

**\*\*\* IMPORTANT NOTE \*\*\***

As stated in notice to members 056-21 published on April 14, 2021, the launch of the Asian trading hours initiative has been rescheduled to September 19, 2021. As such, the attached amendments will become effective on September 19, 2021 instead of May 30, 2021.

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**NOTICE TO MEMBERS**

No. 2021 - 036

February 26, 2021

**SELF-CERTIFICATION**

**AMENDMENTS TO THE RULES AND MANUALS OF THE CANADIAN DERIVATIVES CLEARING CORPORATION TO  
ACCOMMODATE THE EXTENSION OF THE TRADING HOURS AT BOURSE DE MONTREAL INC.**

On July 31, 2020, the Board of Directors of Canadian Derivatives Clearing Corporation (“CDCC”) approved certain amendments to the Rules, Operations Manual, Risk Manual and Default Manual of CDCC as part of phase II of the Extended Trading Hours initiative of Bourse de Montréal Inc., which proposes to extend its trading hours by opening its market at 8:00 pm (t-1) ET.

CDCC wishes to inform the Clearing Members that these amendments have been self-certified pursuant to the self-certification process set forth in the *Derivatives Act* (C.Q.L.R., c I-14.01) and submitted to the Ontario Securities Commission in accordance with the “Rule Change Requiring Approval in Ontario” process.

You will find attached hereto the amendments set to come into force and to be incorporated into the version of the Rules and Manuals of CDCC that will be made available on the CDCC website at [www.cdcc.ca](http://www.cdcc.ca) on **MAY 30, 2021**.

The amendments described in the present notice were published for public comment by CDCC on August 5, 2020 (see Notice [104-20](#)). Further to the publication of this notice, CDCC received no formal comment.

If you have any questions or concerns regarding this notice, please contact Alexandre Normandeau at 514-787-6623 or at [alexandre.normandeau@tmx.com](mailto:alexandre.normandeau@tmx.com).

Jean-François Bertrand  
Interim President



# **CANADIAN DERIVATIVES CLEARING CORPORATION**

## **RULES**

**~~JUNE 16, 2020~~**

## PART A – GENERAL

### RULE A-1 DEFINITIONS

#### Section A-101 SCOPE OF APPLICATION

Unless the context otherwise requires or unless different meanings are specifically defined, for all purposes of these Rules the capitalized terms used herein shall have the meanings given them in Section A-102.

#### Section A-102 DEFINITIONS

[...]

“**Business Day**” – means any day on which the Corporation is open for business.

“**Business Hours**” – means from ~~2-8 p.m.~~ t-1 (ET) to the Close of Business the next day on any Business Day.

[...]

“**Cash**” – means money in the lawful currency of Canada and in any other currency accepted by the Corporation.

[...]

“**Overnight Margin Call**” – means the requirement to deposit supplementary Margin, as determined by the Corporation in accordance with Section A-705.1, at any time the Corporation deems necessary during the Overnight Clearing Cycle, as such term is defined in the Operations Manual.

[...]

“**Restricted Clearing Member**” – has the meaning attributed thereto in Section A-412.

[...]

### RULE A-2 MISCELLANEOUS REQUIREMENTS

[...]

## SECTION A-213

### ACCOUNTS WITH FINANCIAL INSTITUTIONS

Every Clearing Member shall designate an account or accounts established and maintained by it in a ~~Canadian~~ financial institution acceptable to the Corporation for each currency of the Transactions that it enters into.

[...]

## RULE A-4

### ENFORCEMENT

[...]

## SECTION A-412

### RESTRICTED CLEARING MEMBER

- (1) A Clearing Member who is unable to meet an Overnight Margin Call or breaches certain risk exposure thresholds during the Overnight Clearing Cycle (as such term is defined in the Operations Manual) may be deemed by the Corporation as a Restricted Clearing Member.
- (2) In addition to a measure made available to the Corporation under the Rules and the Application for Membership, where a Clearing Member is deemed by the Corporation as a Restricted Clearing Member as provided for in the Operations Manual, the Corporation may take any one of the actions prescribed by the Rules in respect of such Clearing Member including, but not limited to:
  - (a) prohibiting and/or imposing limitations on the acceptance and/or clearance of Transactions by such Clearing Member, which could result in: Clearing Member's trading access and give-up agreements on the Montreal Exchange being restricted, and orders of the Clearing Member and of its Clients being canceled; and
  - (b) sanctioning, reprimanding, fining or imposing a penalty on the Clearing Member.

[...]

## **RULE A-7 MARGIN REQUIREMENTS**

### **Section A-701 MARGIN MAINTENANCE AND PURPOSE**

- (1) Prior to the Settlement Time on every Business Day, every Clearing Member shall be obligated to deposit Margin as determined by the Corporation in accordance with the Margin requirement methodology set out in the Risk Manual, in respect of:

- (a) each Long Position,
- (b) each Short Position,
- (c) each Assigned Position,
- (d) each exercised Option position, and
- (e) each tendered Futures position;

in each account maintained by such Clearing Member with the Corporation at the opening of such Business Day, including each such position that arises out of a Transaction having a Settlement Time on such Business Day, but excluding Short Positions and Assigned Positions for which either the Underlying Interest or the Underlying Interest Equivalent as specified in Section A-706 has been deposited with the Corporation. When determining whether additional Margin is required from a Clearing Member, the Corporation shall take into account, subject to Subsection A-704(2), all Margin deposited by the Clearing Member and not returned by the Corporation to the Clearing Member.

- (2) The Corporation shall apply the suspended Non-Conforming Member's Margin Deposit (including, without limitation, Margin and Clearing Fund), subject to Subsection A-701(3), to the discharge of:

- (a) the Non-Conforming Member's obligation with respect to any Transaction accepted by the Corporation, whether such failure is caused or not by the Non-Conforming Member;
- (b) a failure or anticipated failure to make any payment to the Corporation required of the Non-Conforming Member, whether such failure is attributable to the Non-Conforming Member or not;
- (c) any loss or expense anticipated or suffered by the Corporation upon the liquidation of the Non-Conforming Member's position;
- (d) any loss or expense anticipated or suffered by the Corporation pertaining to the Non-Conforming Member's obligations in respect of exercised Options or tendered Futures or OTCI for which settlement has not yet been made or in connection with hedging transactions effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in Options, Futures and OTCI;

- (e) any protective or hedging transaction effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in Options and Futures;
  - (f) any protective or hedging transaction effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in any OTCI; or
  - (g) subject to Section A-1B01, any other situation determined by the Board.
- (3) Each Clearing Member grants to the Corporation a first ranking pledge over all property (including without limitation Margin and Clearing Fund) that constitutes Margin Deposit or other property which may from time to time be in the possession or control of the Corporation, or in the possession or control of a person acting on behalf of the Corporation. This pledge shall secure the performance by the Clearing Member of all of its obligations to the Corporation and, to the extent such pledge relates to Clearing Fund deposits, it shall also secure the performance by another Clearing Member which is a Non-Conforming Member of its obligations to the Corporation, all subject to the provisions of Rule A-6 and the Default Manual, provided that, except for Clearing Fund deposits, Margin Deposits with respect to a Client Account shall only secure the performance by the Clearing Member of its obligations in respect of that Client Account, and Margin Deposits with respect to a Market Maker Account shall only secure the performance by the Clearing Member of its obligations in respect of that Market Maker Account. Notwithstanding the foregoing, if the Clearing Member does not identify its Margin Deposits with respect to each of its accounts, the Corporation shall use all Margin Deposits without distinction as securing all the obligations of the Clearing Member in respect of all its accounts. The Clearing Member shall execute and deliver (or cause to be executed and delivered) such other documents as the Corporation may from time to time request for the purpose of confirming or perfecting the pledge granted to the Corporation by the Clearing Member; provided that the failure by the Corporation to request or by the Clearing Member to execute and deliver (or cause to be executed and delivered) such documents shall not limit the effectiveness of the pledge in favour of the Corporation.
- (4) Except as permitted under Subsection A-609(4) in respect of Clearing Fund deposits and under Subsection D-607 in respect of Net Variation Margin Requirement deposits, and without limiting the right of the Corporation to invest the Margin Deposits in the form of cash under Subsections A-608(1) and A-707(1), the Corporation shall not grant a pledge over, transfer, or terminate under an Account Control Agreement authorizations to deal with, any property deposited as Margin Deposit by a Clearing Member which has not been designated as a Non-Conforming Member and suspended by the Corporation.
- (5) Without limiting the rights of the Corporation under Subsection A-701(2), the Corporation may at its sole discretion grant a pledge over or transfer all property deposited as Margin Deposit (including, without limitation, Margin and Clearing Fund) by a Clearing Member which has been suspended, as security for, or in connection with, the Corporation's own obligations to any person incurred in order to obtain liquidity or credit for the purpose of assisting the Corporation to honour its obligations on a timely basis further to the designation by the Corporation of such Clearing Member as being a suspended Clearing Member. In such circumstances, the Corporation shall grant a pledge over or transfer such Clearing Member's Margin Deposits before doing so with respect to the Clearing Fund deposits of other Clearing Members, in accordance with Subsection A-609(4). The Corporation shall be deemed to continue to hold all Margin Deposits regardless of whether the Corporation has exercised its rights under this Subsection A-701(5).

- (6) Any account or sub-account of a Clearing Member with the Corporation that reflects Financial Assets deposited with the Corporation by or on behalf of such Clearing Member for Margin purposes and to which such Financial Assets are credited, shall be considered a securities account for purposes of the QSTA or any similar securities transfer law of any other jurisdiction.

### **Section A-702**

#### **DISCRETIONARY MARGIN RULE**

The amount of Margin which may be required from a Clearing Member pursuant to this Rule A-7 (other than Margin required pursuant to Rule D-607) may be varied by the Corporation at any time and from time to time without advance notice whenever the Corporation, in its sole discretion, considers such variation necessary or advisable for the protection of the Corporation, Clearing Members or the investing public.

### **Section A-703**

#### **DAILY MARGIN ACTIVITY**

- (1) Each Business Day, the Corporation shall make available to each Clearing Member for each account maintained by the Clearing Member with the Corporation the reports which shall show the amount of Margin required to be deposited by virtue of the Clearing Member's positions. All Margin requirements shall be satisfied by Settlement Time on each Business Day notwithstanding any error in the information reflected in the reports issued.
- (2) If for any reason a report is not available to a Clearing Member, it shall be the responsibility of that Clearing Member to ascertain from the Corporation the amount of Margin required to be deposited, so that the Margin requirements are met before Settlement Time each Business Day.

### **Section A-704**

#### **WITHDRAWALS OF MARGIN**

- (1) Subject to Subsection A-704(2), in the event that on any particular day the amount of a Clearing Member's Margin on deposit exceeds the amount required to be deposited by such Clearing Member on such day pursuant to this Rule A-7, the Corporation shall authorize the withdrawal of the amount of the excess upon the submission to the Corporation, by such Clearing Member during the hours specified by the Corporation, of a withdrawal request in the form prescribed by the Corporation provided that the Clearing Member shall provide the Corporation with sufficient prior notice of such withdrawal request as set out in the Operations Manual.
- (2) If a Clearing Member has excess Margin deposited in respect of any Firm Account, the Corporation shall be entitled to apply such excess (or a portion thereof) as is necessary to meet the Margin requirements in respect of a Client Account or Market Maker Account. If a Clearing Member has excess Margin deposited in respect of any Client Account or any Market Maker Account, the Clearing Member shall not be entitled to apply such excess (or a portion thereof) to meet the Margin requirements in respect of a Firm Account; provided, however, that if the Clearing Member does not identify its Margin Deposits with respect to each of its accounts, the Corporation shall apply the Margin deposited by a Clearing Member indistinctively to meet the Margin requirements in respect of all its accounts.

## Section A-705 INTRA-DAY MARGIN CALLS

- (1) Section 2 of the Operations Manual specifies the time of the Intra-Day Margin Calls.
- (2) The Corporation may also perform additional Intra-Day Margin Calls and require the deposit of supplementary Margin (other than Margin required pursuant to Rule D-607) by any Clearing Member in any account at any time during any Business Day which the Corporation, in its sole discretion, considers necessary or advisable to reflect changes during such day in the Market Price of any Underlying Interest in order to protect the Corporation, Clearing Members or the public.
- (3) Subject to Subsection A-704(2), if a Clearing Member has excess Margin, the Corporation shall be entitled, upon determining that supplementary Margin is required in accordance with paragraph (2) above, immediately to apply such portion of the excess Margin as is necessary to meet the supplementary Margin requirements. The Corporation shall notify the Clearing Member as soon as practicable of such application. If there is no excess Margin then on deposit, the Corporation will notify the Clearing Member of the amount of supplementary Margin required. Such supplementary Margin shall be deemed to be owing upon a Clearing Member receiving notice thereof and shall be deposited by the Clearing Member within one hour of the Clearing Member receiving such notice, or such longer time as may be provided in the Operations Manual or permitted by the Corporation. Credit for all such supplementary Margin deposits, shall be reflected on the Daily Settlement Summary Report on the following Business Day.

### SECTION A-705.1 OVERNIGHT MARGIN CALLS

- (1) The Corporation may perform Overnight Margin Calls and require the deposit of supplementary Margin (other than Margin required pursuant to Rule D-607) by any Clearing Member in any account at any time during the Overnight Clearing Cycle (as such term is defined in the Operations Manual) which the Corporation, in its sole discretion, considers necessary or advisable to reflect changes during such day in the Market Price of any Underlying Interest in order to protect the Corporation, Clearing Members or the public.
- ~~(4)~~(2) Subject to Subsection A-704(2), if a Clearing Member has excess Margin, the Corporation shall be entitled, upon determining that supplementary Margin is required in accordance with paragraph (1) above, immediately to apply such portion of the excess Margin as is necessary to meet the supplementary Margin requirements. The Corporation shall notify the Clearing Member as soon as practicable of such application. If there is no excess Margin then on deposit, the Corporation will notify the Clearing Member of the amount of supplementary Margin required. Such supplementary Margin shall be deemed to be owing upon a Clearing Member receiving notice thereof and shall be deposited by the Clearing Member within one hour of the Clearing Member receiving such notice, or such longer time as may be provided in the Operations Manual or permitted by the Corporation. Credit for all such supplementary Margin deposits, shall be reflected on the Daily Settlement Summary Report on the following Business Day.





**CANADIAN DERIVATIVES CLEARING CORPORATION**  
**RULES**

## **PART A – GENERAL**

### **RULE A-1 DEFINITIONS**

#### **Section A-101 SCOPE OF APPLICATION**

Unless the context otherwise requires or unless different meanings are specifically defined, for all purposes of these Rules the capitalized terms used herein shall have the meanings given them in Section A-102.

#### **Section A-102 DEFINITIONS**

[...]

“**Business Day**” – means any day on which the Corporation is open for business.

“**Business Hours**” – means from 8 p.m. t-1 (ET) to the Close of Business the next day on any Business Day.

[...]

“**Cash**” – means money in the lawful currency of Canada and in any other currency accepted by the Corporation.

[...]

“**Overnight Margin Call**” – means the requirement to deposit supplementary Margin, as determined by the Corporation in accordance with Section A-705.1, at any time the Corporation deems necessary during the Overnight Clearing Cycle, as such term is defined in the Operations Manual.

[...]

“**Restricted Clearing Member**” – has the meaning attributed thereto in Section A-412.

[...]

### **RULE A-2 MISCELLANEOUS REQUIREMENTS**

[...]

## **SECTION A-213**

### **ACCOUNTS WITH FINANCIAL INSTITUTIONS**

Every Clearing Member shall designate an account or accounts established and maintained by it in a financial institution acceptable to the Corporation for each currency of the Transactions that it enters into.

[...]

## **RULE A-4**

### **ENFORCEMENT**

[...]

## **SECTION A-412**

### **RESTRICTED CLEARING MEMBER**

- (1) A Clearing Member who is unable to meet an Overnight Margin Call or breaches certain risk exposure thresholds during the Overnight Clearing Cycle (as such term is defined in the Operations Manual) may be deemed by the Corporation as a Restricted Clearing Member.
- (2) In addition to a measure made available to the Corporation under the Rules and the Application for Membership, where a Clearing Member is deemed by the Corporation as a Restricted Clearing Member as provided for in the Operations Manual, the Corporation may take any one of the actions prescribed by the Rules in respect of such Clearing Member including, but not limited to:
  - (a) prohibiting and/or imposing limitations on the acceptance and/or clearance of Transactions by such Clearing Member, which could result in Clearing Member's trading access and give-up agreements on the Montreal Exchange being restricted, and orders of the Clearing Member and of its Clients being canceled; and
  - (b) sanctioning, reprimanding, fining or imposing a penalty on the Clearing Member.

[...]

## **RULE A-7**

### **MARGIN REQUIREMENTS**

#### **Section A-701**

##### **MARGIN MAINTENANCE AND PURPOSE**

- (1) Prior to the Settlement Time on every Business Day, every Clearing Member shall be obligated to deposit Margin as determined by the Corporation in accordance with the Margin requirement methodology set out in the Risk Manual, in respect of:

- (a) each Long Position,
- (b) each Short Position,
- (c) each Assigned Position,
- (d) each exercised Option position, and
- (e) each tendered Futures position;

in each account maintained by such Clearing Member with the Corporation at the opening of such Business Day, including each such position that arises out of a Transaction having a Settlement Time on such Business Day, but excluding Short Positions and Assigned Positions for which either the Underlying Interest or the Underlying Interest Equivalent as specified in Section A-706 has been deposited with the Corporation. When determining whether additional Margin is required from a Clearing Member, the Corporation shall take into account, subject to Subsection A-704(2), all Margin deposited by the Clearing Member and not returned by the Corporation to the Clearing Member.

- (2) The Corporation shall apply the suspended Non-Conforming Member's Margin Deposit (including, without limitation, Margin and Clearing Fund), subject to Subsection A-701(3), to the discharge of:

- (a) the Non-Conforming Member's obligation with respect to any Transaction accepted by the Corporation, whether such failure is caused or not by the Non-Conforming Member;
- (b) a failure or anticipated failure to make any payment to the Corporation required of the Non-Conforming Member, whether such failure is attributable to the Non-Conforming Member or not;
- (c) any loss or expense anticipated or suffered by the Corporation upon the liquidation of the Non-Conforming Member's position;
- (d) any loss or expense anticipated or suffered by the Corporation pertaining to the Non-Conforming Member's obligations in respect of exercised Options or tendered Futures or OTCI for which settlement has not yet been made or in connection with hedging transactions effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in Options, Futures and OTCI;

- (e) any protective or hedging transaction effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in Options and Futures;
  - (f) any protective or hedging transaction effected for the account of the Corporation pursuant to Rule A-4 in respect of the Non-Conforming Member's positions in any OTCI; or
  - (g) subject to Section A-1B01, any other situation determined by the Board.
- (3) Each Clearing Member grants to the Corporation a first ranking pledge over all property (including without limitation Margin and Clearing Fund) that constitutes Margin Deposit or other property which may from time to time be in the possession or control of the Corporation, or in the possession or control of a person acting on behalf of the Corporation. This pledge shall secure the performance by the Clearing Member of all of its obligations to the Corporation and, to the extent such pledge relates to Clearing Fund deposits, it shall also secure the performance by another Clearing Member which is a Non-Conforming Member of its obligations to the Corporation, all subject to the provisions of Rule A-6 and the Default Manual, provided that, except for Clearing Fund deposits, Margin Deposits with respect to a Client Account shall only secure the performance by the Clearing Member of its obligations in respect of that Client Account, and Margin Deposits with respect to a Market Maker Account shall only secure the performance by the Clearing Member of its obligations in respect of that Market Maker Account. Notwithstanding the foregoing, if the Clearing Member does not identify its Margin Deposits with respect to each of its accounts, the Corporation shall use all Margin Deposits without distinction as securing all the obligations of the Clearing Member in respect of all its accounts. The Clearing Member shall execute and deliver (or cause to be executed and delivered) such other documents as the Corporation may from time to time request for the purpose of confirming or perfecting the pledge granted to the Corporation by the Clearing Member; provided that the failure by the Corporation to request or by the Clearing Member to execute and deliver (or cause to be executed and delivered) such documents shall not limit the effectiveness of the pledge in favour of the Corporation.
- (4) Except as permitted under Subsection A-609(4) in respect of Clearing Fund deposits and under Subsection D-607 in respect of Net Variation Margin Requirement deposits, and without limiting the right of the Corporation to invest the Margin Deposits in the form of cash under Subsections A-608(1) and A-707(1), the Corporation shall not grant a pledge over, transfer, or terminate under an Account Control Agreement authorizations to deal with, any property deposited as Margin Deposit by a Clearing Member which has not been designated as a Non-Conforming Member and suspended by the Corporation.
- (5) Without limiting the rights of the Corporation under Subsection A-701(2), the Corporation may at its sole discretion grant a pledge over or transfer all property deposited as Margin Deposit (including, without limitation, Margin and Clearing Fund) by a Clearing Member which has been suspended, as security for, or in connection with, the Corporation's own obligations to any person incurred in order to obtain liquidity or credit for the purpose of assisting the Corporation to honour its obligations on a timely basis further to the designation by the Corporation of such Clearing Member as being a suspended Clearing Member. In such circumstances, the Corporation shall grant a pledge over or transfer such Clearing Member's Margin Deposits before doing so with respect to the Clearing Fund deposits of other Clearing Members, in accordance with Subsection A-609(4). The Corporation shall be deemed to continue to hold all Margin Deposits regardless of whether the Corporation has exercised its rights under this Subsection A-701(5).



- (6) Any account or sub-account of a Clearing Member with the Corporation that reflects Financial Assets deposited with the Corporation by or on behalf of such Clearing Member for Margin purposes and to which such Financial Assets are credited, shall be considered a securities account for purposes of the QSTA or any similar securities transfer law of any other jurisdiction.

#### **Section A-702** **DISCRETIONARY MARGIN RULE**

The amount of Margin which may be required from a Clearing Member pursuant to this Rule A-7 (other than Margin required pursuant to Rule D-607) may be varied by the Corporation at any time and from time to time without advance notice whenever the Corporation, in its sole discretion, considers such variation necessary or advisable for the protection of the Corporation, Clearing Members or the investing public.

#### **Section A-703** **DAILY MARGIN ACTIVITY**

- (1) Each Business Day, the Corporation shall make available to each Clearing Member for each account maintained by the Clearing Member with the Corporation the reports which shall show the amount of Margin required to be deposited by virtue of the Clearing Member's positions. All Margin requirements shall be satisfied by Settlement Time on each Business Day notwithstanding any error in the information reflected in the reports issued.
- (2) If for any reason a report is not available to a Clearing Member, it shall be the responsibility of that Clearing Member to ascertain from the Corporation the amount of Margin required to be deposited, so that the Margin requirements are met before Settlement Time each Business Day.

#### **Section A-704** **WITHDRAWALS OF MARGIN**

- (1) Subject to Subsection A-704(2), in the event that on any particular day the amount of a Clearing Member's Margin on deposit exceeds the amount required to be deposited by such Clearing Member on such day pursuant to this Rule A-7, the Corporation shall authorize the withdrawal of the amount of the excess upon the submission to the Corporation, by such Clearing Member during the hours specified by the Corporation, of a withdrawal request in the form prescribed by the Corporation provided that the Clearing Member shall provide the Corporation with sufficient prior notice of such withdrawal request as set out in the Operations Manual.
- (2) If a Clearing Member has excess Margin deposited in respect of any Firm Account, the Corporation shall be entitled to apply such excess (or a portion thereof) as is necessary to meet the Margin requirements in respect of a Client Account or Market Maker Account. If a Clearing Member has excess Margin deposited in respect of any Client Account or any Market Maker Account, the Clearing Member shall not be entitled to apply such excess (or a portion thereof) to meet the Margin requirements in respect of a Firm Account; provided, however, that if the Clearing Member does not identify its Margin Deposits with respect to each of its accounts, the Corporation shall apply the Margin deposited by a Clearing Member indistinctively to meet the Margin requirements in respect of all its accounts.

## **Section A-705**

### **INTRA-DAY MARGIN CALLS**

- (1) Section 2 of the Operations Manual specifies the time of the Intra-Day Margin Calls.
- (2) The Corporation may also perform additional Intra-Day Margin Calls and require the deposit of supplementary Margin (other than Margin required pursuant to Rule D-607) by any Clearing Member in any account at any time during any Business Day which the Corporation, in its sole discretion, considers necessary or advisable to reflect changes during such day in the Market Price of any Underlying Interest in order to protect the Corporation, Clearing Members or the public.
- (3) Subject to Subsection A-704(2), if a Clearing Member has excess Margin, the Corporation shall be entitled, upon determining that supplementary Margin is required in accordance with paragraph (2) above, immediately to apply such portion of the excess Margin as is necessary to meet the supplementary Margin requirements. The Corporation shall notify the Clearing Member as soon as practicable of such application. If there is no excess Margin then on deposit, the Corporation will notify the Clearing Member of the amount of supplementary Margin required. Such supplementary Margin shall be deemed to be owing upon a Clearing Member receiving notice thereof and shall be deposited by the Clearing Member within one hour of the Clearing Member receiving such notice, or such longer time as may be provided in the Operations Manual or permitted by the Corporation. Credit for all such supplementary Margin deposits, shall be reflected on the Daily Settlement Summary Report on the following Business Day.

## **SECTION A-705.1**

### **OVERNIGHT MARGIN CALLS**

- (1) The Corporation may perform Overnight Margin Calls and require the deposit of supplementary Margin (other than Margin required pursuant to Rule D-607) by any Clearing Member in any account at any time during the Overnight Clearing Cycle (as such term is defined in the Operations Manual) which the Corporation, in its sole discretion, considers necessary or advisable to reflect changes during such day in the Market Price of any Underlying Interest in order to protect the Corporation, Clearing Members or the public.
- (2) Subject to Subsection A-704(2), if a Clearing Member has excess Margin, the Corporation shall be entitled, upon determining that supplementary Margin is required in accordance with paragraph (1) above, immediately to apply such portion of the excess Margin as is necessary to meet the supplementary Margin requirements. The Corporation shall notify the Clearing Member as soon as practicable of such application. If there is no excess Margin then on deposit, the Corporation will notify the Clearing Member of the amount of supplementary Margin required. Such supplementary Margin shall be deemed to be owing upon a Clearing Member receiving notice thereof and shall be deposited by the Clearing Member within one hour of the Clearing Member receiving such notice, or such longer time as may be provided in the Operations Manual or permitted by the Corporation. Credit for all such supplementary Margin deposits, shall be reflected on the Daily Settlement Summary Report on the following Business Day.

## PART B – OPTIONS

### RULE B-3 TENDER AND ASSIGNMENT OF EXERCISE NOTICES

#### Section B-301 EXERCISE OF OPTIONS

Unless otherwise determined by the Corporation, issued and unexpired Options may be exercised only in the following manner, ~~during the Business Hours of on~~ each Business Day during the hours specified by the Corporation:

- (1) American Options:
  - (a) on the Expiration Date in accordance with Rule B-307 hereof; or
  - (b) on a Business Day other than the Expiration Date a Clearing Member desiring to exercise an Option may tender an Exercise Notice to the Corporation until the Close of Business on such Business Day.
- (2) European Options:
  - (a) on the Expiration Date in accordance with Rule B-307 hereof.

Only the Clearing Member who holds the relevant open position may tender an Exercise Notice on that position.



## **PART B – OPTIONS**

### **RULE B-3 TENDER AND ASSIGNMENT OF EXERCISE NOTICES**

#### **Section B-301 EXERCISE OF OPTIONS**

Unless otherwise determined by the Corporation, issued and unexpired Options may be exercised only in the following manner, on each Business Day during the hours specified by the Corporation:

- (1) American Options:
  - (a) on the Expiration Date in accordance with Rule B-307 hereof; or
  - (b) on a Business Day other than the Expiration Date a Clearing Member desiring to exercise an Option may tender an Exercise Notice to the Corporation until the Close of Business on such Business Day.
- (2) European Options:
  - (a) on the Expiration Date in accordance with Rule B-307 hereof.

Only the Clearing Member who holds the relevant open position may tender an Exercise Notice on that position.



CANADIAN DERIVATIVES CLEARING CORPORATION  
CORPORATION CANADIENNE DE COMPENSATION DE PRODUITS DÉRIVÉS  
OPERATIONS MANUAL

~~JUNE 12, 2020~~

[...]

## [Section 1 - Definitions]

### DEFINITIONS

“Automatic Exercise” - a process by which CDCS will exercise In-the-Money Options at a pre-determined threshold.

“Assets” - Securities pledged and cash deposited by the Clearing Member to the CDCC.

“CAD” - Canadian Dollars.

“CDCC Clearing Application” - CDCS and all the processes associated with it, as may be supplemented or otherwise changed from time to time.

