |
| IM Requirement (including the VM Add-on) | 115 | 115 | 115 | 115 |
| <i>Collateral Calculation</i> | | | | |
| Collateral Value | 100 | 100 | 100 | 100 |
| Pending Collateral (from end-of-day deficit) | 10 | 10 | 0 | 0 |
| <i>Collateral Payment</i> | | | | |
| Excess/Deficit Amount | -5 | -5 | -15 | -15 |
| Threshold Value | 11.5 | 11.5 | 11.5 | 11.5 |
| Margin Call Indicator | NO | NO | YES | YES |
| Margin Call Amount | 0 | 0 | 15 | 15 |

17. What kind of reporting will be made available and how will risk measures flow to clearing members?

CDCC acknowledges that clearing members should be provided adequate information to support appropriate calibration of overnight funding requirements and to help with the allocation of margins back to clients. CDCC currently offers TagLog files (“TLG”) to all clearing members during the end-of-day process, which contain risk measurements and positions from the clearing member’s activity at each regular margin call, including the 7:15 am ET early morning margin call where the overnight build-up of risk can be conveniently summarized and analysed.

CDCC will provide to clearing members via the Clearing Manager Interface (i.e. existing Clearing interface of SOLA Clearing) a view to follow the margin requirements under the hourly monitoring (updated in the case when the Margin Call or Trading threshold is reached) as well as the exposure generated under the Live margin check (updated at each hour, whether the Warning threshold has been reached or not).

18. Where can I learn more about the Asian trading hours?

More information can be found in CDCC's [Notice to Members \(No. 2020-104\)](#).

Individual clearing member questions on the further extension of clearing hours can be addressed to CDCC Client Services at cdcc-cs@tmx.com.