“Closing Transaction” - any Transaction that is either a Closing Buy Transaction, a Closing Purchase Transaction, a Closing Sell Transaction or a Closing Writing Transaction, as such terms are defined in the Rules, and in all cases that reduces or eliminates the Clearing Member’s Open Interest.

“Converge” - marketing brand of the portion of the CDCC Clearing Application that captures and processes OTCI Transactions, including Fixed Income Transactions.

“Eligible Collateral” - collateral which may be deposited with the Corporation for the purpose of fulfilling Margin requirements and which meets certain criteria described in the Risk Manual.

“Exerciser” - a Clearing Member that holds a Long Position in a particular Series of Options and submits an Exercise Notice to CDCC.

“Expiry Friday” - the third Friday of the month, unless that Friday is not a Business Day, then the Business Day preceding the third Friday of the month.

“FIFO Period” - the quarterly delivery period for Futures contracts on Government of Canada bonds, in accordance with Contract Specifications of the relevant Exchange.

“Forward Repurchase Transaction” - a Repurchase Transaction in respect of which the Open Leg has not settled yet at the time of the relevant report.

“FTP Downloads” - Clearing Member’s access to files and reports on an FTP server that is part of the CDCC Clearing Application.

“Inquiry Screen” - Graphical User Interface (GUI) view of the CDCC Clearing Application.

“Large Value Transfer System” or “LVTS” - an electronic wire system introduced by the Canadian Payments Association in February 1999 to facilitate the transfer of irrevocable payments in Canadian dollars across the country.

“Limited Clearing Member (LCM)”

- has the meaning given thereto in Section A-102 of the Rules.

“Margin Fund Account” - the CDCS record provided to each Clearing Member containing all Margin deposited by such Clearing Member to CDCC, in respect of any of the following: (1) Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), (2) Additional Margin for Market Liquidity Risk, (3) Additional Margin for Specific Wrong-Way Risk, (4) Additional Margin for Mismatched Settlement Risk, (5) Additional Margin for Intra-Day Variation Margin Risk, (6) Additional Margin for Unpaid Option Premium

Exposure Risk, (7) Additional Margin for Banking Holiday Risk, (8) Additional Margin for Variation Margin Delivery Risk, (9) Additional Capital Margin Risk, (10) Additional Margin for Uncovered Risk of Limited Clearing Members, (11) Variation Margin for Options, and (12) Variation Margin for Unsettled Item; the whole in accordance with the Risk Manual, or otherwise as set forth in Section 8-1 hereof.

**“Mini Contract”** - a Future or an Option that has the same Underlying Interest as a Standard Contract but having a Unit of Trading that is a ratio of the Standard Contract in accordance with applicable Contract Specifications.

**“Net Settlement Position”** - all the future Net Delivery Requirements and Net Payment Against Delivery Requirements of a Clearing Member, as reported by CDCC on a daily basis, taking into account all Fixed Income Transactions that have settled during the day and all new Fixed Income Transactions that have been novated to CDCC.

**“Net Variation Margin Requirement”** - has the meaning given thereto in Section D-601 of the Rules. Reference will be made to (Fixed Income) Net Variation Margin Requirement in this Manual.

**“Open Position File”** - database of the CDCC Clearing Application which compiles the Open Positions of all Clearing Members. Each Clearing Member can access the information pertaining to his accounts only, not to other Clearing Members’ accounts.

**“Opening Transaction”** - any Transaction that is either an Opening Buy Transaction, an Opening Purchase Transaction, an Opening Sell Transaction or an Opening Writing Transaction as set forth in Section A-102 of the Rules.

**“Operational Notices”** - formal notifications to the Clearing Members, representing items that are not published on CDCC’s website. These documents are available on the Secured Website.

**“OTCI Equity Options”** - over the counter options on an equity, bearing characteristics that differ from Exchange traded Options and are cleared by CDCC through *Converge*.

**“Overnight Clearing Cycle” - clearing cycle starting at 8:00pm (t-1) and ending at 6:00am ET.**

**“Position Transfer”** - this is the CDCC Clearing Application function to move a position from one Clearing Member to another.

**“Production Schedule”** - all of the timelines that are followed by CDCC, as set forth in Section 2 of this Operations Manual.

**“Regular Clearing Cycle” - clearing cycle starting at 6:00am and ending at 5:30pm ET.**

**“Request for Standard vs Mini Offset”** - the request by a Clearing Member, in the form prescribed by CDCC, to offset one (1) or more Long Position(s) on a Standard Contract against the equivalent number of Short Positions on the corresponding Mini Contract (totaling the same quantity of the Underlying Interest in accordance with the ratio prescribed in the Contract Specifications of the Mini Contract), having the same Delivery Month and booked in the same Clearing Member’s account, or the other way around.

**“Running Repurchase Transaction”** - a Repurchase Transaction in respect of which the Open Leg has already settled at the time of the relevant report.

**“Secured Website”** - Clearing Members only secured web site that requires a sign on and password, where CDCC publishes Operational Notices as well as documents that are meant only for the Clearing Members.

**“Specific Deposit”** - a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit which are accepted by CDCC as Underlying Interest Equivalent to cover a specific Short Position.

**“Standard Contract”** - a Future or Option in relation to which a Mini Contract exists.

**“Tenderer”** - a Clearing Member that holds a Short Position in a particular Series of Futures and submits a Tender Notice, or is deemed to do so in accordance with the Rules, to CDCC.

**“Unsettled Item”** - any delivery of the Underlying Interest that has not been settled at the Central Securities Depository.

**“(Fixed Income) Variation Margin Account”** - the CDCS record provided to each Clearing Member containing all Margin deposits made by such Clearing Member to CDCC for (Fixed Income) Net Variation Margin Requirement purposes only, in accordance with Section D-607 of the Rules, or otherwise as set forth in Section 8-1 hereof.

**“Weekly Options”** - Options that expire on any Friday, other than Expiry Friday. Only monthly Options expire on Expiry Friday.

[...]

[Section 2 - Time Frames]

SETTLEMENT TIME FOR EVERY BUSINESS DAY

Activity	Time Frames	Activity Type
<del>Start of Settlement Day at CDS and Clearing Day at CDCC</del>	<del>5:30 a.m.</del>	<del>System Activity</del>
<del>Beginning of Business Day Clearing Day and Overnight Clearing Cycle</del>	<del>8:00 p.m. (t-1)</del>	<del>System Activity</del>
<del>Clearing Member's (excluding LCMs) Overnight Margin Calculation &amp; Notification</del>	<del>Every hour from 9:00 p.m. (t-1) to 5:00 a.m. (t)</del>	<del>System Activity/Notification</del>
<del>Deadline to settle Overnight Margin Call</del>	<del>2 hours after notification</del>	<del>Obligation Deadline</del>
<del>Beginning of Settlement Day at CDS</del>	<del>5:30 a.m.</del>	<del>System Activity</del>
<del>End of Overnight Clearing Cycle</del>	<del>6:00 a.m.</del>	<del>System Activity</del>
<del>Beginning of Regular Clearing Cycle</del>	<del>6:00 a.m.</del>	<del>System Activity</del>
Clearing Member's (excluding LCMs) Activity/Notification      Early Morning Intra-Day Margin Calculation & Notification	7:15 a.m.	System
Deadline to settle Early Morning Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Assets Concentration Limits breach notification	7:30 a.m.	Notification
Deadline for Clearing Members (excluding LCMs) for Settlement Time with respect to payments for overnight settlement	7:45 a.m.	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	8:30 a.m.	System Activity
Deadline for Clearing Members (excluding LCMs) to receive EOD Amount due from CDCC	8:45 a.m.	Obligation Deadline
Deadline for LCMs for Settlement Time with respect to payments for overnight settlement	9:00 a.m.	Obligation Deadline
Fixed Income Transactions - Morning Netting Cycle Timeframe in respect of any Pending Payment Against Delivery Requirements (Morning Net Payment Against Delivery Requirements sent to CDS for settlement during the Morning Net DVP Settlement Timeframe) - 15 minutes cycle	10:00 a.m.	System Activity
Morning Net DVP Settlement Calculation	10:15 a.m.	System Activity
Deadline for Morning Net DVP Settlement	10:30 a.m.	Obligation Deadline

Activity	Time Frames	Activity Type
Clearing Member's (excluding LCMs) Morning Intra-Day Margin Calculation & Notification Activity/Notification	10:30 a.m.	System
Deadline to settle Morning Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Assets Concentration Limit breach correction deadline	11:45 a.m.	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	12:15 p.m.	System Activity
Clearing Member's Afternoon Intra-Day Margin Calculation & Notification Activity/Notification	12:45 p.m.	System
Deadline to settle Afternoon Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Specific Deposits (same day withdrawal)	12:45 p.m.	Operational Deadline
Deadline to settle Intra-Day Margin Call and Additional Margins for LCMs	The later of 2:45 p.m. or 2 hours after notification	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	2:00 p.m.	System Activity
<del>Cash</del> CAD Deposits - \$10,000,000 and under (same day deposit)	2:45 p.m.	Operational Deadline
<del>Cash</del> CAD Deposits - over \$10,000,000 (2 Business Days notice)	2:45 p.m.	Operational Deadline
<del>Cash</del> CAD withdrawal requests - \$10,000,000 and under (same day withdrawal)	2:45 p.m.	Operational Deadline
<del>Cash</del> CAD withdrawal requests - over \$10,000,000 (2 Business Days notice)	2:45 p.m.	Operational Deadline
Fixed Income Transactions - (Same Day Transactions) - Submission Cut-Off Time	3:30 p.m.	Operational Deadline
Clearing Members (excluding LCMs) - All <del>assets</del> Assets deposits other than cash (Margin deposits)	3:30 p.m.	Operational Deadline
Clearing Members - All <del>assets</del> Assets withdrawal requests other than cash (Margin deposits) for same day withdrawal	3:30 p.m.	Operational Deadline
Clearing Members - All <del>assets</del> Assets substitution requests other than cash (Margin deposits) for same day substitution	3:30 p.m.	Operational Deadline
<u>Foreign currency withdrawal requests deadline</u>	<u>3:30 p.m.</u>	<u>Operational</u> <u>Deadline</u>

Activity	Time Frames	Activity Type
Fixed Income Transactions - Afternoon Netting Cycle Timeframe in respect of any Pending Settlement Requirements (Afternoon Net DVP Settlement Requirements sent to CDS for settlement by End of Day DVP Settlement Time) - 5 minutes cycle	3:35 p.m.	System Activity
CDS Payment Exchange, Net Wire Payment	4:00 p.m.	System Activity
End of Day DVP Settlement Time	4:00 p.m.	Obligation Deadline
Unsettled Item (Options Underlying deliveries only): Confirmation of settled items to be sent to CDCC	4:15 p.m.	Operational Deadline
Deadline for CDCC to respond to substitution or withdrawal request (other than (Fixed Income) Variation Margin)	4:30 p.m.	Obligation Deadline
OTCI (other than Fixed Income Transactions) - Trade Submission Deadline	4:30 p.m.	Operational Deadline
Projected Margin Report Computation	4:30 p.m.	System Activity
Request for Standard vs Mini Offset	5:00 p.m.	Operational Deadline
Position Transfers	5:25 p.m.	Operational Deadline
Same Day and T+1 Trade corrections	5:30 p.m.	Operational Deadline
Open Position changes	5:30 p.m.	Operational Deadline
Futures - Tender Notices submission	5:30 p.m.	Operational Deadline
Options - Exercise Notices submission	5:30 p.m.	Operational Deadline
Fixed Income Transactions and Futures contracts on Acceptable Securities - Netting Cut Off Time (Netted settlement instructions (Net Delivery Requirements and Net Payment Against Delivery Requirements) sent to CDS for settlement on the next business day)	5:30 p.m.	System Activity
<u>End of Regular Clearing Cycle and</u> CDCC Clearing Application shutdown - Close of Business	5:30 p.m.	System Activity
FIFO: Daily reporting by Clearing Members of the Long Positions in each of their accounts in chronological order	5:30 p.m.	Operational Deadline
FIFO: Submission of Tender Notices	5:30 p.m.	Operational Deadline
LCM Only - All <del>assets</del> Assets deposits other than cash (in respect of all Margin requirements)	6:30 p.m.	Operational Deadline
Fixed Income Transactions - available (next Business Day start)	7:00 p.m.	System Activity



## [Section 7 - Settlement]

### ~~Overnight~~End of Day Settlement

Payments for ~~overnight~~end of day settlement (Futures mark-to-market, premiums, Margin shortfalls, etc.) must be received by 7:45 a.m. the next Business Day for each Clearing Member (excluding LCMs) and 9:00 a.m. for each LCM.

If a payment is late, CDCC will notify the Clearing Member that it is being fined. The fine structure is as follows:

Based on a rolling thirty days - if there has been a prior occurrence within the preceding thirty days, it is the second occurrence.

The fine schedule described below is subject to the Escalation Procedure applicable for operational issues detailed in Section 11 of this Manual.

[...]

## [Section 8 - Margin processing]

### MARGIN FUND ACCOUNT

**Margin Fund Account** is the CDCS record provided to each Clearing Member containing all Margin deposited by such Clearing Member to CDCC, in respect of such Clearing Member's Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Market Liquidity Risk, Additional Margin for Specific Wrong-Way Risk, Additional Margin for Mismatched Settlement Risk, Additional Margin for Intra-Day Variation Margin Risk, Additional Margin for Unpaid Option Premium Exposure Risk, Additional Margin for Banking Holiday Risk, Additional Margin for Variation Margin Delivery Risk, Additional Capital Margin Risk, Additional Margin for Uncovered Risk of Limited Clearing Members, Variation Margin for Options, and Variation Margin for Unsettled Items, in accordance with the Risk Manual and as set forth in Section 8-1 hereof.

In addition to the foregoing, an amount may be requested from a Clearing Member for the protection of the Corporation, Clearing Members or the investing public, in accordance with section A-702 of the Rules.

Each Clearing Member must record in its Margin Fund Account any deposit made to cover the shortfalls resulting from the requirements. Deposits must be in the form of Eligible Collateral, as specified in the Risk Manual, in an amount sufficient, taking into account the market value and applicable haircuts as specified in Section A-707.

#### Withdrawals

Clearing Members may request to withdraw any surplus amount from the Margin Fund Account, subject to applicable deadlines, as set forth in Section 2 of this Operations Manual. CDCC will respond within the specified time set forth in Section 2 and, on a best effort basis, approve the withdrawal in CDCC Clearing Application.

#### Substitutions

A Clearing Member may request to substitute a specific CUSIP/ISIN Asset previously pledged/deposited in the Margin Fund Account to the Corporation. The Clearing Member must first pledge deposit equivalent securities/cash and withdraw the existing securities/cash subject to substitution. The value of the equivalent securities/cash so pledged/deposited must be equal to or in excess of the securities/Assets being withdrawn, subject to applicable deadlines, as set forth in Section 2 of this Operations Manual.

CDCC verifies the validity of each deposit made by Clearing Members and ensures that withdrawals of existing securities/Assets subject to substitution do not create deficits in the Clearing Member's Margin Fund Account. CDCC will respond within the specified time set forth in Section 2 and, on a best effort basis, approve the substitution in CDCC Clearing Application.

#### Cash deposit

Cash deposited in the Margin Fund Account must be sent to the relevant CDCC bank account. After performing all the validation processes, CDCC confirms within the CDCC Clearing Application the Clearing Member's deposits and/or withdrawals.

Deposits, withdrawals and changes thereto will be reflected on the immediately following Business Day's Deposits and Withdrawals Report (MA01). In accordance with the Rules, any discrepancies that the Clearing Member notices against its own records should be reported to CDCC immediately.

#### Pledging (Securities / CDS)

Securities pledges in the Margin Fund Account must be performed through CDSX in CDCC's account. The entries on the pledging screen of the CDCC Clearing Application are matched by CDCC to corresponding entries on the reporting system of the relevant Central Securities Depository.

In some cases an exchange of document at a CDCC Office by the Clearing Member (accompanied by a screen print of the entry bearing the Clearing Member's stamp) may be accepted by CDCC as constituting a physical deposit or withdrawal.

After performing all the validation processes, CDCC confirms within the CDCC Clearing Application the Clearing Member's deposits and/or withdrawals.

Deposits, withdrawals and changes thereto will be reflected on the immediately following Business Day's Deposits and Withdrawals Report (MA01). In accordance with the Rules, any discrepancies that the Clearing Member notices against its own records should be reported to CDCC immediately.

### **Pledging (Securities / Tri Party - Securities Account with an Approved Custodian)**

Subject to certain conditions, the Corporation may allow Clearing Members to pledge non-cash collateral for the purpose of meeting their Margin requirements pursuant to Rule A-7 (excluding Net Variation Margin Requirements and any other Margin which can otherwise only be cash settled) to a securities account maintained at a third party securities intermediary. The securities intermediary must enter into an Account Control Agreement with respect to the securities account and be an Approved Custodian, each as defined in the Rules.

#### **Use of the Securities Account**

1. The securities account shall only be maintained by a securities intermediary which is an Approved Custodian, as defined in the Rules.
2. Any securities held in the securities account maintained by the Approved Custodian, in the name of the Clearing Member, shall be subject to an Account Control Agreement.
3. The Account Control Agreement is a standard agreement that meets certain requirements, as prescribed in the Rules.
4. The securities account may not be used for Net Variation Margin Requirements or for settlement purposes.
5. The respective rights and obligations of the Clearing Member and CDCC with respect to the securities collateral held in the securities account are subject to the Rules, including:
  - a. All deposits, withdrawals and substitutions in the securities account are subject to the timeline described in Section 2 of this Manual and to the collateral policy described in Section 2 (Eligible Collateral) of the Risk Manual;
  - b. All deposits, withdrawals and substitutions made in the securities account shall also be entered in CDCC Clearing Application in accordance with the timeline described in Section 2 of this Manual and to the collateral policy described in Section 2 (Eligible Collateral) of the Risk Manual;
  - c. Any withdrawal of securities held in the securities account is subject to CDCC's approval. The withdrawal must be entered in CDCC Clearing Application by the Clearing Member. A withdrawal authorization form signed by the Clearing Member must be transmitted to CDCC and must include the Clearing Member's approved stamp. CDCC will then, within the specified time to respond to a withdrawal request specified in Section 2, sign and transmit the withdrawal authorization form to the Custodian to proceed with the withdrawal;
  - d. Any substitution is subject to the deposit by the Clearing Member of the replacement securities in the securities account before the withdrawal of the replaced securities. Both the deposit and the withdrawal shall also be entered in CDCC Clearing Application by the Clearing Member. A substitution authorization form signed by the Clearing Member must be transmitted to CDCC and must include the Clearing Member's approved stamp. CDCC will then, within the specified time to respond to a

substitution request specified in Section 2, sign and transmit the substitution authorization form to the Custodian to proceed with both the deposit and the withdrawal.

### Intra-Day Margin Calls

CDCC encourages its Clearing Members to cover Intra-Day Margin Calls with collateral other than cash.

The fine schedule described below is subject to the Escalation Procedure applicable for operational issues detailed in Section 11 of this Manual.

Clearing Members (excluding LCMs) have one (1) hour from notification to cover an Intra-Day Margin Call. If the payment or delivery is late, the following fines shall apply:

- if the payment or delivery is received more than 1 hour after but less than 1 hour and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 1 hour and 15 minutes but less than 1 hour and 30 minutes from notification, CDCC will impose a \$1,000 fine.
- if the payment or delivery is not received by 1 hour and 30 minutes from notification, CDCC will deem the Clearing Member (excluding LCMs) a Non-Conforming Member.

LCMs have two (2) hours from notification or until such Settlement Time as may be provided in Section 2 to cover an Intra-Day Margin Call. If the payment or delivery is late, the following fines shall apply:

- if the payment or delivery is received more than 2 hours after but less than 2 hours and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 2 hours and 15 minutes but less than 2 hours and 30 minutes from notification, CDCC will impose a \$1,000 fine.

if the payment or delivery is not received within 2 hours and 30 minutes from notification, CDCC will deem the LCM a Non-Conforming Member

### Overnight Margin Calls

CDCC offers its Clearing Members two (2) ways to cover Overnight Margin Calls:

- Eligible currencies deposited through an approved bank;
- Securities pledged through CDS (see CDS document "PLEDGE AND SETTLEMENT PROCEDURES" section 1.8).

Clearing Members (excluding LCMs) have two hours from notification to cover an Overnight Margin Call. If the payment or delivery is late or insufficient, the Clearing Member may be deemed a Restricted Clearing Member by CDCC and the following fines shall apply:

- if the payment or delivery is received more than 2 hours after but less than 2 hours and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 2 hours and 15 minutes but less than 2 hours and 30 minutes from notification, CDCC will impose a \$1,000 fine.

[...]

[Section 11 - Escalation procedure]

**PAYMENT FAILURE ESCALATION PROCEDURE**

A failure by a Clearing Member to meet a payment, transfer, deposit, delivery, or acceptance of delivery when such obligation becomes due under the Rules (for the purpose of this Section 11 - Escalation Procedure, a "Payment Failure") as a result of an operational issue, including any material systems failure, malfunction, or delay encountered by a Clearing Member or its securities intermediary, including its Settlement Agent, Approved Depository, or Approved Custodian, (an "Operational Issue") shall be managed by the Corporation in accordance with the following procedure, (the "Escalation Procedure").

1) Communication

a) For the purposes of ~~this~~the Payment Failure Escalation Procedure:

- i) a CDCC Level 1 contact shall be a Director Operations, or its equivalent;
- ii) a CDCC Level 2 contact shall be a Vice-President Operations, or its equivalent;
- iii) a CDCC Level 3 contact shall be the President and Chief Clearing Officer or Vice-President and Chief Risk Officer;
- iv) a Clearing Member Level 1 contact shall be a Director of Operations, or its equivalent;
- v) a Clearing Member Level 2 contact shall be a Vice-President Operations, or its equivalent; and
- vi) a 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".

b) The CDCC Level 1 contact shall, immediately upon acquiring actual knowledge or confirmation of a Payment Failure by a Clearing Member, notify the Clearing Member Level 1 contact of the Payment Failure. The Clearing Member Level 1 contact shall, within a reasonable period of time, confirm the nature of the issue that caused the Payment Failure and, promptly upon providing such confirmation, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.

c) In the event that (i) the Clearing Member Level 1 contact fails to respond to the CDCC Level 1 contact within a reasonable period of time, (ii) the Clearing Member Level 1 contact cannot confirm the nature of the issue that caused the Payment Failure, or (iii) the information provided by the Clearing Member Level 1 contact regarding the nature of the Operational Issue that caused the Payment Failure is deemed unsatisfactory by the Corporation, the CDCC Level 2 contact shall immediately contact the Clearing Member Level 2 contact. The Clearing Member Level 2 contact shall, promptly upon being contacted in accordance with this subsection, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.

d) In the event that (i) the CDCC Level 2 contact fails to reach the Clearing Member Level 2 contact within a reasonable period of time, (ii) the Clearing Member Level 2 contact cannot confirm the nature of the Operational Issue that caused the Payment Failure, or (iii) the information provided by the Clearing Member Level 2 contact regarding the nature of the Operational Issue that caused the Payment Failure is deemed unsatisfactory by the Corporation, the CDCC Level 3 contact shall immediately contact the Clearing Member Level 3 contact. The Clearing Member Level 3 contact shall, within an hour after being contacted in accordance with this subsection, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.

## 2) Operational Issue Resolution Notice

a) Upon receiving notification by the Corporation of the Payment Failure in accordance with Section 1 of this Escalation Procedure, if the Clearing Member Level 1, 2, or 3 contact, as the case may be, confirms in accordance with Subsection 1 that the Payment Failure is solely due to an Operational Issue, such Clearing Member Level 1, 2, or 3 contact, as the case may be, shall provide the Corporation with a written confirmation of the nature of the Operational Issue that caused the Payment Failure and a detailed description of the steps proposed to be taken by the Clearing Member to resolve the Operational Issue (together, the "Operational Issue Resolution Notice"). Where the Operational Issue affects the Clearing Member's securities intermediary (including its Settlement Agent, Approved Depository or Approved Custodian), the Clearing Member shall immediately provide the Corporation with the contact details for the relevant representative of such securities intermediary's and include such representative in every communication with the Corporation related to the Operational Issue until the full resolution of the Operational Issue.

b) The Operational Issue Resolution Notice shall be re-issued by the Clearing Member Level 3 contact, to the Corporation on each day on which the Payment Failure persists, until there is a full resolution of the Operational Issue to the satisfaction of the Corporation.

## 3) Mitigation Tools

Immediately upon the occurrence of a Payment Failure, the Clearing Member shall use its best efforts to resolve the Operational Issue, and to mitigate the Payment Failure by the use of the following mitigation tools (the "Mitigation Tools") before 3:45 pm, where necessary:

- a) The Exception Process Request after the start of CDS payment exchange, where applicable, or
- b) The Payment Delay Request.

## 4) Delayed Resolution

On any Business Day on which an Operational Issue Resolution Notice remains in effect, in the event that the Corporation is of the view that the Operational Issue is expected, or likely, to persist until the next following Business Day,

a) The Corporation may determine that no Transaction shall be cleared by the Corporation for such Clearing Member until resolution; and

b) The Clearing Member Level 3 contact shall provide written confirmation that the Payment Failure is solely due to an Operational Issue and that the Clearing Member has used its best efforts to use the Mitigation Tools, and requests, if necessary, no later than 3:45 pm on the Business Day on which the first notification of the Payment Failure has been made, by a Payment Delay Request that the Corporation funds the Clearing Member's obligations of payment to the Corporation until the next following Business Day. The Clearing Member shall, upon request by the Corporation, represent and warrant to each of the Corporation's lender, acknowledging and confirming that each of the Corporation and the lender is relying on such representations and warranties without independent inquiry, that the Payment Failure is solely due to an Operational Issue and that no financial condition is affecting the Clearing Member in such a way that the provision of temporary funding in accordance with this section could jeopardize the interest of the Corporation or other Clearing Members. In the event that temporary funding is provided in accordance with this section, all fees and costs incurred by the Corporation in connection with such funding shall be added to and become part of the payment obligation owed by the Clearing Member to the Corporation and will become due immediately.

## 5) Non-Conforming

a) If no Mitigation Tool has been successfully implemented by the Clearing Member by the end of the Business Day on which the first notification of the Payment Failure has been made, the Corporation may declare the Clearing Member a Non-Conforming Member provided that the President & Chief Clearing

Officer (or its designate) of the Corporation, prior to such designation, notifies the appropriate senior officer of the Bank of Canada in accordance with the Bank of Canada communication requirements.

b) If a Mitigation Tool has successfully been used by the Clearing Member but the Corporation is not satisfied with the information provided pursuant to the Operational Issue Resolution Notice, or considers that the steps proposed to be taken by the Clearing Member to resolve the Operational Issue expose the Corporation to an unacceptable level of risk, the Corporation may declare the Clearing Member a Non-Conforming Member, provided that the President & Chief Clearing Officer (or designate) of the Corporation prior to such designation notifies the appropriate senior officer of the Bank of Canada in accordance with the Bank of Canada communication requirements. The Corporation shall not exercise this discretion without having first performed the Escalation Procedure pursuant to Section 11 within a reasonable timeframe upon acquiring actual knowledge or confirmation of a Payment Failure by a Clearing Member and will not exercise this discretion before 10:00 am on the day following the receipt of the Level-3 Operational Issue Resolution Notice, unless the Clearing Member has not confirmed that the Payment Failure results from an Operational Issue.

## OVERNIGHT UNCOVERED RISK EXPOSURE

During the Overnight Clearing Cycle, CDCC's risk appetite for acceptable levels of uncovered risk are measured every hour on a per Clearing Member basis as a proportion of their Margin requirements, and will therefore take the form of a relative threshold (the "Threshold"). The first monitoring snapshot occurs at 9:00 pm ET (t-1) and the last one at 5:00 am ET, where the Margin requirement is systemically updated with movements in Initial Margin, but only updated once with movements in Variation Margin<sup>1</sup> (at the 1:00 am ET monitoring snapshot). The hourly monitoring of both the Initial Margin and Variation Margin is available and used to estimate the build-up of credit exposure (the "Live margin check").

The Threshold will only apply if at least one position movement is captured during the Overnight Clearing Cycle, allowing the Clearing Member to be considered inactive as long as positions remain static ("Position-based trigger"). In other words, a Clearing Member will be considered inactive until one position movement is captured, after which such Clearing Member will be considered active for the rest of the Overnight Clearing Cycle.

The Threshold will trigger different actions depending on the Clearing Member's established overnight collateral solution (i.e. Pre-funding solution or Payment solution, see additional details in section 12-1 below). Consequently, CDCC uses the following terminology for the Threshold:

- "Margin Call threshold" - Applicable to the Payment solution. If the Clearing Member reaches the Margin Call threshold, an Overnight Margin Call is issued and needs to be fulfilled within the given timeline. If the Clearing Member doesn't fulfill its payment obligation or the payment capabilities are not enough to fulfill the obligation, CDCC may deem such Clearing Member as a Restricted Clearing Member.
- "Trading threshold" - Applicable to the Pre-funding solution. If the Clearing Member reaches the Trading threshold, CDCC may deem such Clearing Member as a Restricted Clearing Member.

Additionally, CDCC will use the below terminology to address Live margin check breaches:

- "Warning threshold" - Should only the Live margin check be breached, a warning is communicated to the Clearing Member.

Overnight Uncovered Risk Exposure Escalation procedure:

- a) the Overnight contact list for the purposes of the "Overnight Uncovered Risk Exposure" Escalation Procedure:

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<sup>1</sup> Additional Margin for Intra-Day Variation Margin Risk as set forth in the Risk Manual.

- i) a CDCC Level 1 contact shall be an Operations Specialist, its equivalent or higher;
  - ii) a CDCC Level 2 contact shall be a Senior Manager, its equivalent or higher;
  - iii) a CDCC Level 3 contact shall be the President or Chief Clearing Officer or Vice-President and Chief Risk Officer;
  - iv) a Clearing Member Level 1 contact shall be an Operation Specialist, its equivalent or higher;
  - v) a Clearing Member Level 2 contact shall be a Senior Manager, its equivalent or higher; and
  - vi) a 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".
- b) The CDCC Level 1 contact shall, immediately upon acquiring confirmation of a Warning threshold breach by a Clearing Member, notify the Clearing Member Level 1 contact of the "Warning threshold" breach.
- c) The CDCC Level 1 contact shall, immediately upon acquiring confirmation of a Margin Call threshold breach by a Clearing Member, notify the Clearing Member Level 1 contact of the breach and that an Overnight Margin Call will be issued.
- d) The CDCC Level 2 contact shall, immediately upon acquiring confirmation of a Trading threshold breach or that the Clearing Member didn't fulfill its payment obligation following the issuance of an Overnight Margin Call, notify the Clearing Member Level 2 contact of the situation and that the Clearing Member may be deemed a Restricted Clearing Member by CDCC.
- e) The CDCC Level 3 contact shall, immediately upon acquiring actual knowledge or confirmation that a Clearing Member may be or was deemed a Restricted Clearing Member, communicate with the Clearing Member Level 3 contact.



## [New Section 12 - Overnight Clearing Cycle Requirements]

### OVERNIGHT CLEARING CYCLE REQUIREMENTS

During the Overnight Clearing Cycle, Clearing Members are assigned to one of the following solution based on their payment capabilities:

- Pre-funding solution (i.e. Overnight Clearing Cycle eligible collateral payment capabilities not available)
- Payment solution (i.e. Overnight Clearing Cycle eligible collateral payment capabilities available)

By default, Clearing Members are considered part of the Pre-funding solution until they demonstrate their ability to meet their obligations towards CDCC from amongst the below list of Overnight Clearing Cycle eligible collateral with respect to the Asian hours, European hours, or both:

- "Asian hours" - i.e. 8:00 pm to 1:00 am ET - in a selection of eligible Non-CAD currencies.
- "European hours" - i.e. 1:00 am to 6:00 am ET - in a selection of eligible Non-CAD currencies or any form of eligible collateral pledged through CDSX.

Clearing Members opting to qualify for the Payment solution during either the Asian hours, European hours or both will automatically be considered as part of the Payment solution at the 1:00 am ET monitoring snapshot (juncture of Asian and European hours).

CDCC will conduct routine testing of the Payment solution from time to time to ensure that operational readiness is maintained by Clearing Members. Should a Clearing Member fail such tests, it will be re-assigned to the Pre-funding solution.

CDCC will allow Clearing Members under the Pre-funding solution to enter the Payment solution at any time after the required certification requirements are passed.



**CANADIAN DERIVATIVES CLEARING CORPORATION  
CORPORATION CANADIENNE DE COMPENSATION DE PRODUITS DÉRIVÉS  
OPERATIONS MANUAL**

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## **PREAMBLE AND DEFINITIONS**

### **PREAMBLE**

This Amended and Restated Operations Manual cancels and supersedes the previous versions thereof.

CDCC and its Clearing Members are contractually bound by the Membership Agreement which is constituted by the Application for Membership when accepted by CDCC, as may be amended from time to time, which incorporates by reference the Rules of CDCC, as may be amended from time to time. The Rules of CDCC include this Operations Manual, as may be amended from time to time. In the case of conflict, the provisions of the Rules (excluding the Operations Manual) prevail over this Operations Manual. The provisions of the Rules (including this Operations Manual), in the case of conflict, prevail over the provisions of the Application for Membership.

The Operations Manual provides practical details with respect to (i) certain definitions, (ii) timelines, (iii) reports, (iv) trade processing, (v) open positions, (vi) exercises, tenders, assignments and delivery, (vii) settlement, (viii) additional margin processing, and (ix) clearing fees. The Operations Manual contains two schedules which are integral parts thereof: (a) the Risk Manual providing practical details with respect to margin and other risk management processes, including the Default Manual as an Appendix, and (b) the templates of depository agreements.

All times specified in this Operations Manual refer to Eastern Time, unless otherwise indicated.

All amounts specified in this Operations Manual refer to Canadian currency, unless otherwise indicated.

All capitalized terms used in this Operations Manual shall have the meanings assigned to them in the Rules unless the context otherwise requires or unless specifically defined differently herein.

### **DEFINITIONS**

**“Automatic Exercise”** - a process by which CDCCS will exercise In-the-Money Options at a pre-determined threshold.

**“Assets”** - Securities pledged and cash deposited by the Clearing Member to the CDCC.

**“CAD”** - Canadian Dollars.

**“CDCC Clearing Application”** - CDCCS and all the processes associated with it, as may be supplemented or otherwise changed from time to time.

**“Closing Transaction”** - any Transaction that is either a Closing Buy Transaction, a Closing Purchase Transaction, a Closing Sell Transaction or a Closing Writing Transaction, as such terms are defined in the Rules, and in all cases that reduces or eliminates the Clearing Member’s Open Interest.

**“Converge”** - marketing brand of the portion of the CDCC Clearing Application that captures and processes OTCI Transactions, including Fixed Income Transactions.

**“Eligible Collateral”** - collateral which may be deposited with the Corporation for the purpose of fulfilling Margin requirements and which meets certain criteria described in the Risk Manual.

## **PREAMBLE AND DEFINITIONS**

**“Exerciser”** - a Clearing Member that holds a Long Position in a particular Series of Options and submits an Exercise Notice to CDCC.

**“Expiry Friday”** - the third Friday of the month, unless that Friday is not a Business Day, then the Business Day preceding the third Friday of the month.

**“FIFO Period”** - the quarterly delivery period for Futures contracts on Government of Canada bonds, in accordance with Contract Specifications of the relevant Exchange.

**“Forward Repurchase Transaction”** - a Repurchase Transaction in respect of which the Open Leg has not settled yet at the time of the relevant report.

**“FTP Downloads”** - Clearing Member’s access to files and reports on an FTP server that is part of the CDCC Clearing Application.

**“Inquiry Screen”** - Graphical User Interface (GUI) view of the CDCC Clearing Application.

**“Large Value Transfer System” or “LVTS”** - an electronic wire system introduced by the Canadian Payments Association in February 1999 to facilitate the transfer of irrevocable payments in Canadian dollars across the country.

**“Limited Clearing Member (LCM)”**

- has the meaning given thereto in Section A-102 of the Rules.

**“Margin Fund Account”** - the CDCS record provided to each Clearing Member containing all Margin deposited by such Clearing Member to CDCC, in respect of any of the following: (1) Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), (2) Additional Margin for Market Liquidity Risk, (3) Additional Margin for Specific Wrong-Way Risk, (4) Additional Margin for Mismatched Settlement Risk, (5) Additional Margin for Intra-Day Variation Margin Risk, (6) Additional Margin for Unpaid Option Premium Exposure Risk, (7) Additional Margin for Banking Holiday Risk, (8) Additional Margin for Variation Margin Delivery Risk, (9) Additional Capital Margin Risk, (10) Additional Margin for Uncovered Risk of Limited Clearing Members, (11) Variation Margin for Options, and (12) Variation Margin for Unsettled Item; the whole in accordance with the Risk Manual, or otherwise as set forth in Section 8-1 hereof.

**“Mini Contract”** - a Future or an Option that has the same Underlying Interest as a Standard Contract but having a Unit of Trading that is a ratio of the Standard Contract in accordance with applicable Contract Specifications.

**“Net Settlement Position”** - all the future Net Delivery Requirements and Net Payment Against Delivery Requirements of a Clearing Member, as reported by CDCC on a daily basis, taking into account all Fixed Income Transactions that have settled during the day and all new Fixed Income Transactions that have been novated to CDCC.

**“Net Variation Margin Requirement”** - has the meaning given thereto in Section D-601 of the Rules. Reference will be made to (Fixed Income) Net Variation Margin Requirement in this Manual.



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## **PREAMBLE AND DEFINITIONS**

**“Open Position File”** - database of the CDCC Clearing Application which compiles the Open Positions of all Clearing Members. Each Clearing Member can access the information pertaining to his accounts only, not to other Clearing Members’ accounts.

**“Opening Transaction”** - any Transaction that is either an Opening Buy Transaction, an Opening Purchase Transaction, an Opening Sell Transaction or an Opening Writing Transaction as set forth in Section A-102 of the Rules.

**“Operational Notices”** - formal notifications to the Clearing Members, representing items that are not published on CDCC’s website. These documents are available on the Secured Website.

**“OTCI Equity Options”** - over the counter options on an equity, bearing characteristics that differ from Exchange traded Options and are cleared by CDCC through *Converge*.

**“Overnight Clearing Cycle”** - clearing cycle starting at 8:00pm (t-1) and ending at 6:00am ET.

**“Position Transfer”** - this is the CDCC Clearing Application function to move a position from one Clearing Member to another.

**“Production Schedule”** - all of the timelines that are followed by CDCC, as set forth in Section 2 of this Operations Manual.

**“Regular Clearing Cycle”** - clearing cycle starting at 6:00am and ending at 4:30pm ET.

**“Request for Standard vs Mini Offset”** - the request by a Clearing Member, in the form prescribed by CDCC, to offset one (1) or more Long Position(s) on a Standard Contract against the equivalent number of Short Positions on the corresponding Mini Contract (totaling the same quantity of the Underlying Interest in accordance with the ratio prescribed in the Contract Specifications of the Mini Contract), having the same Delivery Month and booked in the same Clearing Member’s account, or the other way around.

**“Running Repurchase Transaction”** - a Repurchase Transaction in respect of which the Open Leg has already settled at the time of the relevant report.

**“Secured Website”** - Clearing Members only secured web site that requires a sign on and password, where CDCC publishes Operational Notices as well as documents that are meant only for the Clearing Members.

**“Specific Deposit”** - a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit which are accepted by CDCC as Underlying Interest Equivalent to cover a specific Short Position.

**“Standard Contract”** - a Future or Option in relation to which a Mini Contract exists.

**“Tenderer”** - a Clearing Member that holds a Short Position in a particular Series of Futures and submits a Tender Notice, or is deemed to do so in accordance with the Rules, to CDCC.



Section:

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## **PREAMBLE AND DEFINITIONS**

**“Unsettled Item”** - any delivery of the Underlying Interest that has not been settled at the Central Securities Depository.

**“(Fixed Income) Variation Margin Account”** - the CDCS record provided to each Clearing Member containing all Margin deposits made by such Clearing Member to CDCC for (Fixed Income) Net Variation Margin Requirement purposes only, in accordance with Section D-607 of the Rules, or otherwise as set forth in Section 8-1 hereof.

**“Weekly Options”** - Options that expire on any Friday, other than Expiry Friday. Only monthly Options expire on Expiry Friday.

**TIME FRAMES****ON-LINE ACCESS**

Each Clearing Member must be connected to the CDCC Clearing Application using its PC terminals to perform a variety of functions. (Clearing Members must supply their own PC terminals and Internet connection, at their own cost).

All instructions (corrections, Open Position changes, Position Transfers, Deposits, withdrawals, and submission of Exercise Notices and Tender Notices) must be entered on-line.

The CDCC Clearing Application allows Clearing Members to view their current information throughout the day electronically (except during scheduled maintenance or unforeseen outages). In addition, Clearing Members can download their reports after 7:00 p.m. every day using the FTP Download function.

Should a Clearing Member not have electronic access (due to technical issues) to the CDCC Clearing Application during Office Hours, CDCC can perform instructions on behalf of the Clearing Member. This requires a phone call from the Clearing Member to CDCC, along with the appropriate form faxed or scanned and e-mailed to CDCC. Such form must be authorized with the approved Clearing Member's stamp.

With respect to operational activity related to Options with an Expiration Date on Expiry Friday, CDCC staff members are on-site from 7:00 a.m. to fifteen (15) minutes after delivery of the Options Exercised and Assigned Report (MT02).



## TIME FRAMES

### SETTLEMENT TIME FOR EVERY BUSINESS DAY

Activity	Time Frames	Activity Type
Beginning of Business Day and Overnight Clearing Cycle	8:00 p.m. (t-1)	System Activity
Clearing Member's (excluding LCMs) Overnight Margin Calculation & Notification	Every hour from 9:00 p.m. (t-1) to 5:00 a.m. (t)	System Activity/Notification
Deadline to settle Overnight Margin Call	2 hours after notification	Obligation Deadline
Beginning of Settlement Day at CDS	5:30 a.m.	System Activity
End of Overnight Clearing Cycle	6:00 a.m.	System Activity
Beginning of Regular Clearing Cycle	6:00 a.m.	System Activity
Clearing Member's (excluding LCMs) Early Morning Intra-Day Margin Calculation & Notification	7:15 a.m.	System Activity/Notification
Deadline to settle Early Morning Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Assets Concentration Limits breach notification	7:30 a.m.	Notification
Deadline for Clearing Members (excluding LCMs) for Settlement Time with respect to payments for overnight settlement	7:45 a.m.	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	8:30 a.m.	System Activity
Deadline for Clearing Members (excluding LCMs) to receive EOD Amount due from CDCC	8:45 a.m.	Obligation Deadline
Deadline for LCMs for Settlement Time with respect to payments for overnight settlement	9:00 a.m.	Obligation Deadline
Fixed Income Transactions - Morning Netting Cycle Timeframe in respect of any Pending Payment Against Delivery Requirements (Morning Net Payment Against Delivery Requirements sent to CDS for settlement during the Morning Net DVP Settlement Timeframe) - 15 minutes cycle	10:00 a.m.	System Activity
Morning Net DVP Settlement Calculation	10:15 a.m.	System Activity

### TIME FRAMES

Deadline for Morning Net DVP Settlement	10:30 a.m.	Obligation Deadline
Clearing Member's (excluding LCMs) Morning Intra-Day Margin Calculation & Notification Activity/Notification	10:30 a.m.	System
Deadline to settle Morning Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Assets Concentration Limit breach correction deadline	11:45 a.m.	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	12:15 p.m.	System Activity
<b>Activity</b>	<b>Time Frames</b>	<b>Activity Type</b>
Clearing Member's Afternoon Intra-Day Margin Calculation & Notification Activity/Notification	12:45 p.m.	System
Deadline to settle Afternoon Intra-Day Margin Call for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Specific Deposits (same day withdrawal)	12:45 p.m.	Operational Deadline
Deadline to settle Intra-Day Margin Call and Additional Margins for LCMs	The later of 2:45 p.m. or 2 hours after notification	Obligation Deadline
Fixed Income Transactions - Netting Cycle Timeframe in respect of any Pending Settlement Requirements - 15 minutes cycle	2:00 p.m.	System Activity
CAD Deposits - \$10,000,000 and under (same day deposit)	2:45 p.m.	Operational Deadline
CAD Deposits - over \$10,000,000 (2 Business Days notice)	2:45 p.m.	Operational Deadline
CAD withdrawal requests - \$10,000,000 and under (same day withdrawal)	2:45 p.m.	Operational Deadline
CAD withdrawal requests - over \$10,000,000 (2 Business Days notice)	2:45 p.m.	Operational Deadline
Fixed Income Transactions - (Same Day Transactions) - Submission Cut-Off Time	3:30 p.m.	Operational Deadline
Clearing Members (excluding LCMs) - All Assets deposits other than cash (Margin deposits)	3:30 p.m.	Operational Deadline

### TIME FRAMES

Clearing Members - All Assets withdrawal requests other than cash (Margin deposits) for same day withdrawal	3:30 p.m.	Operational Deadline
Clearing Members - All Assets substitution requests other than cash (Margin deposits) for same day substitution	3:30 p.m.	Operational Deadline
Foreign currency withdrawal requests deadline	3:30 p.m.	Operational Deadline
Fixed Income Transactions - Afternoon Netting Cycle Timeframe in respect of any Pending Settlement Requirements (Afternoon Net DVP Settlement Requirements sent to CDS for settlement by End of Day DVP Settlement Time) - 5 minutes cycle	3:35 p.m.	System Activity
CDS Payment Exchange, Net Wire Payment	4:00 p.m.	System Activity
End of Day DVP Settlement Time	4:00 p.m.	Obligation Deadline

Activity	Time Frames	Activity Type
Unsettled Item (Options Underlying deliveries only): Confirmation of settled items to be sent to CDCC	4:15 p.m.	Operational Deadline
Deadline for CDCC to respond to substitution or withdrawal request (other than (Fixed Income) Variation Margin)	4:30 p.m.	Obligation Deadline
OTCI (other than Fixed Income Transactions) - Trade Submission Deadline	4:30 p.m.	Operational Deadline
Projected Margin Report Computation	4:30 p.m.	System Activity
Request for Standard vs Mini Offset	5:00 p.m.	Operational Deadline
Position Transfers	5:25 p.m.	Operational Deadline
Same Day and T+1 Trade corrections	5:30 p.m.	Operational Deadline
Open Position changes	5:30 p.m.	Operational Deadline
Futures - Tender Notices submission	5:30 p.m.	Operational Deadline
Options - Exercise Notices submission	5:30 p.m.	Operational Deadline
Fixed Income Transactions and Futures contracts on Acceptable Securities - Netting Cut Off Time (Netted settlement instructions (Net Delivery Requirements and Net Payment Against Delivery Requirements) sent to CDS for		

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#### TIME FRAMES

settlement on the next business day)	5:30 p.m.	System Activity
CDCC Clearing Application shutdown - Close of Business	5:30 p.m.	System Activity
FIFO: Daily reporting by Clearing Members of the Long Positions in each of their accounts in chronological order	5:30 p.m.	Operational Deadline
FIFO: Submission of Tender Notices	5:30 p.m.	Operational Deadline
LCM Only - All Assets deposits other than cash (in respect of all Margin requirements)	6:30 p.m.	Operational Deadline
Fixed Income Transactions - available (next Business Day start)	7:00 p.m.	System Activity

## TIME FRAMES

### SETTLEMENT TIME FOR (FIXED INCOME) VARIATION MARGIN FOR EVERY BUSINESS DAY

Activity	Time Frames	Activity Type
Deadline to deliver securities to CDCC to settle Net Variation Margin Requirement	9:30 a.m.	Obligation Deadline
Deadline to submit to CDCC a (Fixed Income) Buy-In request for same day settlement	10:00 a.m.	Operational Deadline
Deadline to deliver securities to Clearing Members by CDCC to settle (Fixed Income) Variation Margin amount	10:30 a.m.	Obligation Deadline
Deadline to submit substitutions for same day settlement	11:00 a.m.	Operation Deadline
Deadline for CDCC to submit substitution instructions to Clearing Members for same day settlement	12:00 (noon)	Operational Deadline
Deadline to deliver same day settlement substitution to CDCC	3:00 p.m.	Obligation Deadline
Deadline for CDCC to deliver same day substitutions For (Fixed Income) Variation Margin	4:00 p.m.	Obligation Deadline
EOD Net Variation Margin Requirement Computation	4:30 p.m.	System Activity

## TIME FRAMES

### SETTLEMENT TIME FOR MONTHLY EXPIRY

Activity	Time Frames	Activity Type
Reports available (FTP Download): <input type="checkbox"/> Expiry Report (MX01) <input type="checkbox"/> Expiry Options Daily Transaction Report (MT01) <input type="checkbox"/> List of Options/Cash Adjustments (MT03)	7:15 p.m.	Publication
CDCC Clearing Application available for: <input type="checkbox"/> Trade corrections <input type="checkbox"/> Open Position changes <input type="checkbox"/> Position Transfers <input type="checkbox"/> Changes to Automatic Exercises <input type="checkbox"/> Exercise Notices input <input type="checkbox"/> Cancel / correct Friday's exercises	7:15 to 9:15 p.m.	Operational Deadline
CDCC Clearing Application shutdown: <input type="checkbox"/> CDCC processes expiry entries	9:15 p.m.	Operational Deadline
Reports available (FTP Download): <input type="checkbox"/> List of Expiry Adjustments Report (MX02) <input type="checkbox"/> Expiry Difference Report (MX03)	9:30 p.m.	Publication
CDCC Clearing Application available again for: <input type="checkbox"/> Review of expiry entries <input type="checkbox"/> Corrections to expiry entries	9:30 to 9:45 p.m.	Operational Deadline
CDCC Clearing Application shutdown <input type="checkbox"/> Close of Business	9:45 p.m.	Operational Deadline
Reports available (FTP Download): <input type="checkbox"/> Options Exercised and Assigned Report (MT02) <input type="checkbox"/> Other reports and files also available	10:30 p.m.	Publication

## TIME FRAMES

### SETTLEMENT TIME FOR WEEKLY EXPIRY

Activity	Time Frames	Activity Type
CDCC Clearing Application available for: <input type="checkbox"/> Trade corrections <input type="checkbox"/> Open Position changes <input type="checkbox"/> Position Transfers <input type="checkbox"/> Changes to Automatic Exercises	7:00 to 8:00 p.m.	Operational Deadline
CDCC Clearing Application shutdown: <input type="checkbox"/> Close of Business	8:00 p.m.	Operational Deadline
Reports available (FTP Download): <input type="checkbox"/> Options Exercised and Assigned Report (MT02) <input type="checkbox"/> Other reports and files also available	9:45 p.m.	Operational Deadline

**TIME FRAMES****ADDITIONAL NET DVP SETTLEMENT PROCESS**

In respect of any Pending Payment Against Delivery Requirements at the Netting Cycle Timeframe(s) specified in Section 2 of this Operations Manual, CDCC shall send new settlement records (Net Payment Against Delivery Requirements) to the Central Securities Depository reducing any Pending Payment Against Delivery Requirements of a Clearing Member in favour of CDCC by any Pending Payment Against Delivery Requirements of CDCC in favour of the same Clearing Member.



**CDCC-REPORTS**  
**REPORT REFERENCES**

Clearing Member reports contain the following information:

**Transactions** Reports relating to Clearing Member's Transactions such as trade entries, trade corrections, trade rejections and exercises/tenders. These reports start with the alpha code MT.

**Fees** Report relating to the collection of service fees from the Clearing Member. These reports start with the alpha code MB.

**Settlements** Reports relating to Premiums, Settlement of Gains and Losses, and Margin. These reports start with the alpha code MS.

**Assets** Reports relating to the maintenance of Clearing Member's Assets as well as depository information. These reports start with the alpha code MA.

**Delivery** Reports relating to delivery obligations and unsettled deliveries. These reports start with the alpha code MD.

**Positions** Reports relating to positions held by Clearing Members separately for Futures, Options, OTCI and Fixed Income Transactions. These reports start with the alpha code MP.

**Expiry** Reports used by Clearing Members to verify expiring positions and automatic exercises. These reports start with the alpha code MX.

**Risk** Reports relating to risk management. These reports start with the alpha code MR.

**CDCC-REPORTS**  
**REPORT DETAILS**

Report Code	Report Name	Report Description
<b>Daily:</b>		
MA01	Deposits and Withdrawals Report	Details on Clearing Member's deposits and withdrawals for Margin Fund Account, Clearing Fund and (Fixed Income) Variation Margin Account. (Note: will find the letters D, W and PW next to the date of deposit)
MD01	Options Unsettled Delivery Report	Lists unsettled deliveries for Options.
MD51	Futures Unsettled Delivery Report	Lists unsettled deliveries for Futures (does not include Share Futures) - the issue and number of Futures contracts which must be delivered - the account to which the delivery has been assigned and the opposite Clearing Member - the Settlement Amount and settlement date
MD52	Share Futures Unsettled Delivery Report	Lists unsettled deliveries for Share Futures (SF) - the issue and number of SF contracts which must be delivered - the account to which the delivery has been assigned and the opposite Clearing Member - the Settlement Amount and settlement date
MD70	Fixed Income Net Settlement Delivery Status Report	Status of Clearing Member's settlement activity at the Central Securities Depository with respect to Acceptable Securities on that day.
MD71	Settlement Obligation Calculated Amounts Reports	Provide information on each Settlement Instruction produced at the exit of the Intra-Day netting that is being considered in the PITSO.
MD72	Settlement Obligation Fulfillment	Provide the different settlement instruction status changes during the PITSO. The report is separated in three sections: Settlement, Pending Party At Fault and Cancelled.
MP01	Options Open Positions Report	Lists the Clearing Member's Open Positions for puts and calls.
MP02	Sub-Account Options Open Positions Report	Lists all Options Open Positions in sub-accounts of the Clearing Member's Client Account(s), Firm Account(s) and Multi-Purpose Account(s).
MP21	Contract Adjustment Report	Lists the Clearing Member's Long Positions and Short Positions before and after the relevant contract adjustment.
MP51	Futures Open Positions Report	Lists the Clearing Member's Futures and Options on Futures Open Positions for all accounts.
MP70	Fixed Income Forward Repo Position Report	Lists the Clearing Member's Repurchase Transactions accepted for clearing by CDCC.
MP71	Fixed Income Repo Conversion Position Report	Lists all of the Clearing Member's Repurchase Transactions that have progressed from Forward Repurchase Transactions to Running Repurchase Transactions on that day.

### CDCC-REPORTS

MP73	Fixed Income Running Repo Open Positions Report	Lists all of the Clearing Member's Running Repurchase Transactions as of that day.
MP75	Fixed Income Forward Net Settlement Positions Report	Lists all of the Clearing Member's forward Net Settlement Positions obligations.
MP79	Daily Repo Rate Mark to Market Report	Lists the Clearing Member's Repo Rate Requirements.
MS01	Daily Settlement Summary Report	Lists Assets balances with Margin requirements and cash settlement in Canadian and U.S. dollars.
MS06	Total Margin Requirement Report	Total margin requirement report with breakdown by margin categories, account types (Firm, Client, Multipurpose) and sub-accounts.
MS07	Intra-Day Margin Report	Margin call details with Margin requirements by account.
MS08	Daily Margin Activity Report	Lists details of positions by Class Group with Margin requirements.
MS10	Variation Margin Summary Report	Lists the details of the Fixed Income Clearing Member's Variation Margin activities and suggests securities to return if applicable.
MS70	Fixed Income Net Settlement Position Activity Report	Lists all of the Clearing Member's Fixed Income Transactions activities that contribute to its Net Settlement Position.
MS73	Entitlement Report	Lists all Fixed Income Clearing Member's coupon payments.
MS75	Fixed Income End of Day Settlement Instruction Report	Detail of Clearing Member's net settlement instructions to be sent to the Central Securities Depository after Netting Cut-Off Time.
MS77	Net Payment Against Delivery Requirement	Provide information at the sub-account level on settlements that occurred during the PITSO.
MS78	Forward NSP & Settlement Instruction Reconciliation Report	Information report containing Net Settlement Position information for the use of Clearing Member for reconciliation.
MT01	Options Daily Transaction Report	Lists details for all Option contracts from previous Business Day.
MT02	Options Exercised and Assigned Report	Lists totals for Options Exercised Positions and Assigned Positions by Series of Options (including the debit and credit dollar values of the Transactions).
MT03	List of Options/Cash Adjustments Report	Lists all trade adjustments and Open Position changes including cash adjustments and Position Transfers.
MT05	Options Consolidated Activity Report	Lists all positions with activity including Option Premiums.
MT06	Options Sub-Account Consolidated Activity Report	Lists positions with activity including Option Premiums for only the sub-accounts of Client, Firm and Multi-Purpose.
MT10	Unconfirmed Items Report	Lists all items that remained unconfirmed by the opposite member at the end of the current Business Day.
MT29	Trades Rejection Modification Report	Lists all original and modified trade rejections for the Clearing Member.
MT51	Final Futures Daily Transaction Report	Lists trade details for all Futures and Options on Futures activity.
MT52	Futures Tenders and Assignments Report	Lists all Tender Notices and Assigned Positions details.

### CDCC-REPORTS

MT53	List of Futures/Cash Adjustments Report	Lists details on all Futures and Options on Futures trade adjustments, Open Position changes, including cash adjustments and Position Transfers.
MT54	Futures Trading Summary Report	Lists all Series of Futures and Options on Futures and prices, and volumes at which each were traded. Lists number of contracts bought and sold for each Series of Futures Trade Prices.
MT60	Share Futures Tender and Assigned Report	Lists totals for Share Futures (SF) tendered and assigned positions including the debit and credit dollar values of the transactions.
MT66	Futures Sub-Account Consolidated Activity Report	Lists Futures and Options on Futures positions with activity including Settlement of Gain and Losses and Futures Premiums respectively, for the sub-accounts of Client, Firm and Multi-Purpose.
MT70	Fixed Income Novated Transactions Report	Lists the Clearing Member's daily Fixed Income Transactions novated to CDCC in accordance with the CDCC Clearing Application.
MT71	Fixed Income CSD Novated Trades Report	Lists the data transmitted to CDCC by the Central Securities Depository with respect to the Clearing Member's daily Fixed Income Transactions submitted for clearing.
MT73	Fixed Income Trade Rejection Report	Lists details of Clearing Member's daily Fixed Income Transactions that were rejected (DK) by CDCC or by the Clearing Member itself.
MT74	Fixed Income Not-Novated Transactions Report	Lists the Clearing Member's daily Fixed Income Transactions that were not novated to CDCC, including all rejected and orphaned trades.
MT92	Options on Futures Exercised & Assigned Report	Lists totals for Options on Futures Exercised Positions and Assigned Positions by Series. <b>Note:</b> Futures Options Exercised Positions and Assigned Positions value is nil
MT99	Detailed Futures Consolidated Activity Report	Detailed list of all Futures position with activity, including Settlement of Gains and Losses. Detailed list of all Options on Futures positions and activity including Futures Premiums.
<b>Monthly:</b>		
MA71	Clearing Fund Statement (monthly and intra-monthly)	Identifies the Clearing Member's (excluding LCM) Clearing Fund obligation. Lists the Clearing Member's (excluding LCM) current Deposits within the Clearing Fund and what is owed.
MB01	Monthly Clearing Fees Invoice	This report contains summarization of the monthly clearing fees in an invoice format - THIS IS NOT TO BE PAID. The system automatically includes the collection of the fees within the daily settlement on the morning of the fifth business day of the month.
MB02	Monthly Clearing Fees Details Report	This report contains the following four sub-reports: "Fees" - this is product by sub-account. "Summary by Category" - this is summarization by product. "Sub-Account Summary" - this is a summary of the operational charges by sub-account irrespective of product.

### CDCC-REPORTS

		“Summary by Account Operation Type” - this is a summary of the operational charges by sub-account.
MB03	Monthly Fixed Income Clearing Fees Invoice	This report details the clearing fees that are due with respect to Fixed Income Transactions by each Clearing Member.
MT40	Broker Ranking by Account Report	Individual Clearing Member ranking within CDCC for contracts, value traded and transactions (trade only) by month with year to date.
<b>FIFO Period:</b>		
MP56	FIFO Position Report	Lists Series of Futures with positions in chronological order, contracts in positions.
MP60	FIFO Declaration vs. Open Position Report	Lists Clearing Member's Futures positions and FIFO long positions declaration.
<b>Options on Futures Expiry:</b>		
MT51	Final Futures Daily Transaction Report	Lists trade details for all Futures and Options on Futures activity.
MX11	Futures Options Expiry Report	Lists all expiring Options on Futures with In-the-Money Options or Out-Of-the-Money Options amounts and Automatic Exercise positions for Expiry.
MX12	Futures Options Expiry Adjustments Report	Lists all trade adjustments and Open Positions changes on expiring Series only.
MX13	Futures Options Expiry Difference Report	Lists all reported changes, deletions and/or additions to exercises on the Futures Options Expiry Report (MX11).
<b>Options Expiry (Friday Evening):</b>		
MT01	Options Daily Transaction Report	Lists trade details for all expiring Option contracts for the Business Day.
MT02	Options Exercised and Assigned Report	Lists totals for Options Exercised Positions and Assigned Positions by Series of Options (including the debit and credit dollar values of the transactions).
MX01	Expiry Report	Lists all expiring Options with In-the-Money Options or Out-of-the-Money Options amounts and Automatic Exercise positions for Expiry.
MX02	List of Expiry Adjustments Report	Lists all trade adjustments and Open Positions changes on expiring Series of Options only.
MX03	Expiry Difference Report	Lists all reported changes, deletions and/or additions to exercises on the Expiry Report.
<b>OTCI Expiry:</b>		
MX01	Expiry Report	Lists all expiring Options with In-the-Money Options or Out-of-the-Money Options amounts and Automatic Exercise positions for Expiry.
<b>Business Day following Expiry:</b>		
MP11	Expired Options Positions Report	Lists the Clearing Member's balance of expired Options positions following the Friday Expiry process.
MP12	Expired Futures Options Positions Report	Lists the Clearing Member's balance of expired Futures Options positions following the Friday Expiry process.

**CDCC-REPORTS****INTRODUCTION**

All Exchange Transactions are processed electronically. In all cases both the selling and buying trade data is sent to the relevant Exchange's electronic trading system, which then transmits the matched trades to CDCC. The CDCC Clearing Application verifies the trade information and, if incorrect, rejects it for correction and resubmission. If the trade information is valid, the Clearing Member's Open Positions are immediately updated. The Exchange Transaction is reported on the Options Daily Transaction Report (MT01) or on the Final Futures Daily Transaction Report (MT51), as the case may be.

OTCI Transactions (other than Fixed Income Transactions) are also submitted electronically. Clearing Members submit their individual trade details onto the trade capture screens of Converge, which will match, validate and confirm the transactional details to the submitting Clearing Members. OTCI Options are reported on the Options Daily Transaction Report (MT01). No corrections will be permitted for OTCI Transactions after CDCC issues a Trade Confirmation.

Fixed Income Transactions will be transmitted through the CDS trade matching facility routing matched trades to CDCC.

Fixed Income Transactions are reported on the Fixed Income CSD Information Report (MT71).

The reports referred to herein are available for FTP Downloads on the morning of the Business Day after Transactions are submitted for clearing to CDCC. In accordance with the Rules, Clearing Members must verify that such reports are correct.

## CDCC-REPORTS

### EXCHANGE TRANSACTIONS (OPTIONS AND FUTURES)

Positions of each Clearing Member are carried by CDCC for Client Account(s), Firm Account(s) and Multi-Purpose Account(s), each of which is maintained separately. CDCC supplies reports for each account.

Such separation requires that each Clearing Member designate whether a Transaction is submitted for a “Client”, “Firm” or “Multi-Purpose” when submitting a Transaction for clearing. Furthermore, if separate sub-accounts are maintained for each account type, each Transaction must be coded to indicate the appropriate sub-account information.

It is required that a Closing Transaction for a Client Account be designated as such on the trade input. Such designation is not required for a Netted Client Account, a Multi-Purpose Account or a Firm Account, as CDCC carries net position records in the Open Position File for each of these accounts.

All Transactions for a Client Account which are not specifically designated as Closing Transactions shall be processed by CDCC as Opening Transactions. Opening Purchase Transactions increase the Long Position and Opening Writing Transactions increase the Short Position, in the particular Series of Options involved, as reported in the Clearing Member's Client Account. Opening Buy Transactions increase the Long Position and Opening Sell Transactions increase the Short Position, in the particular Series of Futures involved, as reported in the Clearing Member's Client Account.

Conversely, all Transactions designated as Closing Transactions decrease the Short Position and Long Position, respectively, for the particular Series of Options or Series of Futures in the reporting Clearing Member's Client Account. The CDCC Clearing Application verifies that all the Closing Transactions are valid and if the volume of a Closing Transaction exceeds the Open Position, the CDCC Clearing Application will reject it and replace it by an Opening Transaction for the entire volume.

The designation of a Transaction as “opening” or “closing” can be modified by the Close of Business.

CDCC maintains both the Long Position and the Short Position for each Series of Options and Series of Futures for Client Accounts but only maintains a net Long Position or net Short Position for each Series of Options and Series of Futures for Netted Client Accounts, Multi-Purpose Accounts and Firm Accounts.

**CDCC-REPORTS****FIXED INCOME TRANSACTIONS**

Positions of each Clearing Member are carried by CDCC for Client Account(s), Firm Account(s) and Multi-Purpose Account(s), each of which is maintained separately. CDCC supplies reports for each account.

Such separation requires that each Clearing Member designate whether a Transaction is submitted for a “Client”, “Firm” or “Multi-Purpose” when submitting a Transaction for Clearing. Furthermore, if separate sub-accounts are maintained for each account type, each Transaction must be coded to indicate the appropriate sub-account information.

All Repurchase Transactions and Cash Buy or Sell Trades must be submitted for clearing to CDCC through the CDS trade matching facility routing matched trades to CDCC.

Once a Repurchase Transaction or Cash Buy or Sell Trade is received by CDCC, a variety of validations will occur. These validations ensure that all transactional details match and CDCC does not accept any Repurchase Transaction or Cash Buy or Sell Trade bearing attributes that are not acceptable for clearing.

Upon issuance of a Trade Confirmation by CDCC, the Repurchase Transaction or Cash Buy or Sell Trade is novated to CDCC, such that the original Repo or Cash Buy or Sell Trade between the two Fixed Income Clearing Members is cancelled and replaced by two equivalent Fixed Income Transactions, one between the Seller and CDCC and one between the Buyer and CDCC.



## OPEN POSITIONS

### INTRODUCTION

Having accepted a Transaction, the next step in the CDCC Clearing Application is the determination of the Open Position. Each Clearing Member can view all the information related to their accounts on the Open Position File which records the open Long Position and Short Position for each Series of Options and Series of Futures, OTCI and Fixed Income Transactions for each account type, updating the information as each Transaction is accepted.

Each Clearing Member is responsible for reconciling the information recorded on the Open Position File and all relevant reports issued by CDCC against their internal records. Careful attention must be paid to account designation and whether the Transaction is coded as “opening” or “closing” in the relevant file or report. Reports are available for FTP Download as per Section 2 of this Operations Manual.

Open Interest is updated automatically as each Transaction, Exercise Notice and Tender Notice is processed.

### ADJUSTMENTS OF OPEN POSITIONS

#### GENERAL

Occasionally the need will arise to adjust an already processed Transaction. In such cases, the adjustment will affect the Clearing Member's Open Position accordingly. For example, an adjustment designed to change the original Opening Buy Transaction (or Opening Purchase Transaction) to a Closing Buy Transaction (or Closing Purchase Transaction) will result in a decrease in the Long Position in the Series of Futures or Series of Options by the volume of the original Transaction. Any Settlement of Gains and Losses (or Premium) adjustments will be shown as adjustments on the relevant report.

Generally this situation will occur when:

1. The transactional details were incorrectly recorded, e.g. Clearing Member number, price, series and volume.
2. Information pertaining to only one side of the Transaction such as the opening/closing or account designation was erroneously reported on the original trade.
3. The source document of the relevant Exchange was input incorrectly.
4. Transfer of Open Positions from one account to another account of a Clearing Member.
5. Transfer of Open Positions from an account of one Clearing Member to an account of another Clearing Member.

#### Types of Adjustments

The following adjustments are acceptable for Exchange Transactions and OTCI (other than Fixed Income Transactions):

1. Same Day Trade Corrections (T). Same day trade corrections are only permitted on account type, sub-account designation and opening/closing and no corrections are permitted on OTCI Transactions after a Trade Confirmation has been issued by CDCC.

**OPEN POSITIONS**

2. Trade Date + 1 Corrections (T+1). Modifications of any type are subject to approval by the relevant Exchange and no corrections permitted on OTCI Transactions.
3. Open Position Changes. For OTCI Transactions, these will be performed through the Position Transfer function of the CDCC Clearing Application. Note: there is a Position Transfer fee per contract.
4. Position Transfers. Specific function of the CDCC Clearing Application to move positions from one Clearing Member to another or between accounts of a same Clearing Member on a post trade basis. Note: there is a Position Transfer fee per contract.
5. Standard vs Mini Offset. Upon the receipt of a Request for Standard vs Mini Offset in the prescribed form, CDCC will offset (i) one or more existing Standard Contract Long Position(s) against the equivalent number of existing Mini Contract Short Positions (totaling the same quantity of the Underlying Interest in accordance with the ratio prescribed in the Contract Specifications of the Mini Contract) having the same Delivery Month and booked in the same Clearing Member's account, or (ii) a number of existing Mini Contract Long Positions against one or more Standard Contract Short Position(s) (totaling the same quantity of the Underlying Interest in accordance with the ratio prescribed in the Contract Specifications of the Mini Contract) having the same Delivery Month and booked in the same Clearing Member's account, based on the instructions provided in the Request for Standard vs Mini Offset. Such Long Positions and Short Positions shall be offset at the previous day's Settlement Price, with the effect of reducing the Open Positions that the Clearing Member has on the relevant Series of Futures in the relevant account. A Future may only be offset against a Future and an Option may only be offset against an Option.

**Conditions applicable to adjustments:**

If there are any adjustments that affect another Clearing Member (on the opposite side of the original Transaction), both Clearing Members must come to an agreement as to the adjustments to be implemented. If one Clearing Member does not enter any changes through the CDCC Clearing Application, the Transaction will stay as is with respect to both Clearing Members.

Notification of all adjustments must be completed prior to the time specified in Section 2 of this Operations Manual. All completed adjustments are processed when they have been verified and validated by CDCC.

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****INTRODUCTION****OPTIONS**

At the time of exercise of an Option, CDCC is responsible for issuing settlement records that will facilitate the delivery of the Underlying Interest to the Clearing Member who chooses to exercise that Option (in case of the exercise of a call Option) or the payment of the relevant Exercise Price (in the case of the exercise of a put Option). When a Clearing Member exercises an Option, CDCC assigns the delivery obligation to a Clearing Member who is the writer of Options in the same Series of Options in any one of its Client Account(s), Firm Account(s), or Multi-Purpose Account(s).

Assignment is made specifically to one of these accounts by CDCC. If assignment is made to a Client Account, the Clearing Member is responsible for allocating it to a specific client. If assignment is made to a Multi-Purpose Account, the Clearing Member must allocate it to the specific Multi-Purpose Account designated by CDCC.

Delivery of the Underlying Interest and payment of the Exercise Price is to be effected by Clearing Members through the settlement method instructed by CDCC.

**FUTURES**

All Futures which have not been closed out by the last trading day will be marked-to-market up to and including the close of the last trading day. In addition, the seller of a Future must submit a Tender Notice in the Delivery Month in accordance with applicable Contract Specifications.

When a seller of a Future submits a Tender Notice to CDCC, CDCC assigns it to a Clearing Member which is the buyer of a Future in the same Series of Futures in any one of its accounts. Assignment is made specifically to one of these accounts by CDCC. If assignment is made by CDCC to a Client Account, the Clearing Member is responsible for allocating it to a specific client. If assignment is made to a specific Multi-Purpose Account, the Clearing Member must allocate it to the specific Multi-Purpose Account designated by CDCC.

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****EXPIRY PROCEDURES**

Operations Notices are sent to Clearing Members setting forth the expiry procedures and it is the responsibility of Clearing Members to ensure that they have adequate processes in place to meet requirements and timelines prescribed by CDCC.

**OPTIONS**

For all information pertaining to the Option expiry procedures, Clearing Members should refer to the Operational Notices which are issued prior to the Expiration Date.

**CDCC's Responsibilities on Expiry Friday**

1. Review/modify Underlying Interest prices and notify the Clearing Members of any changes.
2. Notify Clearing Members (via e-mail) of any changes in the Production Schedule.
3. Notify Clearing Members (via e-mail) of the status of expiry processes.
4. Assist Clearing Members.

**Clearing Members' Responsibilities on Expiry Friday**

1. Ensure that the staff responsible for expiry is familiar with all expiry procedures and processes.
2. Validate entries using the Inquiry Screens or the relevant reports:
  - a. Verify that all Open Positions and adjustments match internal records, enter any new Transaction or Open Position adjustments accordingly.
  - b. Verify that the number of Options that will be automatically exercised on Expiration Date are correct.
  - c. For any changes, indicate on the Expiry Response Screen under the "Override" column the total number of Options for each Series of Options to be exercised.
  - d. Verify any Out-Of-The-Money Options or At-the-Money Options to be exercised and enter the number of Options under the "Override" column.
3. Validate changes using the reports and/or the on-line access to CDCC Clearing Application (in accordance with timeframes set forth in Section 2 of this Operations Manual).
4. If required, make any allowed modifications (in accordance with timeframes set forth in Section 2 of this Operations Manual).

**Daily Expirations (other than Expiry Friday)**

When CDCC receives Underlying Interests' closing and opening prices from the relevant Exchange, the prices are specified on the relevant Expiry Report and are used to determine the In-the-Money Options and the Out-of-the-Money Options.

Clearing Members have until the Close of Business on any Business Day up to the Expiration Date to submit an Exercise Notice with respect to American Style Options to CDCC. European Style Options can only be exercised on their Expiration Date.

OTCI Options can expire on any Business Day.

Typically, exercise instructions must be entered online on the CDCC Clearing Application by Clearing Members. However, if unavailable, the following manual process can be used to submit Exercise Notices to CDCC:

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES**

1. The proper CDCC Exercise Notice form must be used.
2. The authorization stamp of the Clearing Member must be affixed on the form.
3. The properly delivered Exercise Notice will be accepted at any CDCC office.
4. The Exercise Notice must be properly delivered by five minutes before Close of Business.
5. The Clearing Member staff who deliver the Exercise Notice must be available until CDCC processes the exercise.

The CDCC Clearing Application will ensure that there are sufficient Option Open Positions of the relevant Series of Options in the relevant account of the Clearing Member for exercising the relevant Exercise Notice; if not, CDCC will reject the Exercise Notice. If there are sufficient Option Open Positions, the Clearing Member's Long Position is immediately reduced by the number of Option Open Positions exercised.

AN EXERCISE NOTICE CAN BE CANCELLED UNTIL CLOSE OF BUSINESS ON THE DAY IT IS SUBMITTED.

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****OPTIONS****Exercises**

Delivery and payment on Exercised Positions are due on the Exercise Settlement Date.

Until Exercise Settlement Date, CDCC continues to require sufficient Margin to ensure that, if a Clearing Member defaults, any Exercise Notice submitted by it or assigned to it, as the case may be, will be completed.

Exercised Positions and Assigned Positions are reported to Clearing Members through relevant reports listed in Section 3 of this Operations Manual.

**Assignments**

After the Close of Business on any Business Day on which an Exercise Notice is submitted to CDCC, assignment of such Exercise Notice is made on a random selection basis, in which each account of a Member is treated separately. The reason for the separation is to ensure that each Clearing Member's Client Account(s), Firm Account(s), and Multi-Purpose Account(s) have the same probability of being assigned Exercise Notices. When a Clearing Member is assigned an Exercise Notice for a given account (e.g. the Firm Account) it may not allocate that assignment to another account (e.g. a Client Account).

An attempt will be made by CDCC to assign an Exercise Notice for more than 10 Options contracts in blocks not exceeding 10 contracts in each Series of Options.

Exercise Notices assigned to a Clearing Member's Client Account shall be allocated by the Clearing Member to any of its clients based on any method which is equitable and consistent with the rules of the relevant Exchange.

**Automatic Exercise - Options and Options on Futures**

To safeguard Clearing Members from possible errors, CDCC has instituted an Automatic Exercise procedure for expiring Series of Options. In simple terms, all In-the-Money Options and Options on Futures over predetermined thresholds are automatically exercised by CDCC, unless Clearing Members instruct otherwise.

CDCC establishes predetermined thresholds and informs Clearing Members that every Option and Option on Future above that threshold will be automatically exercised. CDCC will not automatically exercise any At-the-Money Option. CDCC provides a method for Clearing Members to make changes to the Automatic Exercise function of the CDCC Clearing Application. This allows Clearing Members to either opt in or opt out of the Automatic Exercise with respect to the Options and Options on Future they hold. For example, a Member can choose not to exercise an Option that is above the predetermined threshold but to exercise another Option that is At-the-Money or Out-of-the-Money.

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****Exercised and Assigned Option Contracts****a) Exercised Positions**

A Clearing Member who has exercised an Option has an obligation to either deliver the Underlying Interest (in the case of a Put Option) or pay the Exercise Price (in the case of a Call Option).

**b) Assigned Positions**

A Clearing Member who has been assigned an Exercise Notice has the obligation to pay the Exercise Price upon delivery of the Underlying Interest (in the case of a Put Option) or to deliver the Underlying Interest against payment (in the case of a Call Option).

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****FUTURES****Submission of Tender Notices**

Tender Notices must be submitted before Close of Business during the relevant FIFO Period (which, subject to any contract adjustment by the Exchange, shall be as follows):

CGB, CGF, CGZ and LGB two Business Days preceding the first Business Day of the Delivery Month up to and including the second last Business Day preceding the last Business Day of the Delivery Month.

MCX before Close of Business on the last trading day.

All outstanding Short Positions in BAX, EMF, SXF, SXM, SCF, Sector Index Futures, Share Futures, and Options on Futures are automatically tendered on the last trading day, as per Contract Specifications, after Close of Business.

All outstanding Short Positions in COA, CRA are automatically tendered on the first Business Day following the last trading day, as per Contract Specifications, after Close of Business.

**Assignment of Tender Notices**

CDCC assigns all Tender Notices to open Long Positions on a random basis with the exception of the Government of Canada Bond Futures (CGB, LGB, CGF and CGZ). Assignments for the CGB, LGB, CGF and CGZ Futures are processed on a First-In-First-Out (FIFO) basis.

Delivery of the Underlying Interest and payment of the Settlement Price is effected by Clearing Members as instructed by CDCC.

**FIRST-IN-FIRST-OUT (FIFO) ASSIGNMENT PROCESS****Description of Procedures**

The Delivery Months for the CGB, CGF, LGB and CGZ Futures contracts are March, June, September and December as prescribed by the Exchange. When a Member submits a Tender Notice with respect to a Short Position, a Long Position is assigned on a First-In-First-Out (FIFO) basis. CDCC sends out an Operational Notice prior to each relevant FIFO Period to remind Clearing Members of the procedures involved.

On the sixth Business Day prior to the first Business Day of the Delivery Month, each Clearing Member holding Long Positions in the relevant Series of Futures must declare on the CDCC Clearing Application its Long Positions in chronological order for each of its accounts. The entries must include the date the position was opened, the number of contracts and the account. When CDCC assigns a Tender Notice, the Long Position with the oldest date will be assigned first and the Long Position with the most recent date will be assigned last.

During the FIFO Period, Clearing Members must ensure that they update their declarations on a daily basis before Close of Business.



**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES****FIXED INCOME TRANSACTIONS**

CDCC acts as central counterparty to all Fixed Income Transactions that are submitted by Clearing Members to CDCC for clearing. All Fixed Income Transactions shall be submitted for clearing to CDCC through the CDS trade matching facility routing matched trades to CDCC. As a result of these Transactions being novated to CDCC, CDCC will be either the buyer or the seller of all settlement records that are sent to the Central Securities Depository.

Various transmissions of settlement records will be sent by CDCC to the Central Securities Depository on a daily basis.

**Same Day Transactions gross settlement records**

For Same Day Transactions, two settlement records consisting of settlement instructions (Gross Delivery Requirements and Gross Payment Against Delivery Requirements) will be sent gross to the Central Securities Depository to be settled on a real-time basis throughout the day immediately after each Same Day Transaction is novated to CDCC until the Submission Cut-Off Time specified in Section 2 of this Operations Manual.

**Forward Settlement Transactions and Futures Contracts on an Acceptable Security net settlement records**

For Forward Settlement Transactions and Futures Contracts on Acceptable Securities, settling on the next Business Day, two settlement records consisting of net settlement instructions (Net Delivery Requirements and Net Payment Against Delivery Requirements) will be sent to the Central Securities Depository on a net basis at the Netting Cut Off Time specified in Section 2 of this Operations Manual for settlement on the next Business Day.

**Morning net DVP settlement process**

In respect of any Pending Payment Against Delivery Requirements at the Morning Netting Cycle Timeframe specified in Section 2 of this Operations Manual, CDCC shall send new settlement records (Morning Net Payment Against Delivery Requirements) to the Central Securities Depository reducing any Pending Payment Against Delivery Requirements of a Clearing Member in favour of CDCC by any Pending Payment Against Delivery Requirements of CDCC in favour of the same Clearing Member. The Clearing Member or its Settlement Agent shall have sufficient funds in its CDS Funds Account to settle the lesser of (i) its Morning Net Payment Against Delivery Requirement and (ii) the amount of the CDCC Daylight Credit Facility during the Morning Net DVP Settlement Timeframe specified in Section 2 of this Operations Manual.

**Afternoon net DVP settlement process**

In respect of any Pending Settlement Requirements at the Afternoon Netting Cycle Timeframe specified in Section 2 of this Operations Manual, CDCC shall send new settlement records (Afternoon Net DVP Settlement Requirements) to the Central Securities Depository reducing any Pending Delivery Requirements of a Clearing Member in favour of CDCC by any Pending Delivery Requirements of CDCC in favour of the same Clearing Member in respect of the same Acceptable Security, and/or reducing any Pending Payment Against Delivery Requirements of a Clearing Member in favour of CDCC by any Pending Payment Against Delivery Requirements of CDCC in favour of the same Clearing Member. The Clearing Member, or its Settlement Agent, shall have sufficient funds and sufficient Acceptable Securities in its

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES**

CDS Funds Accounts and CDS Securities Accounts to settle its Afternoon Net DVP Settlement Requirements by the End of Day DVP Settlement Time specified in Section 2 of this Operations Manual.

**Delivery**

Securities delivery against payment is effected on a DVP basis through the Central Securities Depository.

In the event of a failed or partial delivery, CDCC will take appropriate action in accordance with this Manual and Section A-804 of the Rules.

CDCC shall determine the net settlement instructions by Clearing Member, CUSIP/ISIN and Settlement Date for all Transactions comprised in the Forward Settlement Transactions netting process (as specified in the above section entitled “Forward Settlement Transactions and Futures Contracts on an Acceptable Security net settlement records”) submitted to CDCC for clearing as of the Netting Cut Off Time. These settlement instructions shall be submitted to the relevant Central Securities Depository on a daily basis and in the form and settlement tranche acceptable to the Central Securities Depository for this purpose.

For Same Day Transactions, CDCC shall determine the gross settlement instructions (Gross Delivery Requirements and Gross Payment Against Delivery Requirements) by Clearing Member and the applicable CUSIP/ISIN, and submit such instructions to the relevant Central Securities Depository (in the form and settlement tranche acceptable to such Central Securities Depository) immediately after each Same Day Transaction is novated to CDCC for real-time settlement. Notwithstanding the foregoing, at the Morning Netting Cycle Timeframe, CDCC shall cancel previously issued Pending Payment Against Delivery Requirements and replace them by Morning Net Payment Against Delivery Requirements by Clearing Member (as specified in the above section entitled “Morning net DVP settlement process”).

In the event of a Failed Delivery for a particular settlement tranche to a Net Delivery Requirement or to an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities by the End of Day DVP Settlement Time specified in Section 2 of this Operations Manual, CDCC shall, on a best efforts basis, attempt to coordinate a partial delivery among those Receivers of Securities for that particular settlement tranche of the relevant Acceptable Security. In the event that no partial settlement is possible, the settlement tranche will be included in the Rolling Delivery Obligation of the failing Clearing Member and CDCC shall re-attempt settlement of the failed settlement tranche on the next Business Day. In the case of a Failed Delivery with respect to a Gross Delivery Requirement resulting from a Same-Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time to be settled by the End of Day DVP Settlement Time, CDCC will fail or partially deliver for the same quantity of Acceptable Securities to the Clearing Member who is the Receiver of Securities with respect to the relevant Same Day Transaction.

In the event of a Failed Payment Against Delivery at the Morning Net DVP Settlement Timeframe specified in Section 2 of this Operations Manual, CDCC shall impose a fine on the Clearing Member corresponding to the charges which are levied on CDCC for the usage of the CDCC Daylight Credit Facility as a result of this Failed Payment Against Delivery. If the Clearing Member still does not have sufficient funds in its CDS Funds Account or that of its Settlement Agent at the Central Securities Depository to settle the relevant Morning Net Payment Against Delivery Requirement, or in the amount of the CDCC Daylight Credit Facility (whichever is less), by 11:00 a.m., the Clearing Member shall be deemed a Non-Conforming Member, in addition to any other remedies that CDCC may apply to such situation in accordance with Subsection A-806(1) of the Rules.

**EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES**

In the event of a Failed Payment Against Delivery at the End of Day DVP Settlement Time specified in Section 2 of this Operations Manual, the Clearing Member shall be deemed a Non-Conforming Member and shall be required to pay to CDCC any charges which are levied on CDCC for the overnight financing of this Failed Payment Against Delivery, in addition to any other remedies that CDCC may apply to such situation in accordance with Subsection A-806(2) of the Rules. CDCC will assist the Clearing Member to remedy the situation so that the Clearing Member can maintain its conforming status. As DVP is not available after the End of Day DVP Settlement Time at the Central Securities Depository (CSD), the Clearing Member must deliver the funds (or acceptable equivalent) outside of the CSD's systems to CDCC prior to CDCC delivering the securities via the CSD.

**Buy-In Process (excluding Fixed Income Variation Margin Buy-Ins)**

For a Buy-In in respect of the Acceptable Security, the following applies. As set forth in Subsection A-804(3) of the Rules, CDCC may effect a Buy-In transaction on its own initiative or pursuant to a formal request by a Receiver of Securities affected by a Failed Delivery by purchasing the missing quantity of the relevant Acceptable Securities on the open market.

When initiated by a Receiver of Securities, the Buy-In process shall be as follows:

1. The Receiver of Securities who wants to initiate a Buy-In must send to CDCC the appropriate Buy-In Scan Form (which is accessible on CDCC's Secured Website) duly completed, with the following information:
  - a. Clearing Member's Name;
  - b. Clearing Member's Number;
  - c. The Acceptable Security (ISIN) involved;
  - d. The total quantity of the Failed Delivery;
  - e. The quantity requested in the Buy-In;
  - f. The Buy-In delivery date, which shall be the current Business Day + not less than two (2) complete Business Days.

The Buy-In Scan Form must be submitted to CDCC in the prescribed format with the authorization stamp of the Clearing Member properly affixed on the form (with initials).

2. Upon receiving the duly completed Buy-In Scan Form from a Receiver of Securities, CDCC will work with the Provider(s) of Securities responsible for the Failed Delivery in order to validate if the delivery can be made within the number of Business Days specified in the Buy-In Scan Form (the "Buy-In Notice Delay").
3. At the expiry of the Buy-In Notice Delay, if the Provider(s) of Securities have not delivered the relevant Acceptable Securities, CDCC will initiate a cash trade on the open market.
4. Once delivery is received by CDCC on the cash trade, CDCC will deliver the Acceptable Securities to the Receiver of Securities that requested the Buy-In transaction.
5. All fees incurred to CDCC, including all costs with respect to the Buy-In transaction shall be charged to the Provider(s) of Securities responsible for the Failed Delivery. Such fees will be included on the Monthly Clearing Fees Invoice (MB01) of the second Business Day of each month as a separate pay figure, payable to CDCC on the 5th Business Day of each month through LVTS or any other payment method approved by CDCC.

**SETTLEMENT****SETTLEMENT****INTRODUCTION**

CDCC provides the mechanism for a single cash settlement with respect to amounts which are not settled through a Central Securities Depository due by a Clearing Member to CDCC and by CDCC to such Clearing Member on a daily basis, as prescribed in Paragraph A-801(2)(a) of the Rules. Clearing Members are able to make a single payment to CDCC or receive a single payment from CDCC that represents the net value of their purchases, sales, gains and losses and, on a monthly basis, clearing fees. Additionally, the CDCC incorporates the amounts due from the Clearing Members for Margin (excluding for the Net Variation Margin Requirement) and the exercise/assignment Settlement Amounts of cash settled Transactions.

Settlement of trading in a given currency is kept separate throughout the clearing procedure. All payments in the Canadian currency to and from CDCC are collected via an irrevocable payment processing system, known as the Large Value Transfer System (LVTS), or any other payment method approved by CDCC. Any US dollar payments are collected via a payment processing system known as Financial Electronic Data Interchange (FEDI). As described in the Risk Manual, the amount of Margin due by a Clearing Member on a given day is computed on the basis of that day's Open Positions shown on the relevant report.

**SETTLEMENT CALCULATION**

The calculation of a Clearing Member's Net Daily Settlement amount is based on Transactions (including adjustments, exercises, tenders and assignments) and Margin requirements and, on a monthly basis, clearing fees.

The Net Daily Settlement amount for each Clearing Member is determined in the following manner:

- (i) The amount of Margin required for the Margin Fund Account are compared with Margin Deposits made by the Clearing Member for such accounts.
- (ii) The premiums, Futures Settlement of Gains and Losses, cash settled exercise/assignment Settlement Amounts and cash adjustments for each account type (Client Account(s), Firm Account(s) and Multi-Purpose Account(s)) are netted to a single pay or collect figure.

All cash settlements to CDCC are to be made to CDCC's settlement account at the Bank of Canada, or to any other account of CDCC with a Schedule I bank, as designated by CDCC.

**FINES**

CDCC applies fines with regards to late payments to deter Clearing Members from being late in the performance of their payment obligations.

## SETTLEMENT

### End of Day Settlement

Payments for end of day settlement (Futures mark-to-market, premiums, Margin shortfalls, etc.) must be received by 7:45 a.m. the next Business Day for each Clearing Member (excluding LCMs) and 9:00 a.m. for each LCM.

If a payment is late, CDCC will notify the Clearing Member that it is being fined. The fine structure is as follows:

Based on a rolling thirty days - if there has been a prior occurrence within the preceding thirty days, it is the second occurrence.

The fine schedule described below is subject to the Escalation Procedure applicable for operational issues detailed in Section 11 of this Manual.

#### *For Clearing Members not in a Tri-Party Agreement*

##### First occurrence of a late payment:

- if CDCC receives the payment in its Bank of Canada account by 7:55 a.m. the next Business Day, there will be no fine.
- if the payment is received by 8:30 a.m. the next Business Day, CDCC will impose a \$1,000 fine.
- if the payment is received by 8:59 a.m. the next Business Day, CDCC will impose a \$2,500 fine.
- if the payment is not received by 9:00 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

##### On the second or more occurrences of a late payment:

- if CDCC receives the payment in its Bank of Canada account by 7:55 a.m. the next Business Day, CDCC will impose a \$1,000 fine
- if the payment is received after 7:55 a.m. but before 8:30 a.m. the next Business Day, CDCC will impose a \$5,000 fine.
- if the payment is received by after 8:30 a.m. but before 8:59 a.m. the next Business Day, CDCC will impose a \$10,000 fine.
- if the payment is not received by 9:00 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

#### *For Clearing Members (excluding LCMs) in a Tri-Party Agreement - Margin Shortfalls only*

##### First occurrence of a late payment or delivery:

- if CDCC receives the payment in its Bank of Canada account or if CDCC has evidence that the securities have been received in the appropriate account by 7:55 a.m. the next Business Day, there will be no fine.
- if the payment or delivery is received by 8:30 a.m. the next Business Day, CDCC will impose a \$1,000 fine.
- if the payment or delivery is received by 8:59 a.m. the next Business Day, CDCC will impose a \$2,500 fine.
- if the payment or delivery is not received by 9:00 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

##### On the second or more occurrences of a late payment or delivery:

- if CDCC receives the payment in its Bank of Canada account or if CDCC has evidence that the securities have been received in the appropriate account by 7:55 a.m. the next Business Day, CDCC will impose a \$1,000 fine

**SETTLEMENT**

- if the payment or delivery is received after 7:55 a.m. but before 8:30 a.m. the next Business Day, CDCC will impose a \$5,000 fine.
- if the payment or delivery is received by after 8:30 a.m. but before 8:59 a.m. the next Business Day, CDCC will impose a \$10,000 fine.
- if the payment or delivery is not received by 9:00 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

*For LCMs - Margin Shortfalls only*First occurrence of a late payment or delivery:

- if CDCC receives the payment in CDCC's Bank of Canada account designated for such Limited Clearing Member or if CDCC has evidence that the securities have been received in the appropriate account by 9:10 a.m. the next Business Day, there will be no fine.
- if the payment or delivery is received by 9:45 a.m. the next Business Day, CDCC will impose a \$1,000 fine.
- if the payment or delivery is received by 10:14 a.m. the next Business Day, CDCC will impose a \$2,500 fine.
- if the payment or delivery is not received by 10:15 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

On the second or more occurrences of a late payment or delivery:

- if CDCC receives the payment in CDCC's Bank of Canada account designated for such Limited Clearing Member or if CDCC has evidence that the securities have been received in the appropriate account by 9:10 a.m. the next Business Day, CDCC will impose a \$1,000 fine
- if the payment or delivery is received after 9:10 a.m. but before 9:45 a.m. the next Business Day, CDCC will impose a \$5,000 fine.
- if the payment or delivery is received by after 9:45 a.m. but before 10:14 a.m. the next Business Day, CDCC will impose a \$10,000 fine.
- if the payment or delivery is not received by 10:15 a.m. the next Business Day, CDCC will deem the Clearing Member a Non-Conforming Member.

**MARGIN PROCESSING****MARGIN FUND ACCOUNT**

**Margin Fund Account** is the CDCS record provided to each Clearing Member containing all Margin deposited by such Clearing Member to CDCC, in respect of such Clearing Member's Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Market Liquidity Risk, Additional Margin for Specific Wrong-Way Risk, Additional Margin for Mismatched Settlement Risk, Additional Margin for Intra-Day Variation Margin Risk, Additional Margin for Unpaid Option Premium Exposure Risk, Additional Margin for Banking Holiday Risk, Additional Margin for Variation Margin Delivery Risk, Additional Capital Margin Risk, Additional Margin for Uncovered Risk of Limited Clearing Members, Variation Margin for Options, and Variation Margin for Unsettled Items, in accordance with the Risk Manual and as set forth in Section 8-1 hereof.

In addition to the foregoing, an amount may be requested from a Clearing Member for the protection of the Corporation, Clearing Members or the investing public, in accordance with section A-702 of the Rules.

Each Clearing Member must record in its Margin Fund Account any deposit made to cover the shortfalls resulting from the requirements. Deposits must be in the form of Eligible Collateral, as specified in the Risk Manual, in an amount sufficient, taking into account the market value and applicable haircuts as specified in Section A-707.

**Withdrawals**

Clearing Members may request to withdraw any surplus amount from the Margin Fund Account, subject to applicable deadlines, as set forth in Section 2 of this Operations Manual. CDCC will respond within the specified time set forth in Section 2 and, on a best effort basis, approve the withdrawal in CDCC Clearing Application.

**Substitutions**

A Clearing Member may request to substitute a specific Asset previously deposited in the Margin Fund Account to the Corporation. The Clearing Member must first deposit equivalent securities/cash and withdraw the existing securities/cash subject to substitution. The value of the equivalent securities/cash so deposited must be equal to or in excess of the Assets being withdrawn, subject to applicable deadlines, as set forth in Section 2 of this Operations Manual.

CDCC verifies the validity of each deposit made by Clearing Members and ensures that withdrawals of existing Assets subject to substitution do not create deficits in the Clearing Member's Margin Fund Account. CDCC will respond within the specified time set forth in Section 2 and, on a best effort basis, approve the substitution in CDCC Clearing Application.

**Cash deposit**

Cash deposited in the Margin Fund Account must be sent to the relevant CDCC bank account. After performing all the validation processes, CDCC confirms within the CDCC Clearing Application the Clearing Member's deposits and/or withdrawals.

Deposits, withdrawals and changes thereto will be reflected on the immediately following Business Day's Deposits and Withdrawals Report (MA01). In accordance with the Rules, any discrepancies that the Clearing Member notices against its own records should be reported to CDCC immediately.



**MARGIN PROCESSING****Pledging (Securities / CDS)**

Securities pledges in the Margin Fund Account must be performed through CDSX in CDCC's account. The entries on the pledging screen of the CDCC Clearing Application are matched by CDCC to corresponding entries on the reporting system of the relevant Central Securities Depository.

In some cases an exchange of document at a CDCC Office by the Clearing Member (accompanied by a screen print of the entry bearing the Clearing Member's stamp) may be accepted by CDCC as constituting a physical deposit or withdrawal.

After performing all the validation processes, CDCC confirms within the CDCC Clearing Application the Clearing Member's deposits and/or withdrawals.

Deposits, withdrawals and changes thereto will be reflected on the immediately following Business Day's Deposits and Withdrawals Report (MA01). In accordance with the Rules, any discrepancies that the Clearing Member notices against its own records should be reported to CDCC immediately.

**Pledging (Securities / Tri Party - Securities Account with an Approved Custodian)**

Subject to certain conditions, the Corporation may allow Clearing Members to pledge non-cash collateral for the purpose of meeting their Margin requirements pursuant to Rule A-7 (excluding Net Variation Margin Requirements and any other Margin which can otherwise only be cash settled) to a securities account maintained at a third party securities intermediary. The securities intermediary must enter into an Account Control Agreement with respect to the securities account and be an Approved Custodian, each as defined in the Rules.

**Use of the Securities Account**

1. The securities account shall only be maintained by a securities intermediary which is an Approved Custodian, as defined in the Rules.
2. Any securities held in the securities account maintained by the Approved Custodian, in the name of the Clearing Member, shall be subject to an Account Control Agreement.
3. The Account Control Agreement is a standard agreement that meets certain requirements, as prescribed in the Rules.
4. The securities account may not be used for Net Variation Margin Requirements or for settlement purposes.
5. The respective rights and obligations of the Clearing Member and CDCC with respect to the securities collateral held in the securities account are subject to the Rules, including:
  - a. All deposits, withdrawals and substitutions in the securities account are subject to the timeline described in Section 2 of this Manual and to the collateral policy described in Section 2 (Eligible Collateral) of the Risk Manual;
  - b. All deposits, withdrawals and substitutions made in the securities account shall also be entered in CDCC Clearing Application in accordance with the timeline described in Section 2 of this Manual and to the collateral policy described in Section 2 (Eligible Collateral) of the Risk Manual;



**MARGIN PROCESSING**

c. Any withdrawal of securities held in the securities account is subject to CDCC's approval. The withdrawal must be entered in CDCC Clearing Application by the Clearing Member. A withdrawal authorization form signed by the Clearing Member must be transmitted to CDCC and must include the Clearing Member's approved stamp. CDCC will then, within the specified time to respond to a withdrawal request specified in Section 2, sign and transmit the withdrawal authorization form to the Custodian to proceed with the withdrawal;

d. Any substitution is subject to the deposit by the Clearing Member of the replacement securities in the securities account before the withdrawal of the replaced securities. Both the deposit and the withdrawal shall also be entered in CDCC Clearing Application by the Clearing Member. A substitution authorization form signed by the Clearing Member must be transmitted to CDCC and must include the Clearing Member's approved stamp. CDCC will then, within the specified time to respond to a substitution request specified in Section 2, sign and transmit the substitution authorization form to the Custodian to proceed with both the deposit and the withdrawal.

**Intra-Day Margin Calls**

CDCC encourages its Clearing Members to cover Intra-Day Margin Calls with collateral other than cash.

The fine schedule described below is subject to the Escalation Procedure applicable for operational issues detailed in Section 11 of this Manual.

Clearing Members (excluding LCMs) have one (1) hour from notification to cover an Intra-Day Margin Call. If the payment or delivery is late, the following fines shall apply:

- if the payment or delivery is received more than 1 hour after but less than 1 hour and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 1 hour and 15 minutes but less than 1 hour and 30 minutes from notification, CDCC will impose a \$1,000 fine.
- if the payment or delivery is not received by 1 hour and 30 minutes from notification, CDCC will deem the Clearing Member (excluding LCMs) a Non-Conforming Member.

LCMs have two (2) hours from notification or until such Settlement Time as may be provided in Section 2 to cover an Intra-Day Margin Call. If the payment or delivery is late, the following fines shall apply:

- if the payment or delivery is received more than 2 hours after but less than 2 hours and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 2 hours and 15 minutes but less than 2 hours and 30 minutes from notification, CDCC will impose a \$1,000 fine.

if the payment or delivery is not received within 2 hours and 30 minutes from notification, CDCC will deem the LCM a Non-Conforming Member

**Overnight Margin Calls**

CDCC offers its Clearing Members two (2) ways to cover Overnight Margin Calls:

- Eligible currencies deposited through an approved bank;
- Securities pledged through CDS (see CDS document "PLEDGE AND SETTLEMENT PROCEDURES" section 1.8).

**MARGIN PROCESSING**

Clearing Members (excluding LCMs) have two hours from notification to cover an Overnight Margin Call. If the payment or delivery is late or insufficient, the Clearing Member may be deemed a Restricted Clearing Member by CDCC and the following fines shall apply:

- if the payment or delivery is received more than 2 hours after but less than 2 hours and 15 minutes from notification, CDCC will impose a \$500 fine.
- if the payment or delivery is received more than 2 hours and 15 minutes but less than 2 hours and 30 minutes from notification, CDCC will impose a \$1,000 fine.

**(FIXED INCOME) VARIATION MARGIN ACCOUNT**

The Fixed Income Variation Margin Account is the CDCS record provided to each Clearing Member listing all Margin deposits made by such Clearing Member to CDCC for (Fixed Income) Net Variation Margin Requirement purposes only, in accordance with Section D-607 of the Rules, or otherwise as set forth in Section 8-1 hereof.

**(Fixed Income) Net Variation Margin Requirement Settlement**

In order to meet a (Fixed Income) Net Variation Margin Requirement, Clearing Members are required to pledge, through CDSX, to CDCC's (Fixed Income) Variation Margin Account, Margin deposits in the form of Eligible Collateral, as specified in the Risk Manual, in an amount sufficient, taking into account the market value and applicable haircuts as specified in Section A-707, to cover any positive variation of the (Fixed Income) Net Variation Margin Requirement owed by a Clearing Member to CDCC.

While the Eligible Collateral must be delivered and pledged to CDCC through CDSX, each Clearing Member must in parallel record in its (Fixed Income) Variation Margin Account such pledge, or any pledge release, to match the entries. The (Fixed Income) Variation Margin Account is solely used to record the pledges or pledge releases, as the case may be, of Margin deposits for (Fixed Income) Net Variation Margin Requirement purposes.

**Delivery of the (Fixed Income) Net Variation Margin Requirement**

On any given Business Day, each Clearing Member must deliver to the Corporation in CDCC's account at CDS, Eligible Collateral for (Fixed Income) Net Variation Margin Requirement purposes, taking into consideration any shortfall resulting from the variation of the (Fixed Income) Net Variation Margin Requirement, as compared to the (Fixed Income) Net Variation Margin Requirement calculated on the previous Business Day, and the fluctuation of the market value of the Eligible Collateral previously pledged by such Clearing Member to meet its (Fixed Income) Net Variation Margin Requirement.

Upon accepting Eligible Collateral that has been pledged to it through CDSX, CDCC may re-pledge and deliver the Eligible Collateral to a receiving Clearing Member, subject to CDCC's first ranking pledge, and the receiving Clearing Member shall be entitled to re-pledge or re-hypothecate the Eligible Collateral delivered to it.

Each Clearing Member is also required to return to the Corporation the same CUSIP/ISIN that had been allocated and pledged to it by the Corporation as part of the (Fixed Income) Net Variation Margin Requirement delivery, in an amount sufficient to meet the (Fixed Income) Net Variation Margin Requirement shortfalls as indicated on the MS10 report. Clearing Members must return the same CUSIP/ISIN in accordance with the (Fixed Income) Net Variation Margin Requirement Settlement Times. If a Clearing Member fails to return to the Corporation the specific CUSIP/ISIN securities listed on the

**MARGIN PROCESSING**

report but returns equivalent securities instead (a “Fixed Income Variation Margin Delivery Failure”), the Clearing Member will be subject to fines as described below.

**Distribution of the (Fixed Income) Net Variation Margin Requirement Collateral**

The Corporation will transfer to each Clearing Member being owed a net amount resulting from a change in such Clearing Member’s (Fixed Income) Net Variation Margin Requirement or from the fluctuation of the market value of the Eligible Collateral previously pledged by such Clearing Member to meet its (Fixed Income) Net Variation Margin Requirement, the Variation Margin securities received by the Corporation as part of the (Fixed Income) Net Variation Margin Requirement. The Corporation will in priority return the same CUSIP/ISIN previously pledged to the Corporation by such Clearing Member, subject to the specific procedures described below in the event of a Fixed Income Variation Margin Delivery Failure or of a substitution request.

**Substitution of Pledged Securities Collateral for the (Fixed Income) Variation Margin Account****1. (Fixed Income) Variation Margin Account Collateral substitution request:**

A Clearing Member may request to substitute a specific CUSIP/ISIN previously pledged in the (Fixed Income) Variation Margin Account to the Corporation. The request for substitution must be received by the Corporation before 11:00 a.m. for same day settlement. Clearing Member must first pledge equivalent securities and withdraw the existing securities subject to substitution. The value of the equivalent securities so pledged must be equal to or in excess of the securities being withdrawn. Substitution of a specific CUSIP/ISIN requested for same day settlement will be completed by 3:00 p.m. by the Corporation, subject to the Buy-In process below.

**2. (Fixed Income) Variation Margin Account Securities Collateral substitution notice:**

The Corporation will inform by 12:00 p.m. (noon) any Clearing Member subject to a substitution request (the “Holder of securities”) for a same day settlement. The Holder of securities will have until 3.00 p.m. to deliver the securities to CDCC’s (Fixed Income) Variation Margin Account. Failure to deliver by the Holder of securities by the cut-off time will be considered a Fixed Income Variation Margin Delivery Failure and will result in fines being applied to the Holder of securities as described below.

**FIXED INCOME VARIATION MARGIN DELIVERY FAILURE****Fines**

CDCC will apply fines for failure to return distributed securities.

CDCC will apply fines for failure to return securities subject to a substitution notice, by the appropriate deadline.

For each day between the day of the original return obligation and the delivery date (the “Fail Period”) a fine will be applied (Fail fees). The Fail fee is based on a rate equal to 1-month CDOR, which is fixed on a monthly basis and is applied daily. CDCC shall immediately notify the Clearing Member to which a fine is imposed.

Throughout the Fail Period, CDCC will require to receive Eligible Collateral of a value equivalent to the value of the unreturned securities and CDCC will deliver such replacement securities to the receiving

## **MARGIN PROCESSING**

Clearing Member (the "Replacement Securities"). At the end of the Fail Period, the Replacement Securities will be returned from the receiving Clearing Member to the delivering Clearing Member.

The fines described above are subject to the Escalation Procedure applicable for operational issues detailed in Section 11 of this Manual.

### **Collection of Fines**

CDCC will collect any applicable fines with the month-end clearing fee billing.

### **Fixed Income Variation Margin Buy-In process for Fixed Income Variation Margin Delivery Failure**

The Receiver of securities affected by a Fixed Income Variation Margin Delivery Failure may request that the Corporation execute a Buy-In on the day following the market standard settlement (T+2 / T+3, where T is the day of the original date of the request).

Same day settlement will be executed by CDCC on a best efforts basis. In the event of a failure to deliver by the counterparty to the Buy-In transaction on the same day, CDCC will execute the Buy-In transaction the following day without liability.

The Corporation shall only execute a Buy-In transaction pursuant to a formal request by a Receiver of securities affected by a Failed Delivery, by purchasing on the open market the collateral of the specified quantity and CUSIP/ISIN.

When initiated by a Receiver of securities, the Buy-In process shall be as follows:

1. The Receiver of securities who wants to initiate a Buy-In must send to the Corporation the appropriate Buy-In Scanned Form (which is accessible on CDCC's Secured Website) duly completed with the following information:
  - a. Clearing Member's Name;
  - b. Clearing Member's Number
  - c. The specific securities (Eligible Collateral) (ISIN) involved;
  - d. The total quantity of the Failed Delivery;
  - e. The quantity requested in the Buy-In;
  - f. The Buy-In delivery date, which shall be the current Business Day + no less than two (2) complete Business Days.

The Buy-In Scanned Form must be submitted to CDCC in the prescribed format with the authorization stamp of the Clearing Member properly affixed on the form (with initials) before 10:00 a.m.

2. Upon receiving the duly completed Buy-In Scanned Form from a Receiver of securities, the Corporation will work with the Holder(s) of securities responsible for the Failed Delivery in order to validate if the delivery can be made within the number of Business Days specified in the Buy-In Scan Form (the "Buy-In Notice Delay").

3. At the expiry of the Buy-In Notice Delay, if the Provider(s) of securities has not delivered the relevant securities, the Corporation will initiate a cash trade on the open market.

4. Upon receipt of the securities, CDCC will deliver the requested securities to the Receiver that initiated the Buy-In transaction.

**MARGIN PROCESSING**

5. All fees incurred by the Corporation, including all costs with respect to the Buy-In transaction shall be charged to the Provider(s) of securities responsible for the Failed Delivery. Such fees will be included on the Monthly Clearing Fees Details Report (MB01) produced on the second Business Day of each month as a separate pay figure, payable to the Corporation on the fifth Business Day of each month through LVTS or any other payment method approved by the Corporation.

**CLEARING FUND**

Each Clearing Member (excluding LCMs) approved to clear Exchange Transactions and/or OTCI Transactions and/or Fixed Income Transactions shall maintain a deposit in the Clearing Fund of the amounts from time to time required by CDCC in accordance with Rule A-6. The Clearing Fund has been established to protect CDCC and its Clearing Members (including their Affiliate(s)) from potential defaults and other market events and shall be used for the purposes set out in Section A-609 and Subsection A-701(2) of the CDCC Rules.

Each Clearing Member's (excluding LCMs) contribution includes a required Base Deposit and a Variable Deposit. The details of the Base and Variable Deposits are set forth in Rule A-6.

**Clearing Fund Statement Report**

On the first Business Day of each calendar month, CDCC shall issue to each Clearing Member (excluding LCMs) a Clearing Fund statement that shall list the current amount of such Clearing Member's deposits to the Clearing Fund and the amount of deposit, which is based on the monthly calculation of the Variable Deposit, required of such Clearing Member. CDCC will also issue a Clearing Fund statement (MA71) intra-monthly if an increase to the Variable Deposit is necessary. Any deficit between the amounts held on deposit and the deposit required to be made by a Clearing Member must be satisfied on the next Business Day (T+1) before 10:00 a.m. (no same-day deposit).

**Deposits**

Deposits to the Clearing Fund shall be in the form of Cash. Deposits to the Clearing Fund are made and valued in the same manner and are subject to the same deadlines as for Margin deposits, as set forth in Section 2 of this Operations Manual.

**Withdrawals**

Clearing Members (excluding LCMs) may request to withdraw any surplus amount from the Clearing Fund, subject to applicable deadlines, as set forth in Section 2 of this Operations Manual.

**Pledges**

Pledges of Cash must be performed in accordance with Rule A-6.

## **CLEARING FEES**

### **CLEARING FEES**

#### **Clearing services fees**

Clearing fees are charged to both Clearing Members submitting a Transaction for clearing to CDCC and are based on the number of contracts involved. There is a minimum monthly clearing fee charge with respect to certain product types (Futures, Options and OTCI (other than Fixed Income Transactions)). Once a Clearing Member, otherwise eligible to do so in accordance with the Rules, starts using a particular clearing service by submitting a first Transaction of such product type, the applicable minimum monthly clearing fee shall be charged to the Clearing Member thereafter whether the Clearing Member actually uses the services or not during any given month, until the Clearing Member duly notifies CDCC in writing that it wishes to withdraw from the clearing services for that product type, effective sixty (60) days after CDCC receives such notice, provided there is no outstanding Transaction of such product type standing to an account of the Clearing Member at such time. Clearing Members should refer to the CDCC website [www.cdcc.ca](http://www.cdcc.ca) for a complete list of applicable fees.

Clearing fees are collected as a separate pay figure and are payable to CDCC on the morning of the 5th Business Day of each month through LVTS or any other payment method approved by CDCC. The MB01 Monthly Clearing Fees Invoice, MB02 Monthly Clearing Fees Details Reports and MB03 Monthly Fixed Income Clearing Fees Invoice are generated on every 2<sup>nd</sup> Business Day of each month and are available to Clearing Members on the morning of the 3<sup>rd</sup> Business Day of each month.

#### **Fees for additional services**

There are a number of discretionary services available to Clearing Members, in addition to the normal clearing services. These are published periodically as an Operational Notice to Members and can be viewed on the Secured Website. CDCC issues a statement on a monthly basis for these services. The fees are collected as per the date on the statement through LVTS or any other payment method approved by CDCC.

#### **Fees for cost incurred at CDS (or other Central Securities Depository)**

Any settlement cost incurred by CDCC within CDSX (or the settlement platform of another Central Securities Depository) will be charged to the Clearing Member with which CDCC is settling. Such cost will be included on the Monthly Clearing Fees Details Report (MB01) of the second Business Day of each month as a separate pay figure, payable to CDCC on the 5th Business Day of each month through LVTS or any other payment method approved by CDCC.

Clearing Members shall designate up to three (3) individuals within their firm who will be responsible for handling the Clearing Member's User Profiles ("Security Officers"). The designation of Securities Officers is done by filing with CDCC a CDCC Clearing - Security Officer Identification form, which form shall be renewed on an annual basis.

Once duly designated, a Security Officer shall submit a CDCC Clearing User Profile Request form to request that CDCC add or delete a User Profile (this form is accessible on CDCC's Secured Website).



## **SECURITY OFFICER**

### **SECURITY OFFICER**

The Security Officer must complete this form with the authorization stamp of the Clearing Member properly affixed on the form (with initials). When the form is complete, the Clearing Member can either scan the form and send it to the Corporate Operations group e-mail address: [cdcc-ops@tmx.com](mailto:cdcc-ops@tmx.com), or fax the form to one of CDCC's offices.

Upon receipt of the form, the process for the addition / deletion is performed by one of CDCC's senior managers.

## ESCALATION PROCEDURE

### PAYMENT FAILURE ESCALATION PROCEDURE

A failure by a Clearing Member to meet a payment, transfer, deposit, delivery, or acceptance of delivery when such obligation becomes due under the Rules (for the purpose of this Section 11 - Escalation Procedure, a "Payment Failure") as a result of an operational issue, including any material systems failure, malfunction, or delay encountered by a Clearing Member or its securities intermediary, including its Settlement Agent, Approved Depository, or Approved Custodian, (an "Operational Issue") shall be managed by the Corporation in accordance with the following procedure, (the "Escalation Procedure").

- 1) Communication
  - a) For the purposes of the Payment Failure Escalation Procedure:
    - i) a CDCC Level 1 contact shall be a Director Operations, or its equivalent;
    - ii) a CDCC Level 2 contact shall be a Vice-President Operations, or its equivalent;
    - iii) a CDCC Level 3 contact shall be the President and Chief Clearing Officer or Vice-President and Chief Risk Officer;
    - iv) a Clearing Member Level 1 contact shall be a Director of Operations, or its equivalent;
    - v) a Clearing Member Level 2 contact shall be a Vice-President Operations, or its equivalent; and
    - vi) a 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".
  - b) The CDCC Level 1 contact shall, immediately upon acquiring actual knowledge or confirmation of a Payment Failure by a Clearing Member, notify the Clearing Member Level 1 contact of the Payment Failure. The Clearing Member Level 1 contact shall, within a reasonable period of time, confirm the nature of the issue that caused the Payment Failure and, promptly upon providing such confirmation, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.
  - c) In the event that (i) the Clearing Member Level 1 contact fails to respond to the CDCC Level 1 contact within a reasonable period of time, (ii) the Clearing Member Level 1 contact cannot confirm the nature of the issue that caused the Payment Failure, or (iii) the information provided by the Clearing Member Level 1 contact regarding the nature of the Operational Issue that caused the Payment Failure is deemed unsatisfactory by the Corporation, the CDCC Level 2 contact shall immediately contact the Clearing Member Level 2 contact. The Clearing Member Level 2 contact shall, promptly upon being contacted in accordance with this subsection, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.
  - d) In the event that (i) the CDCC Level 2 contact fails to reach the Clearing Member Level 2 contact within a reasonable period of time, (ii) the Clearing Member Level 2 contact cannot confirm the nature of the Operational Issue that caused the Payment Failure, or (iii) the information provided by the Clearing Member Level 2 contact regarding the nature of the Operational Issue that caused the Payment Failure is deemed unsatisfactory by the Corporation, the CDCC Level 3 contact shall immediately contact the Clearing Member Level 3 contact. The Clearing Member Level 3 contact shall, within an hour after being contacted in accordance with this subsection, proceed to provide the Corporation with the required information in accordance with the Operational Issue Resolution Notice defined below.



## ESCALATION PROCEDURE

### 2) Operational Issue Resolution Notice

a) Upon receiving notification by the Corporation of the Payment Failure in accordance with Section 1 of this Escalation Procedure, if the Clearing Member Level 1, 2, or 3 contact, as the case may be, confirms in accordance with Subsection 1 that the Payment Failure is solely due to an Operational Issue, such Clearing Member Level 1, 2, or 3 contact, as the case may be, shall provide the Corporation with a written confirmation of the nature of the Operational Issue that caused the Payment Failure and a detailed description of the steps proposed to be taken by the Clearing Member to resolve the Operational Issue (together, the “Operational Issue Resolution Notice”). Where the Operational Issue affects the Clearing Member’s securities intermediary (including its Settlement Agent, Approved Depository or Approved Custodian), the Clearing Member shall immediately provide the Corporation with the contact details for the relevant representative of such securities intermediary’s and include such representative in every communication with the Corporation related to the Operational Issue until the full resolution of the Operational Issue.

b) The Operational Issue Resolution Notice shall be re-issued by the Clearing Member Level 3 contact, to the Corporation on each day on which the Payment Failure persists, until there is a full resolution of the Operational Issue to the satisfaction of the Corporation.

### 3) Mitigation Tools

Immediately upon the occurrence of a Payment Failure, the Clearing Member shall use its best efforts to resolve the Operational Issue, and to mitigate the Payment Failure by the use of the following mitigation tools (the “Mitigation Tools”) before 3:45 pm, where necessary:

- a) The Exception Process Request after the start of CDS payment exchange, where applicable, or
- b) The Payment Delay Request.

### 4) Delayed Resolution

On any Business Day on which an Operational Issue Resolution Notice remains in effect, in the event that the Corporation is of the view that the Operational Issue is expected, or likely, to persist until the next following Business Day,

a) The Corporation may determine that no Transaction shall be cleared by the Corporation for such Clearing Member until resolution; and

b) The Clearing Member Level 3 contact shall provide written confirmation that the Payment Failure is solely due to an Operational Issue and that the Clearing Member has used its best efforts to use the Mitigation Tools, and requests, if necessary, no later than 3:45 pm on the Business Day on which the first notification of the Payment Failure has been made, by a Payment Delay Request that the Corporation funds the Clearing Member’s obligations of payment to the Corporation until the next following Business Day. The Clearing Member shall, upon request by the Corporation, represent and warrant to each of the Corporation’s lender, acknowledging and confirming that each of the Corporation and the lender is relying on such representations and warranties without independent inquiry, that the Payment Failure is solely due to an Operational Issue and that no financial condition is affecting the Clearing Member in such a way that the provision of temporary funding in accordance with this section could jeopardize the interest of the Corporation or other Clearing Members. In the event that temporary funding is provided in accordance with this section, all fees and costs incurred by the Corporation in connection with such

## ESCALATION PROCEDURE

funding shall be added to and become part of the payment obligation owed by the Clearing Member to the Corporation and will become due immediately.

### 5) Non-Conforming

a) If no Mitigation Tool has been successfully implemented by the Clearing Member by the end of the Business Day on which the first notification of the Payment Failure has been made, the Corporation may declare the Clearing Member a Non-Conforming Member provided that the President & Chief Clearing Officer (or its designate) of the Corporation, prior to such designation, notifies the appropriate senior officer of the Bank of Canada in accordance with the Bank of Canada communication requirements.

b) If a Mitigation Tool has successfully been used by the Clearing Member but the Corporation is not satisfied with the information provided pursuant to the Operational Issue Resolution Notice, or considers that the steps proposed to be taken by the Clearing Member to resolve the Operational Issue expose the Corporation to an unacceptable level of risk, the Corporation may declare the Clearing Member a Non-Conforming Member, provided that the President & Chief Clearing Officer (or designate) of the Corporation prior to such designation notifies the appropriate senior officer of the Bank of Canada in accordance with the Bank of Canada communication requirements. The Corporation shall not exercise this discretion without having first performed the Escalation Procedure pursuant to Section 11 within a reasonable timeframe upon acquiring actual knowledge or confirmation of a Payment Failure by a Clearing Member and will not exercise this discretion before 10:00 am on the day following the receipt of the Level-3 Operational Issue Resolution Notice, unless the Clearing Member has not confirmed that the Payment Failure results from an Operational Issue.

## OVERNIGHT UNCOVERED RISK EXPOSURE

During the Overnight Clearing Cycle, CDCC's risk appetite for acceptable levels of uncovered risk are measured every hour on a per Clearing Member basis as a proportion of their Margin requirements, and will therefore take the form of a relative threshold (the "**Threshold**") The first monitoring snapshot occurs at 9:00 pm ET (t-1) and the last one at 5:00 am ET, where the Margin requirement is systemically updated with movements in Initial Margin, but only updated once with movements in Variation Margin<sup>1</sup> (at the 1:00 am ET monitoring snapshot). The hourly monitoring of both the Initial Margin and Variation Margin is available and used to estimate the build-up of credit exposure (the "**Live margin check**").

The Threshold will only apply if at least one position movement is captured during the Overnight Clearing Cycle, allowing the Clearing Member to be considered inactive as long as positions remain static ("**Position-based trigger**"). In other words, a Clearing Member will be considered inactive until one position movement is captured, after which such Clearing Member will be considered active for the rest of the Overnight Clearing Cycle.

The Threshold will trigger different actions depending on the Clearing Member's established overnight collateral solution (i.e. Pre-funding solution or Payment solution, see additional details in section 12-1 below). Consequently, CDCC uses the following terminology for the Threshold:

- "**Margin Call threshold**" - Applicable to the Payment solution. If the Clearing Member reaches the Margin Call threshold, an Overnight Margin Call is issued and needs to be fulfilled within the given timeline. If the Clearing Member doesn't fulfill its payment obligation or the payment

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<sup>1</sup> Additional Margin for Intra-Day Variation Margin Risk as set forth in the Risk Manual.

### ESCALATION PROCEDURE

capabilities are not enough to fulfill the obligation, CDCC may deem such Clearing Member as a Restricted Clearing Member.

- **“Trading threshold”** - Applicable to the Pre-funding solution. If the Clearing Member reaches the Trading threshold, CDCC may deem such Clearing Member as a Restricted Clearing Member.

Additionally, CDCC will use the below terminology to address Live margin check breaches:

- **“Warning threshold”** - Should only the Live margin check be breached, a warning is communicated to the Clearing Member with a clear breakdown of the Clearing Member’s credit exposure with respect to Initial Margin and Variation Margin.

#### Overnight Uncovered Risk Exposure Escalation Procedure:

- a) Overnight contact list for the purposes of the “Overnight Uncovered Risk Exposure” Escalation Procedure:
  - i) a CDCC Level 1 contact shall be an Operations Specialist, its equivalent or higher;
  - ii) a CDCC Level 2 contact shall be a Senior Manager, its equivalent or higher;
  - iii) a CDCC Level 3 contact shall be the President or Chief Clearing Officer or Vice-President and Chief Risk Officer;
  - iv) a Clearing Member Level 1 contact shall be an Operation Specialist, its equivalent or higher;
  - v) a Clearing Member Level 2 contact shall be a Senior Manager, its equivalent or higher; and
  - vi) a 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”.
- b) The CDCC Level 1 contact shall, immediately upon acquiring confirmation of a Warning threshold breach by a Clearing Member, notify the Clearing Member Level 1 contact of the “Warning threshold” breach.
- c) The CDCC Level 1 contact shall, immediately upon acquiring confirmation of a Margin Call threshold breach by a Clearing Member, notify the Clearing Member Level 1 contact of the breach and that an Overnight Margin Call will be issued.
- d) The CDCC Level 2 contact shall, immediately upon acquiring confirmation of a Trading threshold breach or that the Clearing Member didn’t fulfill its payment obligation following the issuance of an Overnight Margin Call, notify the Clearing Member Level 2 contact of the situation and that the Clearing Member may be deemed a Restricted Clearing Member by CDCC.
- e) The CDCC Level 3 contact shall, immediately upon acquiring actual knowledge or confirmation that a Clearing Member may be or was deemed a Restricted Clearing Member, communicate with the Clearing Member Level 3 contact.

## OVERNIGHT CLEARING CYCLE REQUIREMENTS

During the Overnight Clearing Cycle, Clearing Members are assigned to one of the following solution based on their payment capabilities:

- Pre-funding solution (i.e. Overnight Clearing Cycle eligible collateral payment capabilities not available)
- Payment solution (i.e. Overnight Clearing Cycle eligible collateral payment capabilities available)

By default, Clearing Members are considered part of the Pre-funding solution until they demonstrate their ability to meet their obligations towards CDCC from amongst the below list of Overnight Clearing Cycle eligible collateral with respect to the Asian hours, European hours, or both:

- “Asian hours” - i.e. 8:00 pm to 1:00 am ET - in a selection of eligible Non-CAD currencies.
- “European hours” - i.e. 1:00 am to 6:00 am ET - in a selection of eligible Non-CAD currencies or any form of eligible collateral pledged through CDSX.

Clearing Members opting to qualify for the Payment solution during either the Asian hours, European hours or both will automatically be considered as part of the Payment solution at the 1:00 am ET monitoring snapshot (juncture of Asian and European hours).



# RISK MANUAL

~~JUNE 12, 2020~~

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[...]

## Section 2 - Eligible Collateral

As set out in Section 1 of the Risk Manual, every Clearing Member shall be obligated to deposit Margin with the Corporation, as determined by the Corporation. Deposits must be made in the form of eligible collateral, as specified in this section, in an amount sufficient, taking into account the market value and applicable Haircuts.

### 2.1 FORMS OF COLLATERAL

The forms of eligible collateral that may be deposited by or on behalf of a Clearing Member with CDCC, as prescribed in Rule A-6 (Clearing Fund Deposits) and Rule A-7 (Margin requirements), are one or more of the following assets:

- 1) Cash; Canadian dollar (CAD) Cash is the only form of eligible collateral that can be deposited in the Clearing Fund
- 2) Debt Securities
- 3) Valued Securities

CDCC may, on an exceptional and temporary basis at its sole discretion, exclude certain forms of eligible collateral or accept other forms of collateral.

### 2.2 CASH

Cash amounts are accepted ~~only~~ in Canadian dollars, and a selection of Non-CAD Currencies. CAD Cash is the only form of eligible collateral that can be deposited in the Clearing Fund.

CDCC reviews and publishes the selection of Non-CAD Currencies from time to time, and the Clearing Members are informed of these reviews by written notice.

### 2.3 DEBT SECURITIES

#### 2.3.1 General Considerations

Debt Securities which fulfill certain minimum criteria may be deemed as an eligible form of collateral.

Acceptance of a Debt Security is conditional on the availability of a price from a source that CDCC determines to be acceptable and reliable.

CDCC establishes, reviews and publishes the list of eligible Debt Securities on a regular basis.

Irrespective of the fact that a Debt Security fulfils all eligibility criteria, CDCC will not accept as collateral from or on behalf of a Clearing Member any Debt Security issued or guaranteed by the Clearing Member itself or its Affiliates.

### **2.3.2 Types of Debt Securities**

The Debt Security must be a debt instrument having a fixed and unconditional principal amount.

The coupon rate of the debt instrument must be fixed. Zero coupon bonds are eligible.

Furthermore, real return bonds can be eligible for a specific issuer as determined by CDCC on the list of eligible Debt Securities.

The Debt Security must not have an embedded option or carry a right of conversion into equity securities, with the exception of non-financial calls (i.e. “Canada Call”).

Saving Bonds, floating rate notes, stripped coupons and residual securities are excluded.

### **2.3.3 Types of Issuers**

The eligible Debt Securities must be issued or guaranteed by the Government of Canada, by a provincial government or by the United States (“U.S.”) Government.

### **2.3.4 Eligible Debt Securities by Issuer**

#### **2.3.4.1 Debt Securities issued by the Government of Canada:**

- Treasury bills, bullet bonds and real return bonds.

#### **2.3.4.2 Debt Securities guaranteed by the Government of Canada:**

- Treasury bills, bullet bonds and Debt Securities issued by Canada Housing Trust.

#### **2.3.4.3 Debt Securities issued by a provincial government:**

- Treasury bills and bullet bonds issued by the governments of Alberta, British Columbia, Manitoba, Ontario and Quebec.

#### **2.3.4.4 Debt Securities guaranteed by a provincial government:**

- Bullet bonds issued by Financement Quebec, Hydro-Quebec and Ontario Electricity Financial Corporation.

#### **2.3.4.5 Debt Securities issued by the U.S. Government**

- Treasury bills, notes, bonds, and Treasury inflation-protected securities (TIPS).

#### **2.3.5 Settlement Procedures**

Debt Securities must be transferable in book-entry form using CDSX of CDS Clearing and Depository Services Inc.

#### **2.3.6 Currency of Denomination**

Debt Securities must be denominated in Canadian dollars with the exception of Debt Securities issued by the U.S. Government denominated in U.S. dollars.

### **2.4 VALUED SECURITIES**

#### **2.4.1 General Considerations**

CDCC accepts Valued Securities trading on the Toronto Stock Exchange or the TSX Venture Exchange.

Irrespective of the fact that a Valued Security fulfils all eligibility criteria, CDCC will not accept as collateral from or on behalf of a Clearing Member any Valued Security issued or guaranteed by the Clearing Member itself or its Affiliates.

No value will be recognized for a Valued Security whose closing price is below \$10 per share.

#### **2.4.2 Settlement Procedures**

Valued Securities must be transferable in book-entry form using CDSX of CDS Clearing and Depository Services Inc.

#### **2.4.3 Currency of Denomination**

Valued Securities must be denominated in Canadian dollars.

### **2.5 RISK CONTROL MEASURES**

#### **2.5.1 General Considerations**

The CDCC collateral framework takes a conservative approach to manage the forms of eligible collateral accepted. The framework includes, but is not limited to, risk limits and calculation of Haircuts that apply to the different forms of eligible collateral.



## 2.5.2 Risk Limits

### 2.5.2.1 Limits at the Clearing Member Level

- Except for the Variation Margin account, for each acceptable Government Debt Security, excluding Treasury bills, a concentration limit equal to \$250 million or 10% of the total issue outstanding, whichever is less, is applied to each Clearing Member.
- Valued Securities issued or guaranteed by the Clearing Member or its Affiliates are not eligible.
- Valued Securities issued by the TMX Group are not eligible.

### 2.5.2.2 Limit on the Clearing Fund Account

For each Clearing Member, for all of its accounts combined, 100% of the Clearing Fund Requirements must be covered by CAD Cash.

### 2.5.2.3 Limit on the Margin Requirements<sup>1</sup>

For each Clearing Member, for all of its accounts combined, at least 25% of the Margin requirements must be covered by CAD Cash, acceptable Treasury bills and bonds issued or guaranteed by the Government of Canada or any combination thereof valued after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 40% of the Margin requirements may be covered by Debt Securities issued by the United States of America Federal Government after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 50% of the Margin requirements may be covered by provincial issued or guaranteed Debt Securities after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Alberta after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of British Columbia after the application of Haircuts.

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<sup>1</sup> This excludes the Net Variation Margin Requirement.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Manitoba after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 30% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Ontario after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 30% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Quebec after the application of Haircuts.

For each Clearing Member, for all of its accounts combined no more than 15% of the Margin requirements may be covered by Valued Securities after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 5% of the Margin requirements may be covered by any one Valued Security after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, risk limits in proportion of the Margin requirements may be covered by Non-CAD Currencies after the application of Haircuts. CDCC reviews and publishes risk limits attributable to Non-CAD Currencies from time to time, and the Clearing Members are informed of these reviews by written notice.

#### **2.5.2.4 Limit on the Variation Margin Account**

For each Clearing Member, for all of its accounts combined, 100% of the Net Variation Margin Requirement must be covered by acceptable Treasury bills and bonds issued or guaranteed by the Government of Canada, Government of Alberta, Government of British Columbia, Government of Ontario and Government of Quebec or any combination thereof after the application of Haircuts.

CDCC shall, on an exceptional basis, acting reasonably, accept CAD cash or other securities as collateral to cover the Net Variation Margin Requirement.

#### **2.5.3 Limits at CDCC Level**

For each acceptable Valued Security, a concentration limit of 5% of the free float applies at CDCC level.

## 2.6 HAIRCUTS

### 2.6.1 Haircuts for Non-CAD Currencies

The Corporation calculates the Haircuts based on historical daily returns of the foreign exchange risks. The volatility estimator uses the exponentially weighted moving average (“EWMA”) approach as defined in Appendix 6.2, and the assumption that the Non-CAD currency can be liquidated at a reasonable price in “n” days (“n” is determined according to the applicable basket of currencies and prevailing market conditions).

In addition, the final Haircut applied for Non-CAD Currencies is calculated as the maximum daily haircut computed over the last 5 years and over the applicable basket of currencies considered by the Corporation.

Once the quantitative analysis is performed, CDCC reserves the right to increase the Haircuts based on qualitative criteria, acting reasonably.

### 2.6.12.6.2 Haircuts for Government Securities

The Corporation calculates the Haircuts based on any of the following criteria:

- Valuation of the market, credit, liquidity and foreign exchange risks based on historical daily returns;
- The volatility estimator uses the exponentially weighted moving average (“EWMA”) approach as defined in Appendix 6.5, and the assumption that the bond can be liquidated at a reasonable price in “n” days. (“n” is determined according to the type of products and prevailing market conditions). In addition, a floor for the EWMA volatility estimator is calculated as the 25<sup>th</sup> percentile of a daily EWMA volatility estimator observed over the last 10 years;
- Liquidity risk valued according to the bid-ask spread of the issues using the same EWMA volatility estimator and the floor (if this spread is unavailable, the liquidation window will be expanded and will depend on market conditions);
- Bonds of the same issuer and comparable maturities.

Once the quantitative analysis is performed, CDCC reserves the right to increase the Haircuts based on qualitative criteria, such as:

- Comparative analysis of CDCC’s Haircuts in relation to the Haircuts of the Bank of Canada;
- Comparative analysis of CDCC’s Haircuts in relation to the Haircuts of other clearing houses;
- The congruence of the different Haircuts to the credit rating spreads of the different issuers; and

- Any other factor considered relevant by CDCC, acting reasonably.

#### **2.6.22.6.3 The Haircuts for Valued Securities**

A Haircut of 50% is applied to all Valued Securities pledged against the total Margin requirement for all accounts combined.

#### **2.6.32.6.4 Haircuts Policy**

CDCC reviews and publishes the Haircuts from time to time, and the Clearing Members are informed of these reviews by written notice.

[...]



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## Glossary

Unless otherwise defined in this Risk Manual, capitalized terms shall have the meanings given to them in the Rules.

**Adjusted Base Initial Margin:** With respect to Limited Clearing Members, the Base Initial Margin is multiplied by the Effective Ratio. The Effective Ratio is recalibrated on a regular basis as provided in this Manual.

**Additional Margin(s):** Additional Margins are added to the Base Initial Margin (or Adjusted Base Initial Margin, where applicable) to form part of the Initial Margin in accordance with the methodology set out in this Manual. The Additional Margins include the following: (1) Additional Margin for Market Liquidity Risk, (2) Additional Margin for Specific Wrong-Way Risk, (3) Additional Margin for Mismatched Settlement Risk, (4) Additional Margin for Intra-Day Variation Margin Risk, (5) Additional Margin for Unpaid Option Premium Exposure Risk, (6) Additional Margin for Banking Holiday Risk, (7) Additional Margin for Variation Margin Delivery Risk, (8) Additional Margin for Capital Risk, (9) Additional Margin for Uncovered Risk of Limited Clearing Members and (10) any other additional Margins as set out in the Rules (other than required pursuant to Rule D-607). When used in the singular form, Additional Margin shall refer to one of the Additional Margins described above, whenever the context so requires.

**Additional Margin for Banking Holiday Risk:** The Additional Margin for Banking Holiday Risk covers the risk of uncovered exposures arising from new trades during the Banking Holiday and the additional market risk that the Corporation could face during the Banking Holiday.

**Additional Margin for Capital Risk:** This Margin requirement covers the credit risk of the Clearing Members that arises if the exposure of a Clearing Member to the Corporation is greater than the Clearing Member's capital level.

**Additional Margin for Intra-day Variation Margin Risk:** This Margin requirement covers the intra-day risk arising in circumstances in which market volatility or surges in trading volumes produce unusually large Variation Margin exposures.

**Additional Margin for Market Liquidity Risk:** This Margin requirement covers the liquidity risk arising when the Corporation has to close-out positions at a price different than the market price. This liquidity risk could be divided into two components: the first one is the inherent market liquidity risk which is mainly associated to the bid-ask spread, and the second one is the additional liquidity risk due to concentrated positions that cannot be liquidated within the bid-ask spread.

**Additional Margin for Mismatched Settlement Risk:** This Margin requirement covers the risk arising from a lag between the settlement of positions which otherwise results in a margin offset.

**Additional Margin for Specific Wrong-Way Risk:** This Margin requirement covers the risk that arises when the exposure of a Clearing Member in its own products is adversely correlated with the creditworthiness of that Clearing Member.

**Additional Margin for Uncovered Risk of Limited Clearing Members:** This Margin requirement covers the risk exposure that arises if the total value of the risk represented by a Limited Clearing Member to the Corporation is greater than the aggregate amount of the Limited Clearing Member's Adjusted Base Initial Margin and the total value of the Clearing Fund.

The risk represented by the Limited Clearing Member is determined by the Corporation by calculating the estimated loss that the Corporation would face in extreme but plausible market conditions. This Additional Margin is calculated on a daily basis and is required from Limited Clearing Members only.

**Additional Margin for Unpaid Option Premium Exposure Risk:** The Additional Margin for Unpaid Option Premium Exposure Risk covers the risk incurred by the Corporation in guaranteeing to each Clearing Member the settlement of the Net Daily Premium on a daily basis.

**Additional Margin for Variation Margin Delivery Risk:** The Additional Margin for Variation Margin Delivery Risk covers the risk incurred by the Corporation in guaranteeing to each Clearing Member having pledged specific securities to cover its Net Variation Margin Requirement, the return of such specific securities, in the event that another Clearing Member to which the specific securities were initially delivered fails to return such specific securities and becomes Non-Conforming or is Suspended. In this case, the Corporation will have to buy the specific securities in the market to return to the Clearing Member that had initially pledged the specific securities.

**Banking Holiday:** Remembrance Day, in Canada, or any day determined as Remembrance Day by the Corporation through its Holiday Schedule published on a yearly basis.

**Base Initial Margin:** The Base Initial Margin requirement covers the potential losses that may occur over the next liquidation period as a result of market fluctuations. The Base Initial Margin does not include any Additional Margins.

**Boundaries:** With respect to the Effective Ratio, the Boundaries refer for a specific period to the upper limit (UB) and lower limit (LB) which are respectively the highest and lowest Daily Ratios during such period.

**Clearing Fund Requirement:** The Clearing Fund Requirement constitutes the required contribution to the Clearing Fund for each Clearing Member (excluding Limited Clearing Members).

**Combined Commodity:** Group of positions that are associated with the same Underlying Interest or product or both. Combined Commodity is the lowest level at which the Base Initial Margin for Options, Futures and Unsettled Items is computed.

**Daily Ratio:** The Daily Ratio is determined, for any Business Day, by dividing the total amount of Clearing Fund Requirement on that Business Day by the aggregate amount of the Base Initial Margin requirement of all Clearing Members (other than Limited Clearing Members) on the same Business Day.

**Effective Ratio:** Ratio established by the Corporation, in accordance with the governance standards set forth in this Manual, which reflects the multiplier applicable to the Base Initial Margin for Limited Clearing Members.

**Expected Shortfall:** Average of all losses which are greater than or equal to the worst case. The worst case represents the  $(1-\alpha)\%$  case, where  $\alpha$  is the confidence level.

**Haircut:** Percentage discounted from the market value of eligible collateral pledged for Margin Deposit. The discount reflects the price movement volatility of the collateral pledged.

**Historical Filtered Scenarios:** Set of scenarios resulting of a weight applied to the Historical P&L Scenarios to reflect the current volatility. The current volatility is estimated by applying a volatility scaling adjustment using the exponentially weighted moving average (EWMA).

**Historical P&L Distribution:** Ranking of the Historical P&L Scenarios from the largest loss to the largest profit.

**Historical P&L Scenarios:** Set of scenarios for a Fixed Income Transaction representing the hypothetical gains and losses derived from Historical Filtered Scenarios. The gains and losses are created by calculating the difference between the price the Fixed Income Transaction under an Historical Filtered Scenario and the initial reference price.

**Historical Scenarios:** Set of scenarios for a Risk Factor and representing an hypothetical market observation movement reasonably likely to occur, from the current situation to a specific point in time in the future.

**Initial Margin:** The Initial Margin is composed of the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) and the Additional Margins.

**Inter-Commodity:** Portfolio containing offsetting positions in highly correlated instruments are subject to credits which reduce the overall Base Initial Margin for Options, Futures and Unsettled Items.

**Intra-Commodity:** Portfolio containing offsetting positions in different maturity month in the same Combined Commodity are subject to a charge since they may not be perfectly correlated.

**Margin Buffer Multiplier:** Multiplier to the Base Initial Margin for Fixed Income Transaction to prevent and control potential procyclical effects.

**Margin Interval (MI):** Parameter established by the Corporation which reflects the maximum price fluctuation that the Underlying Interest could be expected to have during the MPOR. The MI is used to calculate the Base Initial Margin for Options, Futures and Unsettled Items.

**Margin Period of Risk (MPOR):** The period required by the Corporation to close-out non-concentrated positions in a particular contract (or either through liquidation, auction or by hedging or neutralizing the market risk.

**Price Scan Range (PSR):** The maximum price movement reasonably likely to occur, during a specified timeframe.

**Risk Array:** A Risk Array is a set of scenarios defined for a particular contract and representing the hypothetical gain/loss under a specific set of market conditions from the current situation to a specific point in time in the future.

**Risk Factor:** Factor influencing the value of a Derivative Instrument or OTCI.

**Risk Engine:** The system used by the Corporation for risk management, risk measurement and calculation of Initial Margin and Clearing Fund Requirement.

**Rules:** means the Rules of the Corporation, including the Operations Manual and this Manual, as any such rules and manuals may from time to time be amended, changed, supplemented or replaced in whole or in part.

**Scanning Risk:** The difference between the initial reference price of an Underlying Interest and its most unfavourable projected liquidation value obtained by shocking the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions.

**Short Option Minimum:** Amount included in the Base Initial Margin to cover the risk exposure arising from deep out-of-the-money short option positions. This amount is required if this amount is higher than the result of the Risk Arrays.

**Variation Margin:** The Variation Margin covers the risk due to the change in price of a Derivative Instrument or of an OTCI or a change in the Floating Price Rate, in each case since the previous evaluation in accordance with the Rules.

**VaR Risk Group(s):** Group of Fixed Income Transactions that are associated to similar Risk Factors. VaR Risk Group is the lowest level at which the Base Initial Margin for Fixed Income Transactions is computed.

**Volatility Scan Range (VSR):** The maximum implied volatility movement reasonably likely to occur, during a specified timeframe.



**Volatility Shock(s):** Parameter established by the Corporation which reflects the maximum daily volatility fluctuation of the Option contract. The Volatility Shock is used to calculate the Base Initial Margin for Options.

**Zero Curve:** Specific type of yield curve that associates interest rates on zero coupon bonds to different maturities (tenors). Tenors represent the Risk Factors inputs to evaluate the price of a Fixed Income Transaction using a full revaluation method.



## Risk Manual

## Section 1: Margin Deposits

As set out in the Rules, every Clearing Member shall be obligated to deposit Margin with the Corporation, as determined by the Corporation. Deposits must be made in the form of eligible collateral, as specified in Section 2 of this Risk Manual, in an amount sufficient, taking into account the market value and applicable Haircuts.

The Corporation requires Margin Deposits to cover two types of requirements, namely:

- Margin requirement; and
- Clearing Fund Requirement.

### 1.1 MARGIN REQUIREMENT

The Margin requirement is composed of the Initial Margin and the Variation Margin.

#### 1.1.1 Initial Margin

The Initial Margin is composed of the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) and the Additional Margins. In order to cover the Initial Margin described below, Clearing Members shall deliver to CDCC an acceptable form of Deposits in accordance with Section 2 of this Risk Manual.

##### 1.1.1.1 Base Initial Margin

The Base Initial Margin requirement covers the potential losses and market risk that may occur as a result of future adverse price and/or Risk Factors across the portfolio of each Clearing Member under normal market conditions.

The risk methodology for the Options, Futures and Unsettled Items incorporates the historical volatility of the daily price returns of the Underlying Interests for Options, Unsettled Items and Share Futures and the daily price returns of the Futures prices for Futures (excluding Share Futures). In addition, as part of the methodology, the Corporation uses a volatility estimator, a confidence level over 99% under the normal distribution or the student's t-distribution assumption and a variable number of days as the MPOR.

The risk methodology for Fixed Income Transactions is the Value at Risk methodology (VaR)<sup>1</sup>. This methodology considers a full revaluation method and it is based on Zero Curves. In addition, as part of the methodology, the Corporation uses a volatility estimator, a Margin Buffer Multiplier to prevent a large decrease in Margin requirements during periods of low volatility, a confidence level over 99% and a variable number of days as the MPOR.

Please refer to Sections 6.1 and 6.2 for additional details on the Base Initial Margin calculation.

With respect to the Limited Clearing Members, the Base Initial Margin is multiplied by the Effective Ratio to calculate the Adjusted Base Initial Margin. Please refer to Section 6.3 for additional details on Effective Ratio Recalibration.

#### 1.1.1.2 Additional Margins

In addition to the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), the Corporation requires Margin Deposits for the following Additional Margins:

- (1) Additional Margin for Market Liquidity Risk
- (2) Additional Margin for Specific Wrong-Way Risk
- (3) Additional Margin for Mismatched Settlement Risk
- (4) Additional Margin for Intra-day Variation Margin Risk
- (5) Additional Margin for Unpaid Option Premium Exposure Risk
- (6) Additional Margin for Banking Holiday Risk
- (7) Additional Margin for Variation Margin Delivery Risk
- (8) Additional Capital Margin Risk
- (9) Additional Margin for Uncovered Risk of Limited Clearing Members
- (10) Any other additional Margins

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<sup>1</sup> The same methodology used for Fixed Income Transactions is applied for physical delivery of Government of Canada Bond Futures.



### ADDITIONAL MARGIN FOR MARKET LIQUIDITY RISK

As mentioned in Section 1.1.1.1, the Base Initial Margin requirement is intended to cover potential portfolio losses and market risks over a variable number of days defined as the MPOR. This Additional Margin covers the liquidity risk arising when the Corporation has to close-out positions at a price different than the market price.

The Additional Margin for Market Liquidity Risk methodology will consider an absolute surcharge or a relative surcharge for positions exceeding pre-determined thresholds.

The absolute surcharge is a fixed dollar amount applied on a specific contract or transaction or a group of contracts or transactions. The relative surcharge is applied against the specific Base Initial Margin of the specific contract or transaction or a group of contracts or transactions.

The thresholds are determined based on quantitative adjustments such as the trading volume of the product or Underlying Interest, the volatility of the product or Underlying Interest, and the average amount of bids in the primary market auctions for real return bonds. In addition to these adjustments, the Corporation may also apply qualitative adjustments.

The threshold and surcharge values are updated by CDCC from time to time.

### ADDITIONAL MARGIN FOR SPECIFIC WRONG-WAY RISK

The risk covered by the Additional Margin for Specific Wrong-Way Risk arises when the exposure of a Clearing Member in its own products<sup>2</sup> is adversely correlated with the credit worthiness of that Clearing Member. The Additional Margin for Specific Wrong-Way risk aims to measure the risk exposure that represents the net wrong-way exposure less any eligible right-way exposure. For each situation described in the section below, the right-way exposure is limited to the value of the wrong-way risk exposure.

CDCC has identified four specific situations where the risk exists:

- Call Options: When a Clearing Member holds a long Call Option position on the shares issued by itself or its Affiliates, the Option Price

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<sup>2</sup> Positions on a security issued by the Clearing Member or its Affiliates or positions for which the Underlying Interest is a security issued by the Clearing Member or its Affiliates.

or the OTCI Option Price for OTCI Securities Options, as the case may be, is charged as Additional Margin for Specific Wrong-Way Risk. However, the value of all short Call Options for which the Underlying Interest is a security issued by itself or its Affiliates will reduce the amount charged as Additional Margin for Specific Wrong-Way Risk.

- **Put Options:** When a Clearing Member holds a short Put Option position for which the Underlying Interest is a security issued by itself or its Affiliates, the full strike value amount minus the Option Price or the OTCI Option Price for OTCI Securities Options is charged as Additional Margin for Specific Wrong-Way Risk. For long Put Option position for which the Underlying Interest is a security issued by itself or its Affiliates, the Option Price or the OTCI Option Price for OTCI Securities Options minus the full strike value amount is charged as Additional Margin for Specific Wrong-Way Risk.
- **Share Futures:** When a Clearing Member holds a long Share Futures position for which the Underlying Interest is a security issued by itself or its Affiliates, the full settlement value amount is charged as Additional Margin for Specific Wrong-Way Risk. However, any short Share Futures position for which the Underlying Interest is a security issued by itself or its Affiliates will reduce the amount charged as Additional Margin for Specific Wrong-Way Risk.
- **Unsettled Items:** When a Clearing Member holds an Unsettled Item position for which the Underlying Interest is a security issued by itself or its Affiliates, the last price of the Underlying Interest is used for the calculation of the Additional Margin for Specific Wrong-Way Risk. Depending if the Unsettled Item position results from an exercise or an assignment, it could either increase or lower the Additional Margin for Specific Wrong-Way Risk.

The Additional Margin for Specific Wrong-Way Risk is netted and capped at the product level. The value cannot be lower than zero.

#### **ADDITIONAL MARGIN FOR MISMATCHED SETTLEMENT RISK**

The Additional Margin for Mismatched Settlement Risk is requested if the risk arising from a lag between the settlement of positions results in a margin offset. More specifically, CDCC faces a risk that a Clearing Member settles a position that provides either a Base Initial Margin offset with other positions on the rest of the portfolio.

Given the fact that margin offsets are granted when Fixed Income Transactions portfolios have both long and short positions without taking into account the settlement dates, this Additional Margin charge will be calculated for the positions that could cause mismatched settlement exposure prior to a default.

In order to address such risk, CDCC will perform forward looking analysis to forecast material changes in the Base Initial Margin as a result of settlements of Fixed Income Transactions.

The Additional Margin for Mismatched Settlement Risk will be calculated by using the maximum of several scenarios representing the potential cases that may trigger a mismatched settlement risk following the settlement of positions, minus the Base Initial Margin.

#### **ADDITIONAL MARGIN FOR INTRA-DAY VARIATION MARGIN RISK**

The risk covered by the Additional Margin for Intra-Day Variation Margin Risk arises when market volatility of cleared volumes produces unusually large Variation Margin exposures. The Additional Margin for Intra-day Variation Margin Risk requirement corresponds to the sum of the Additional Margin for Intra-day Variation Margin Risk in respect of Futures and the Additional Margin for Intra-day Variation Margin Risk in respect of Fixed Income Transactions. When calculating the value of Additional Margin for Intra-day Variation Margin Risk for Futures or Fixed Income Transactions, the value cannot be lower than zero.

In order to address the intra-day variation margin risk, the Corporation may call for Additional Margin from each Clearing Member if it determines that the intra-day exposure for Futures and/or Fixed Income Transactions of the Clearing Member exceeds certain limits (thresholds expressed in percentage) in relation to the Clearing Member's respective Base Initial Margin. The Additional Margin for Intra-Day Variation Margin Risk is subject to a minimum value (floor).

#### **ADDITIONAL MARGIN FOR UNPAID OPTION PREMIUM EXPOSURE RISK**

The Additional Margin for Unpaid Option Premium Exposure Risk covers the risk incurred by the Corporation in guaranteeing to each Clearing Member the settlement of the Net Daily Premium on a daily basis. To cover this potential risk, the Corporation accumulates during the Business Day the value of the trades that are not yet settled. At the time of the calculation, if a Clearing Member is expected to make a cash settlement

to the Corporation, the value is requested from the Clearing Member, as Additional Margin for Unpaid Option Premium Exposure Risk.

#### **ADDITIONAL MARGIN FOR BANKING HOLIDAY RISK**

This Additional Margin considers the risk associated to uncovered exposures arising from new trades and the additional market risk that the Corporation could face during the Banking Holiday.

The incremental exposure is based on the historical fluctuation of the Base Initial Margin requirement over a specific period and it is designed to capture the potential uncovered Base Initial Margin requirement arising from new trades during the Banking Holiday.

With respect to the additional market risk, one (1) more Business Day is added to the MPOR of the Base Initial Margin requirement for the eligible tradeable products during the Banking Holiday. This Base Initial Margin requirement is then compared to the Base Initial Margin calculated with the MPOR. The difference between the two values corresponds to the additional market risk.

#### **ADDITIONAL MARGIN FOR VARIATION MARGIN DELIVERY RISK**

This Margin requirement covers the risk incurred by the Corporation in guaranteeing to each Clearing Member having pledged specific securities to cover its Net Variation Margin Requirement, the return of such specific securities, in the event that another Clearing Member to which the specific securities were initially delivered fails to return such specific securities and becomes Non-Conforming or is Suspended. In this case, the Corporation will have to buy the specific securities in the market to return to the Clearing Member that had initially pledged the specific securities. To cover this potential risk, an amount representing a percentage of the total Variation Margin requirement or a specific percentage set at the securities level will be collected from the Clearing Member who initially receives the specific securities, as Additional Margin for Variation Margin Delivery Risk.

#### **ADDITIONAL CAPITAL MARGIN RISK**

This Additional Margin intends to measure the credit exposure of all Clearing Members (excluding Limited Clearing Members) that arises if the exposure of a Clearing Member is superior to its capital amount.

The Corporation compares the Clearing Member's capital amount to the Base Initial Margin. In the event that the Base Initial Margin of the Clearing Member exceeds the capital amount, Additional Margin in the amount of the excess will be collected from the Clearing Member.

The capital level is derived from regulatory reports received on a regular basis. The Corporation uses the net allowable assets, the net Tier 1 capital or any other comparative measure to assess the capital level of each Clearing Member.

#### **ADDITIONAL MARGIN FOR UNCOVERED RISK OF LIMITED CLEARING MEMBERS**

This Additional Margin covers the risk exposure that arises if the total value of the risk represented by a Limited Clearing Member to the Corporation is greater than the aggregate amount of the Limited Clearing Member's Adjusted Base Initial Margin and the total value of the Clearing Fund.

The risk represented by the Limited Clearing Member is determined by the Corporation by calculating the estimated loss that the Corporation would face in extreme but plausible market conditions. This Additional Margin is calculated on a daily basis and is required from Limited Clearing Members only.

#### **ANY OTHER ADDITIONAL MARGINS**

Any other additional Margins as set out in the Rules (other than required pursuant to Rule D-607).

### **1.1.2 Variation Margin**

The Variation Margin requirement covers the risk due to the change in price of a Derivative Instrument or an OTCI or a change in the Floating Price Rate since the previous evaluation in accordance with the Rules. The following table evidences the type of Variation Margin coverage that will be required by CDCC for each type of products:

Products	Variation Margin coverage type
Options	Collateralized
Futures	Cash settled
Fixed Income Transactions	Collateralized (subject to Variation Margin process)
Unsettled Items	Collateralized

#### 1.1.2.1 Options

For Options, the Variation Margin is collateralized every Business Day and at each Intra-Day Margin Call based on the Option Price reported by the Exchange, or the last OTCI Option Price for OTCI Securities Options<sup>3</sup>, as the case may be, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall set such price in accordance with the best information available as to the correct price.

#### 1.1.2.2 Futures

For Futures, the Variation Margin is cash settled every Business Day based on the last Settlement Price reported by the Exchange, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall set the last Settlement Price in accordance with the best information available as to the correct price.

#### 1.1.2.3 Fixed Income Transactions

The Variation Margin Requirement<sup>4</sup> in respect of each Fixed Income Transaction is calculated on a daily basis and represents the sum of the Price Valuation Requirement and the Repo Rate Requirement, each as defined in Section D-601 of the Rules.

##### PRICE VALUATION REQUIREMENT

The Price Valuation Requirement represents, in respect of a Repurchase Transaction, an amount which is the aggregate amount calculated in respect of the difference between (i) the Market Value of the Purchased Security and (ii) the Repurchase Price of the Repurchase Transaction, plus any Coupon Income payable to the holder between the calculation date and the Repurchase Date, and, in respect of a Cash Buy or Sell Trade, an amount which is the difference between (i) the Market Value of the Purchased Security and (ii) the Purchase Price of the Cash Buy or Sell Trade; which amount is owed to the Corporation by a Fixed Income

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<sup>3</sup> Please refer to Section 6.4 for additional details on the theoretical price calculation of OTCI Securities Options.

<sup>4</sup> The Variation Margin Requirement for Fixed Income Transactions is not applied for physical delivery of Government of Canada Bond Futures. The applicable Variation Margin Requirement for Fixed Income Transactions is rounded up to the nearest \$1 of nominal value.

Clearing Member that is a party to such Repurchase Transaction or Cash Buy or Sell Trade or by the Corporation to such Fixed Income Clearing Member.

#### **REPO RATE REQUIREMENT**

The Repo Rate Requirement represents a change in the current Floating Price Rate and means, in respect of a Repurchase Transaction, an amount which is calculated in respect of the difference between the Floating Price Rate and the Repo Rate; which amount is owed to the Corporation by a Fixed Income Clearing Member that is a party to such Repurchase Transaction or by the Corporation to such Fixed Income Clearing Member.

#### **1.1.2.4 Unsettled Items**

The Variation Margin for Unsettled Items with respect to both Options and Futures is collateralized. With respect to Variation Margin for Unsettled Items related to Options, the Corporation calculates a Variation Margin requirement equal to the intrinsic value of the Option multiplied by the position and the contract size. With respect to Variation Margin for Unsettled Items related to Futures, the Corporation calculates a Variation Margin requirement equal to the difference between the last Settlement Price of the Futures and the price of the Underlying Interest related to the Futures, multiplied by the position and the contract size.

### **1.1.3 Account Structure, Netting and Risk Aggregation**

#### **1.1.3.1 Short Positions, Account Types and Positions Netting**

Clearing Members shall not be required to deposit Margin in respect of Short Positions in Futures or Options for which they have deposited the Underlying Interest in accordance with Section A-708 of the Rules.

The Corporation uses three types of accounts for Margin calculation purposes and positions management: Firm Account, Multi-Purpose Account and Client Account.

- For all account types, the Margin requirement for Futures positions and Fixed Income Transactions is calculated on a net basis.
- The Margin requirement for Options is calculated on a net basis for the Firm Account and the Multi-Purpose Account, but on a gross basis

for the Client Account, which means that only short Options are considered when computing the Initial Margin.

#### 1.1.3.2 Margin Aggregation

The total Margin requirement of each Clearing Member is composed of the Initial Margin requirement and the Variation Margin requirement.

The calculation is made at the account level and then aggregated at the Clearing Member level. However, operationally the Margin requirement is subject to the following aggregation, subject to the applicable type of products being cleared by the Clearing Member:

##### **INITIAL MARGIN REQUIREMENT (including the Variation Margin for Options and Unsettled Items)**

The Initial Margin requirement for all products is aggregated with the Variation Margin for Options and Unsettled Items as follows:

- a) The Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) is calculated at the account level. For Options, Futures and Unsettled Items, the margin results are calculated at the Combined Commodity level and the Base Initial Margin corresponds to the sum of all Combined Commodities. For Fixed Income Transactions, the Base Initial Margin represents the sum of all VaR Risk Groups. The Base Initial Margin at the account level corresponds to the sum of the Base Initial Margin for Options, Futures and Unsettled Items and the Base Initial Margin for Fixed Income Transactions.
- b) The Variation Margin for Options and Unsettled Items is calculated at the account level and then added to the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be).
  - If the Variation Margin for Options and Unsettled Items is negative, this will result in a margin credit<sup>5</sup> decreasing the aggregate value of the Base Initial Margin for Options and Unsettled Items.
  - If the Variation Margin for Options and Unsettled Items is positive, this will result in a margin debit increasing the aggregate value of the Base Initial Margin for Options and Unsettled Items.

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<sup>5</sup> For a given account, the margin credit is capped to the Base Initial Margin for Options, Futures and Unsettled Items.



- c) The Margin requirement in respect of each Clearing Member is calculated by aggregating for all accounts the value of (1) the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) and the Variation Margin for Options and Unsettled Items and (2) the following Additional Margins calculated at the Clearing Member level: Additional Margin for Market Liquidity Risk, Additional Margin for Specific Wrong-Way Risk, Additional Margin for Mismatched Settlement Risk, Additional Margin for Intra-Day Variation Margin Risk, Additional Margin for Unpaid Option Premium Exposure Risk, Additional Margin for Banking Holiday Risk, Additional Margin for Variation Margin Delivery Risk, Additional Capital Margin Risk, Additional Margin for Uncovered Risk of Limited Clearing Members and any other Additional Margins as set out in the Rules (other than required pursuant to Rule D-607).

#### VARIATION MARGIN FOR FUTURES

The Variation Margin for Futures (the net value of Gains and Losses) is aggregated at the Clearing Member level.

#### VARIATION MARGIN FOR FIXED INCOME TRANSACTIONS

The Variation Margin Requirement for Fixed Income Transactions is aggregated at the Clearing Member level.

### 1.2 CLEARING FUND REQUIREMENT

Rule A-6 governs the rights and obligations of the Corporation and the Clearing Members, excluding Limited Clearing Members (LCMs), with respect to the Clearing Fund.

The Clearing Fund is a reserve fund put in place by the Corporation to absorb the deficit that may occur upon the default of a Clearing Member and its Affiliates when the suspended Clearing Member's prefunded financial resources do not cover its market exposure.

This fund is structured to mitigate the largest Uncovered Residual Risk under extreme but plausible market conditions of all Clearing Members (excluding Limited Clearing Members) and of their Affiliate(s).

On a monthly basis, the Clearing Fund is reviewed and updated according to the following methodology which considers two specific elements:

- The size of the Clearing Fund is based on the largest Uncovered Residual Risk of all Clearing Members and of their Affiliate(s) (excluding Limited Clearing Members) over the last sixty (60) Business Days. The size is then increased by 15%.

- Each Clearing Member's Clearing Fund Requirement amount is equal to the weight of its respective Base Initial Margin over the last sixty (60) Business Days multiplied by the size of the Clearing Fund. A Clearing Member's contribution is subject to a minimum floor (Base Deposit), which varies according to the Clearing Member's type of activity.

On an intra-month basis, the Corporation monitors and controls the size of the Clearing Fund and may adjust it upward between monthly re-evaluations. If the largest Uncovered Residual Risk exceeds 90% of the size of the Clearing Fund but is inferior to 100% of the size of the Clearing Fund, the size of the Clearing Fund is increased by 15% of the current size. If the largest Uncovered Residual Risk exceeds 100%, the size of the Clearing Fund is updated based on the methodology described above.



## Section 2: Eligible Collateral

As set out in Section 1 of the Risk Manual, every Clearing Member shall be obligated to deposit Margin with the Corporation, as determined by the Corporation. Deposits must be made in the form of eligible collateral, as specified in this section, in an amount sufficient, taking into account the market value and applicable Haircuts.

### 2.1 FORMS OF COLLATERAL

The forms of eligible collateral that may be deposited by or on behalf of a Clearing Member with CDCC, as prescribed in Rule A-6 (Clearing Fund Deposits) and Rule A-7 (Margin requirements), are one or more of the following assets:

- 1) Cash; Canadian dollar (CAD) Cash is the only form of eligible collateral that can be deposited in the Clearing Fund
- 2) Debt Securities
- 3) Valued Securities

CDCC may, on an exceptional and temporary basis at its sole discretion, exclude certain forms of eligible collateral or accept other forms of collateral.

### 2.2 CASH

Cash amounts are accepted in Canadian dollars and a selection of Non-CAD Currencies. CAD Cash is the only form of eligible collateral that can be deposited in the Clearing Fund.

CDCC reviews and publishes the selection of Non-CAD Currencies from time to time, and the Clearing Members are informed of these reviews by written notice.

### 2.3 DEBT SECURITIES

#### 2.3.1 General Considerations

Debt Securities which fulfill certain minimum criteria may be deemed as an eligible form of collateral.

Acceptance of a Debt Security is conditional on the availability of a price from a source that CDCC determines to be acceptable and reliable.

CDCC establishes, reviews and publishes the list of eligible Debt Securities on a regular basis.

Irrespective of the fact that a Debt Security fulfils all eligibility criteria, CDCC will not accept as collateral from or on behalf of a Clearing Member any Debt Security issued or guaranteed by the Clearing Member itself or its Affiliates.

### **2.3.2 Types of Debt Securities**

The Debt Security must be a debt instrument having a fixed and unconditional principal amount.

The coupon rate of the debt instrument must be fixed. Zero coupon bonds are eligible.

Furthermore, real return bonds can be eligible for a specific issuer as determined by CDCC on the list of eligible Debt Securities.

The Debt Security must not have an embedded option or carry a right of conversion into equity securities, with the exception of non-financial calls (i.e. "Canada Call").

Saving Bonds, floating rate notes, stripped coupons and residual securities are excluded.

### **2.3.3 Types of Issuers**

The eligible Debt Securities must be issued or guaranteed by the Government of Canada, by a provincial government or by the United States ("U.S.") Government.

### **2.3.4 Eligible Debt Securities by Issuer**

#### **2.3.4.1 Debt Securities issued by the Government of Canada:**

- Treasury bills, bullet bonds and real return bonds.

#### **2.3.4.2 Debt Securities guaranteed by the Government of Canada:**

- Treasury bills, bullet bonds and Debt Securities issued by Canada Housing Trust.

#### **2.3.4.3 Debt Securities issued by a provincial government:**

- Treasury bills and bullet bonds issued by the governments of Alberta, British Columbia, Manitoba, Ontario and Quebec.

**2.3.4.4 Debt Securities guaranteed by a provincial government:**

- Bullet bonds issued by Financement Quebec, Hydro-Quebec and Ontario Electricity Financial Corporation.

**2.3.4.5 Debt Securities issued by the U.S. Government**

- Treasury bills, notes, bonds, and Treasury inflation-protected securities (TIPS).

**2.3.5 Settlement Procedures**

Debt Securities must be transferable in book-entry form using CDSX of CDS Clearing and Depository Services Inc.

**2.3.6 Currency of Denomination**

Debt Securities must be denominated in Canadian dollars with the exception of Debt Securities issued by the U.S. Government denominated in U.S. dollars.

**2.4 VALUED SECURITIES****2.4.1 General Considerations**

CDCC accepts Valued Securities trading on the Toronto Stock Exchange or the TSX Venture Exchange.

Irrespective of the fact that a Valued Security fulfils all eligibility criteria, CDCC will not accept as collateral from or on behalf of a Clearing Member any Valued Security issued or guaranteed by the Clearing Member itself or its Affiliates.

No value will be recognized for a Valued Security whose closing price is below \$10 per share.

**2.4.2 Settlement Procedures**

Valued Securities must be transferable in book-entry form using CDSX of CDS Clearing and Depository Services Inc.

**2.4.3 Currency of Denomination**

Valued Securities must be denominated in Canadian dollars.

## 2.5 RISK CONTROL MEASURES

### 2.5.1 General Considerations

The CDCC collateral framework takes a conservative approach to manage the forms of eligible collateral accepted. The framework includes, but is not limited to, risk limits and calculation of Haircuts that apply to the different forms of eligible collateral.

### 2.5.2 Risk Limits

#### 2.5.2.1 Limits at the Clearing Member Level

- Except for the Variation Margin account, for each acceptable Government Debt Security, excluding Treasury bills, a concentration limit equal to \$250 million or 10% of the total issue outstanding, whichever is less, is applied to each Clearing Member.
- Valued Securities issued or guaranteed by the Clearing Member or its Affiliates are not eligible.
- Valued Securities issued by the TMX Group are not eligible.

#### 2.5.2.2 Limit on the Clearing Fund Account

For each Clearing Member, for all of its accounts combined, 100% of the Clearing Fund Requirements must be covered by CAD Cash.

#### 2.5.2.3 Limit on the Margin Requirements<sup>6</sup>

For each Clearing Member, for all of its accounts combined, at least 25% of the Margin requirements must be covered by CAD Cash, acceptable Treasury bills and bonds issued or guaranteed by the Government of Canada or any combination thereof valued after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 40% of the Margin requirements may be covered by Debt Securities issued by the United States of America Federal Government after the application of Haircuts.

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<sup>6</sup> This excludes the Net Variation Margin Requirement.

For each Clearing Member, for all of its accounts combined, no more than 50% of the Margin requirements may be covered by provincial issued or guaranteed Debt Securities after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Alberta after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of British Columbia after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Manitoba after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 30% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Ontario after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 30% of the Margin requirements may be covered by Debt Securities issued or guaranteed by the province of Quebec after the application of Haircuts.

For each Clearing Member, for all of its accounts combined no more than 15% of the Margin requirements may be covered by Valued Securities after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, no more than 5% of the Margin requirements may be covered by any one Valued Security after the application of Haircuts.

For each Clearing Member, for all of its accounts combined, risk limits in proportion of the Margin requirements may be covered by Non-CAD Currencies after the application of Haircuts. CDCC reviews and publishes risk limits attributable to Non-CAD Currencies from time to time, and the Clearing Members are informed of these reviews by written notice.



#### 2.5.2.4 Limit on the Variation Margin Account

For each Clearing Member, for all of its accounts combined, 100% of the Net Variation Margin Requirement must be covered by acceptable Treasury bills and bonds issued or guaranteed by the Government of Canada, Government of Alberta, Government of British Columbia, Government of Ontario and Government of Quebec or any combination thereof after the application of Haircuts.

CDCC shall, on an exceptional basis, acting reasonably, accept CAD cash or other securities as collateral to cover the Net Variation Margin Requirement.

#### 2.5.3 Limits at CDCC Level

For each acceptable Valued Security, a concentration limit of 5% of the free float applies at CDCC level.

### 2.6 HAIRCUTS

#### 2.6.1 Haircuts for Non-CAD Currencies

The Corporation calculates the Haircuts based on historical daily returns of the foreign exchange risks. The volatility estimator uses the exponentially weighted moving average ("EWMA") approach as defined in Appendix 6.2, and the assumption that the Non-CAD currency can be liquidated at a reasonable price in "n" days ("n" is determined according to the applicable basket of currencies and prevailing market conditions).

In addition, the final Haircut applied for Non-CAD Currencies is calculated as the maximum daily haircut computed over the last 5 years and over the applicable basket of currencies considered by the Corporation.

Once the quantitative analysis is performed, CDCC reserves the right to increase the Haircuts based on qualitative criteria, acting reasonably.

#### 2.6.2 Haircuts for Government Securities

The Corporation calculates the Haircuts based on any of the following criteria:

- Valuation of the market, credit, liquidity and foreign exchange risks based on historical daily returns;
- The volatility estimator uses the exponentially weighted moving average ("EWMA") approach as defined in Appendix 6.5, and the assumption that the

bond can be liquidated at a reasonable price in “n” days. (“n” is determined according to the type of products and prevailing market conditions). In addition, a floor for the EWMA volatility estimator is calculated as the 25<sup>th</sup> percentile of a daily EWMA volatility estimator observed over the last 10 years;

- Liquidity risk valued according to the bid-ask spread of the issues using the same EWMA volatility estimator and the floor (if this spread is unavailable, the liquidation window will be expanded and will depend on market conditions);
- Bonds of the same issuer and comparable maturities.

Once the quantitative analysis is performed, CDCC reserves the right to increase the Haircuts based on qualitative criteria, such as:

- Comparative analysis of CDCC’s Haircuts in relation to the Haircuts of the Bank of Canada;
- Comparative analysis of CDCC’s Haircuts in relation to the Haircuts of other clearing houses;
- The congruence of the different Haircuts to the credit rating spreads of the different issuers; and
- Any other factor considered relevant by CDCC, acting reasonably.

#### **2.6.3 The Haircuts for Valued Securities**

A Haircut of 50% is applied to all Valued Securities pledged against the total Margin requirement for all accounts combined.

#### **2.6.4 Haircuts Policy**

CDCC reviews and publishes the Haircuts from time to time, and the Clearing Members are informed of these reviews by written notice.



## Risk Manual

## Section 3: Monitoring Program

### 3.1 BACKTESTING

The Corporation monitors the daily performance of the models through the backtesting and sensitivity analysis. The backtesting is used as a tool to validate the models, but it is not limited to model validation.

In addition, a Clearing Member's portfolio is backtested on a daily basis and the results are monitored by the Corporation.

### 3.2 STRESS TESTING

The CDCC stress testing management framework takes a conservative approach to create and revise stress tests scenarios. The Corporation uses different historical and theoretical stress scenarios, each of them designed to test different relevant Risk Factors. The framework includes, but is not limited to, the assessment of the new scenarios and the monitoring of the Risk Factors and stress test scenarios and correction measures if the daily results are not satisfactory.

The stress testing management framework is revised by CDCC from time to time.

### 3.3 CLEARING MEMBERS CREDIT RISK MONITORING

CDCC performs a qualitative analysis of the financial statements of each Clearing Member. CDCC has defined specific thresholds to analyze the profitability, the regulatory margin and capital obligations, the liquidity and the capital level of each Clearing Member. As a result of its analysis, the Corporation may require such additional information from its Clearing Members as may be reasonably necessary. On the basis of the above analysis, the Corporation will determine if it is necessary to take any additional actions.



## Section 4: Contract Adjustment

Section A-902 of the Rules prescribes the cases in which a contract adjustment may be made.

The Corporation is responsible for monitoring and identifying the corporate events that may result in a contract adjustment. It interprets the information and communicates it to the Adjustment Committee as soon as possible. The Adjustment Committee acts in accordance with the provisions of Rule A-9.

A meeting of the Adjustment Committee is called by the Corporation, whenever circumstances require. The Adjustment Committee is responsible for preparing the draft notices to the Clearing Members which, once approved by the Adjustment Committee members, are published to the attention of the Clearing Members and the market participants.



## Risk Manual

## Section 5: Acceptability of Underlying Interests

### 5.1 ACCEPTABLE UNDERLYING INTERESTS OF SECURITIES OPTIONS

- Section B-603 of the Rules sets out the eligibility criteria for Securities Options.
- Section B-604 of the Rules sets out the ineligibility criteria for Securities Options.
- Section B-605 of the Rules sets out the eligibility criteria for ETF Securities as Underlying Interests of Options.
- Section B-606 of the Rules sets out the ineligibility criteria for ETF Securities as Underlying Interests of Options.

CDCC reviews and publishes, from time to time, the eligibility threshold and ineligibility threshold in terms of Value of Available Public Float and volume (expressed as an average daily North American Volume of the last 20 Business Days) for clearing Securities Options.

### 5.2 ACCEPTABLE UNDERLYING INTERESTS OF SHARE FUTURES

- Section C-1503 of the Rules sets out the eligibility criteria for Share Futures.
- Section C-1504 of the Rules sets out the ineligibility criteria for Share Futures.

CDCC reviews and publishes, from time to time, the eligibility threshold and ineligibility threshold in terms of Value of Available Public Float and volume (expressed as an average daily North American Volume of the last 20 Business Days) for clearing Share Futures.

### 5.3 ACCEPTABLE UNDERLYING INTERESTS OF OTCI SECURITIES OPTIONS

- Section D-104 of the Rules sets out the acceptance criteria for OTCI Securities Options.

CDCC reviews and publishes, from time to time, on its website a list of Acceptable Underlying Interests for clearing OTCI Securities Options.

Between two publications of the list of Acceptable Underlying Interests, a Clearing Member who wishes to clear OTCI Securities Options for which an Underlying Interest is not included on the list must obtain the Corporation's prior approval. The Underlying Interest must at least meet the acceptance criteria prescribed in Section D-104 of the Rules.

### 5.4 ACCEPTABLE UNDERLYING INTERESTS OF CASH BUY OR SELL TRADES

For the application of Sections D-104 and D-603 of the Rules, Securities are acceptable for Cash Buy or Sell Trades clearing if they meet the following criteria:



- The issuer must be eligible, which includes the following issues:
- Bonds and Treasury bills issued by the Government of Canada, including real return issues;
- Canada Mortgage and Housing Corporation debt securities;
- Bonds issued by Business Development Bank of Canada;
- Bonds issued by Export Development Canada;
- Bonds issued by Farm Credit Canada;
- Bonds issued by Canada Post; and
- Bonds issued by certain provincial governments and provincial Crown corporations determined as acceptable by CDCC, excluding real return bonds, zero coupon bonds, and bonds with a maturity of less than one year.
  - The bonds must be repayable at maturity;
  - The bonds must be denominated in Canadian dollars;
  - The coupon type must be fixed, adjusted for the inflation or zero (Treasury bills are eligible);
  - The net amount outstanding<sup>7</sup> must be greater than or equal to \$250 million;
  - The bonds' prices must be issued by a source that is acceptable to the Corporation.

## 5.5 ACCEPTABLE UNDERLYING INTERESTS OF REPURCHASE TRANSACTIONS

For the application of the provisions of Sections D-104 and D-603 of the Rules, Securities are eligible for clearing of Repurchase Transactions if they meet the following criteria:

- The Underlying Interest must be an Acceptable Underlying Interest of Cash Buy or Sell Trades;
- The Purchase Date of the Repurchase Transaction must be no earlier than the Novation Date;
- The Repurchase Date of the Repurchase Transaction must not be more than 365 days later than the Purchase Date of the Repurchase Transaction and must be no later than the maturity date of the Acceptable Security.

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<sup>7</sup> The net amount outstanding is defined as the outstanding amount issued on the market minus the stripped coupon bonds and issuer repurchases.



## Risk Manual

## Section 6: Appendix

### 6.1 BASE INITIAL MARGIN CALCULATION FOR OPTIONS, FUTURES AND UNSETTLED ITEMS<sup>8</sup>

For greater certainty, this sections only applies to Options, Futures and Unsettled Items.

To calculate the Base Initial Margin the risk methodology is based on the PSR and the VSR which are then converted into the Scanning Risk parameter. The Scanning Risk parameter represents the difference between the most unfavourable projected liquidation value and the initial reference price<sup>9</sup>. The most unfavourable projected liquidation value amongst the Risk Array is obtained by varying the values of the Underlying Interest and implied volatility according to several scenarios representing adverse changes in normal market conditions. The projected liquidation values are obtained using specific valuation models such as Black 76, Black-Scholes, Binomial and others.

The Scanning Risk is calculated at the Combined Commodity level and is denominated in the same currency as the contract. For contracts belonging to the same Combined Commodity, the Risk Array results are added up for all contracts under the same scenario. The highest loss represents the Scanning Risk.

The other variables influencing the value of the Base Initial Margin are the Intra-Commodity, the Inter-Commodity and the Short Option Minimum. The following table summarizes the variables used in the calculation.

Input variables to calculate the Base Initial Margin	Options	Futures	Unsettled Items
Scanning Risk	●	●	●
Intra-Commodity		●	
Inter-Commodity <sup>10</sup>		●	

<sup>8</sup> Unsettled Items resulting of a physical delivery of Government of Canada Bond Futures are margined under the VaR methodology.

<sup>9</sup> The initial reference price is the market price or the theoretical price derived from market observations.

<sup>10</sup> Not applicable for Share Futures.

Short Option Minimum	●		
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### 6.1.1 Scanning Risk

The Scanning Risk parameter represents the difference between the most unfavourable projected liquidation value and the initial reference price. The most unfavourable projected liquidation value amongst the Risk Array is obtained by varying the values of the Underlying Interest and implied volatility according to several scenarios representing adverse changes in normal market conditions. The table at the end of this section shows all the risk scenarios. The projected liquidation values are obtained using specific valuation models such as Black 76, Black-Scholes, Binomial and others. If the largest loss is negative, the Scanning Risk is set to zero. The Scanning Risk is then compared to the Short Option Minimum. This amount is required if the Short Option Minimum is higher than the result of the Risk Arrays.

#### 6.1.1.1 Price Scan Range

The term PSR represents the potential variation of the contract value and it is calculated through the following formula:

$$PSR = Price \times MI \times Contract\ Size$$

The methodology for the MI is detailed in Section 6.5.

#### 6.1.1.2 Volatility Scan Range

The term VSR represents the potential variation of the implied volatility and it is calculated through the following formula:

$$VSR = Volatility\ Shock \times \sqrt{n}$$

Where 'n' is the MPOR, and 'Volatility Shock' represents the 95% confidence level of the historical daily fluctuations for the series volatility over a one year look-back period. The daily fluctuations are scaled up with the use of MPOR. VSR values are subject to a floor value and a cap value.

Risk Scenarios	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Underlying Price Variation *	0	0	1/3	1/3	-1/3	-1/3	2/3	2/3	-2/3	-2/3	1	1	-1	-1	2	-2
Volatility Variation *	1	-1	1	-1	1	-1	1	-1	1	-1	1	-1	1	-1	0	0
Weight Fraction Considered	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	35 %	35 %

\* Expressed in scan range

The MI, MPOR and Volatility Shocks values are updated by the Corporation from time to time.

### 6.1.2 Intra-Commodity

Long positions on Futures maturing in one month are automatically matched with short positions on Futures maturing in another month. The resulting Base Initial Margin on these two Futures belonging to the same Combined Commodity, could be lower than the real risk associated with the combination of the two contracts. In order to cover this inter-month spread risk, a charge is included in the Base Initial Margin.

For the Futures, the Intra-Commodity which is an additional dollar amount charge applied to each combination of two different Futures, is determined as follows:

$$Intra - Commodity = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of MPOR, 'α' is equal to the confidence value equivalent to 99.87% (three standard deviations) of the cumulative normal distribution (applicable to all products except for the Three-Month Canadian Bankers' Acceptance Futures (BAX) and CORRA Futures (COA & CRA)) or equal to the confidence value equivalent to 99% of the cumulative student's t-distribution with 4 degrees of freedom (applicable to the BAX and CORRA Futures). 'σ' is the volatility estimator of the Futures combination's daily profit and loss over the reference period and is computed using the EWMA approach. Further details on the EWMA are described in Appendix 6.5.

In addition, CDCC considers a floor for the EWMA volatility estimator. The level of such floor is calculated as an average of daily EWMA volatility estimator observed

over the last 10 years. The EWMA volatility estimator that will be used to calculate the Intra-Commodity cannot be lower than the calculated floor.

With respect to the BAX and CORRA Futures (COA & CRA), CDCC calculates the Intra-Commodity for all combinations of spreads and butterfly-strategies and applies a same charge for a same group of combinations with close maturities. If multiple Intra-Commodity are defined, the Corporation will prioritize the ones providing the lowest Base Initial Margin.

The combinations and the spread priorities for the Intra-Commodity are updated by CDCC from time to time.

#### **6.1.3 Inter-Commodity**

The Corporation may consider the correlation that exists between different Futures when calculating the Base Initial Margin. The Corporation will grant a credit according to the historical correlation of the returns of the two Futures. If multiple Inter-Commodity are defined, the Corporation will prioritize the ones with the highest correlation.

The Inter-Commodity and the spread priorities are updated by CDCC from time to time.

### **6.2 BASE INITIAL MARGIN CALCULATION FOR FIXED INCOME TRANSACTIONS**

For greater certainty, this section only applies to Fixed Income Transactions.

To calculate the Base Initial Margin, the VaR methodology is based on Historical Scenarios for all relevant Risk Factors. The Historical Scenarios consist of a set of scenarios for a Risk Factor over a relevant historical period that represents an hypothetical market observation movement (shocked market observation based on market history) reasonably likely to occur, from the current situation to a specific point in time in the future.

For Fixed Income Transactions, the Risk Factors are the Zero Curves. On any given Business Day, the shocks derived from the Historical Scenarios are applied to the initial reference market inputs values. The difference between the initial reference price and the shocked historical price represents an Historical P&L Scenario. The initial reference price and historical shocked price are derived respectively from the initial reference Zero Curves and the shocked Zeros Curve using a full revaluation method.

The Historical P&L Scenarios are calculated at the VaR Risk Group level and are denominated in the same currency as the Fixed Income Transactions. For Fixed Income Transactions belonging to the same VaR Risk Group, the Historical P&L Scenarios results are added up for Fixed Income Transactions.

Lastly, the Historical P&L Scenarios are ranked to derive the Historical P&L Distribution that is used to calculate the average loss of the portfolio using the Expected Shortfall method. A Margin Buffer Multiplier is then applied to the Expected Shortfall value to obtain the Base Initial Margin.

The main steps to calculate the Base Initial Margin are described in the section below.

### 6.2.1 Historical Filtered Scenarios

The Historical Filtered Scenarios are generated using the initial reference Risk Factors value and historical observations of different tenors on the Zero Curves.

The shocked Risk Factors are calculated using the following formula:

$$y'_{t,\tau} = y_{T,\tau}(1 + R_{t,\tau}c_{t,\tau})$$

Where  $c$  is the scaling factor for the volatility scaling adjustment and  $R$  is the daily relative market return over the Margin Period of Risk 'n'. CDCC uses a look-back period of 5 years.

The scaling factor formula at time  $t$  and for a given tenors is calculated using the following formula:

$$c_{t,\tau} = \text{Max}\left(\frac{\sigma_{T,\tau} + \sigma_{t,\tau}}{2 \sigma_{t,\tau}}, \text{Min SF}\right)$$

Where  $\sigma$  is the EWMA volatility forecast and Min SF is the minimal scaling factor.

The implemented formula for the EWMA volatility forecast is:

$$\sigma_{t,\tau}^2 = (1 - \lambda)R_{t-1,\tau}^2 + \lambda\sigma_{t-1,\tau}^2$$

Where  $R$  is the relative market return over the Margin Period of Risk 'n' and  $\lambda$  is the decay factor. CDCC uses  $\lambda = 0.99$ . The Min SF is updated by CDCC from time to time.

### 6.2.2 Historical P&L Scenario generation

The Historical P&L Scenarios are valued by calculating the difference between the shocked prices of Fixed Income Transactions under an Historical Filtered Scenario and the initial reference prices. The Historical P&L Scenarios results are added up for all Fixed Income Transactions within a VaR Risk Group.

The initial reference prices are calculated using a full revaluation method and the initial reference Risk Factors. The shocked prices are calculated using a full revaluation method and the shocked Risk Factors.

#### 6.2.3 Expected Shortfall

For each VaR Risk Group, the Historical P&L is sorted from largest loss to largest profit to construct the Historical P&L Distribution. Using a confidence value equivalent to 99.62% and the Historical P&L Distribution, the Expected Shortfall is determined by averaging the losses exceeding the confidence value.

#### 6.2.4 Margin Buffer Multiplier

The Base Initial Margin for each VaR Risk Group is obtained by applying a Margin Buffer Multiplier to the Expected Shortfall value.

The Margin Buffer Multiplier is based on the ratio of the average 10 years volatility and the previous month volatility. CDCC will change the Margin Buffer Multiplier level if it is deemed stable for at least 3 consecutive months. The ratio is then rounded to the nearest 0.25. A floor of 1 and a cap value of 1.5 are applied.

The Margin Buffer Multiplier is updated by CDCC from time to time.

### 6.3 RECALIBRATION OF THE EFFECTIVE RATIO

The Base Initial Margin requirement of each Limited Clearing Member is affected by a multiplication factor (the "Effective Ratio").

**Objective:** The Recalibration Methodology (as defined below) ensures that the Effective Ratio remains continuously consistent with the ratio of the total Clearing Fund Requirements on the total Base Initial Margin for all Clearing Members (excluding Limited Clearing Members) and addresses the permanence and persistence of a change.

**Trigger:** The Corporation shall review the Effective Ratio annually, and may review the Effective Ratio at any time following a change to the CDCC risk model which is required in order to comply on an ongoing basis with the regulatory requirements applicable to CDCC ("Risk Model Change"). Following such review, CDCC may recalibrate the Effective Ratio in accordance with the methodology set forth below (the "Recalibration Methodology"). For further clarity, a Risk Model Change captures both changes required by CDCC to comply on an ongoing basis with its current regulatory requirements and changes required to comply on an ongoing basis with applicable regulatory requirements.



### 6.3.1 Recalibration Methodology

The Effective Ratio ("ER") shall be re-calibrated if the value of the ER, at the time of the calculation, is not within the range determined by the UB and LB (as defined below):

- Where the current ER is within one plus the Boundaries (defined below) applicable to a given period, no recalibration will be made to the Effective Ratio.
  - The **Boundaries** refer to the upper limit (UB) and lower limit (LB) which are respectively the highest and lowest Daily Ratios over a specific period.
  - The **Daily Ratio** is determined, for any Business Day, by dividing the total amount of Clearing Fund Requirements on that Business Day by the aggregate amount of the Base Initial Margin requirements of all Clearing Members (other than Limited Clearing Members) on the same Business Day.
- Where the current ER is outside one plus the Boundaries applicable to a given period, this will constitute a recalibration event (a "Recalibration Event"), and the ER shall be recalibrated in the following manner:
  - The Boundaries of Effective Ratio shall be rounded up or down to the nearest +/- 0.1 increment.
  - If  $ER > 1 + UB$ , the new Effective Ratio shall be equal to the UB.
  - If  $ER < 1 + LB$ , the new Effective Ratio shall be equal to the LB.
  - If  $ER \leq 1 + UB$  and  $ER \geq 1 + LB$ , there is no Recalibration Event.
- Annually, the Corporation shall determine the upper limit (UB) and lower limit (LB) parameters in accordance with the following:
  - At the time of the calculation, the UB and LB are determined by taking respectively the highest and lowest Daily Ratios over the prior calendar year, in accordance with the following formulas:

$$Lower\ Limit\ (LB) = \left( \frac{Total\ CF_t}{Total\ Base\ IM_t} \right)$$

$$Upper\ Limit\ (UB) = \left( \frac{Total\ CF_t}{Total\ Base\ IM_t} \right)$$

Where :

- *Total CF<sub>t</sub>*: total amount of Clearing Fund Requirements on the Business Day t.
- *Total Base IM<sub>t</sub>*: the aggregate amount of the Base Initial Margin requirements of all Clearing Members (other than Limited Clearing Members) on the Business Day.
- Min: lowest value from the set of Daily Ratios calculated for each Business Day t in the prior calendar year.
- Max: highest value from the set of Daily Ratios calculated for each Business Day t in the prior calendar year.
- Following a Risk Model Change, the Corporation shall determine the upper limit (UB) and lower limit (LB) parameters in accordance with the following:
  - At the time of the calculation, the UB and LB are determined by taking respectively the highest and lowest Daily Ratios, by calculating the Daily Ratio over the prior 12 month-period with the use of simulated impacts to Base Initial Margin and Clearing Fund as they would have been observed had the Risk Model Change already been in place:

$$\text{Lower Limit (LB)} = \left( \frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

$$\text{Upper Limit (UB)} = \left( \frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

Where :

- *Total CF<sub>t</sub>*: total amount of Clearing Fund Requirements on the Business Day t.
- *Total Base IM<sub>t</sub>*: the aggregate amount of the Base Initial Margin requirements of all Clearing Members (other than Limited Clearing Members) on the Business Day t.
- Min: lowest value from the set of Daily Ratios calculated for each Business Day t in the prior 12-month period.
- Max: highest value from the set of Daily Ratios calculated for each Business Day t in the prior 12-month period.

- For greater certainty, for the purposes of the calculating a Daily Ratio, the term "Base Initial Margin" excludes any Additional Margins.

#### **6.3.2 Recalibration Governance**

- On a quarterly basis, CDCC will report to Risk Management Advisory Committee (RMAC) for information purposes the Boundaries calculated over the preceding quarter.
- On an annual basis, CDCC will report to RMAC the final Boundaries applicable over the preceding calendar year.
- Following a Risk Model Change CDCC will promptly report to RMAC on the impact of the Risk Model Change on the Boundaries, including whether it leads to a Recalibration Event, and review the Risk Model Change in accordance with the RMAC standard governance process.
- Annually, or subsequent to any Risk Model Change, each Limited Clearing Member will be notified in writing of the new ER, where applicable.

#### **6.3.3 Entry in force**

- Annually, or as soon as practicable upon the occurrence of a Recalibration Event subsequent to a Risk Model Change, the Corporation shall notify in writing each Limited Clearing Member of the new ER applicable to it.
- Subject to Section 6.2.4 below, new ERs shall become effective one calendar quarter after the date of the notification to each Limited Clearing Member of the new ER, and shall remain in force until a revised ER notified to the Limited Clearing Member either as a result of the ER annual review or subsequent to a Risk Model Change enters into force, in accordance with this section.

#### **6.3.4 Recalibration Additional Information**

- If the Corporation notifies an Limited Clearing Member of the new ER applicable to it, the Corporation shall provide the Limited Clearing Member with the data supporting the determination that a Recalibration Event has occurred.
- Within 10 Business Days of receiving notice of the new ER applicable to it, an Limited Clearing Member may request additional information regarding the Recalibration.

- Upon receiving such request and in any event, within 5 Business Days following such request, the Corporation will provide additional information respecting the Recalibration Event.
- A Limited Clearing Member may dispute a Recalibration Event by notifying the Corporation that it requires it to be discussed at the next following quarterly RMAC meeting.
- If a Limited Clearing Member has notified the Corporation and RMAC that it disputes a Recalibration Event and the Recalibration Event has been discussed at the subsequent quarterly RMAC meeting, unless a revision of the ER has been agreed, the new ER shall become effective one calendar quarter after the date of the initial notification by the Corporation of the revised ER to the Limited Clearing Member.

#### 6.4 OTCI SECURITIES OPTIONS

In order to evaluate the OTCI Option Price, the implied volatility of the contract must be derived. Two different methodologies are used depending on whether the Option is listed on an Exchange or not.

If the Option is exchange-traded, the Corporation uses the Option's data (the entire Option series for one expiry month) and builds a volatility curve using a cubic spline function. After building the volatility curve, the Corporation determines the implied volatility that corresponds exactly to the strike price of the Option to be assessed. If the expiry date of the Option does not correspond to the ones of the listed series, the Corporation builds two volatility curves, one using the Option series with an expiry date that is right after the one of the assessed Option and one using the series of Options with an expiry date that is right before the one of the assessed Option.

Then, the implied volatility that corresponds to the strike price of the Option to be assessed is determined on each curve. Finally, a linear interpolation is done to determine the implied volatility that corresponds to the strike and to the expiry date of the Option to be assessed. However, if the expiry date of the Option to be assessed is before (after) the first (last) expiry date of the listed Options series, the Corporation uses the volatilities of the volatility curve of the first (last) expiry date of the listed Option series.

If the Option is not listed and no data is available for it, the Corporation uses the yearly historical volatility of the Option's Underlying Interest price as a proxy for the implied volatility.

## 6.5 MARGIN INTERVAL

The MI is calculated using the following formula:

$$MI = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the MPOR, ' $\alpha$ ' is equal to the confidence level equivalent to 99.87% (three standard deviations) of the cumulative normal distribution (applicable to all products except for the BAX, the S&P/MX International Cannabis Index Futures and CORRA Futures) or equal to the confidence value equivalent to 99% of the cumulative student's t-distribution with 4 degrees of freedom (applicable to the BAX, the S&P/MX International Cannabis Index Futures and CORRA Futures). ' $\sigma$ ' is the volatility estimator of the contract's returns and is computed using an exponentially weighted moving average (EWMA) approach.

The implemented formula for the estimator at any time  $t$  is:

$$IM = \alpha \times \sqrt{n} \times \sigma$$

$$\sigma_t = \sqrt{\frac{(1 - \lambda) \sum_{i=1}^{260} \lambda^{i-1} (R_{t-i} - \bar{R})^2}{(1 - \lambda^{260})}}$$

Where  $R$  is the daily price returns of the Underlying Interests for Options and Share Futures and the daily price returns of the Futures prices for Futures (excluding Share Futures),  $\bar{R}$  is the mean return over the specified period and  $\lambda$  is the decay factor. CDCC uses  $\lambda = 0.99$ .

In addition, CDCC considers a floor for the EWMA volatility estimator defined above. The level of such floor is calculated as an average of daily EWMA volatility estimator observed over the last 10 years. The volatility estimator that will be used to calculate the MI cannot be lower than the calculated floor.



## DEFAULT MANUAL

~~APRIL 6, 2018~~

[...]

### 3.5 LIQUIDITY MANAGEMENT

While not a source of capital available for the offset of losses, the Corporation has available an array of liquidity facilities, which it may, at its discretion, call upon to assist with the funding of its loss mitigation activities. In the event of a default, the Corporation must make a determination as to how to deploy these resources. Included among its alternatives are:

- Drawing upon the Corporation's commercial bank liquidity lines, in whole or in part.
- Raising liquidity through outright sales and/or Repurchase Transactions involving Securities of the defaulting Clearing Member.
- Raising liquidity through the sale of non-Cad currencies pledged by the defaulting Clearing member
- Raising liquidity through the exercise of its rights of re-pledging/re-hypothecation of suspended Clearing Member's Margin Deposits (including without limitation Margin and Clearing Fund deposits).
- Raising liquidity through the exercise of its rights of re-pledging/re-hypothecation of surviving Clearing Members' Clearing Fund Requirements.

[...]



## **DEFAULT MANUAL**



[...]

### 3.5 LIQUIDITY MANAGEMENT

While not a source of capital available for the offset of losses, the Corporation has available an array of liquidity facilities, which it may, at its discretion, call upon to assist with the funding of its loss mitigation activities. In the event of a default, the Corporation must make a determination as to how to deploy these resources. Included among its alternatives are:

- Drawing upon the Corporation's commercial bank liquidity lines, in whole or in part.
- Raising liquidity through outright sales and/or Repurchase Transactions involving Securities of the defaulting Clearing Member.
- Raising liquidity through the sale of non-Cad currencies pledged by the defaulting Clearing member
- Raising liquidity through the exercise of its rights of re-pledging/re-hypothecation of suspended Clearing Member's Margin Deposits (including without limitation Margin and Clearing Fund deposits).
- Raising liquidity through the exercise of its rights of re-pledging/re-hypothecation of surviving Clearing Members' Clearing Fund Requirements.

[...]