NOTICE TO MEMBERS

No. 2015 – 056
May 8, 2015

SELF-CERTIFICATION

AMENDMENTS TO THE OPERATIONS MANUAL AND RISK MANUAL OF CDCC

ADDITIONAL MARGIN FOR SPECIFIC WRONG-WAY RISK

On July 14, 2014, the Board of Directors of the Canadian Derivatives Clearing Corporation (CDCC) approved amendments to the Operations Manual and Risk Manual of CDCC. CDCC wishes to inform the Clearing Members that this amendments have been self-certified pursuant to the self-certification process set forth in the *Derivatives Act* (R.S.Q., c I-14.01) and approved by the Ontario Securities Commission in accordance with the "Rule Change Requiring Approval in Ontario" process.

The purpose of the proposed amendments is to address the specific wrong-way risk identified by CDCC.

You will find attached hereto the amendments to be incorporated into the version of the Operations Manual and Risk Manual of CDCC that will be made available on the CDCC website at www.cdcc.ca as of May 8, 2015 and set to come into force on May 11, 2015.

If you have any questions or concerns regarding this notice, please contact CDCC's Corporate Operations department or direct your e-mail inquiries to cdcc-ops@cdcc.ca.

Glenn Goucher
President and Chief Clearing Officer

CANADIAN DERIVATIVES CLEARING CORPORATION
CORPORATION CANADIENNE DE COMPENSATION DE PRODUITS DÉRIVÉS

OPERATIONS MANUAL

VERSION OF ~~JUNE 13~~, 2014

DEFINITIONS

“Acceptable Collateral” – Margin Deposits by Clearing Members in a form that is acceptable to CDCC as set forth in Section A-709 of the Rules.

“Assignee” – a Clearing Member that holds a Short Position in an Options contract or a Long Position in a Futures contract and which is assigned by CDCC the obligation to make delivery of the Underlying Interest, resulting from the submission of an Exercise Notice or a Tender Notice by another Clearing Member (referred to as Exerciser or Tenderer) holding a Long Position in the relevant Series of Options or a Short Position in the relevant Series of Futures.

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

“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.

“Difference Fund” – any and all deposits from a Clearing Member to CDCC as additional Margin, in accordance with Sections A-702, A-705, A-710, B-412, C-303, C-517 or D-307 of the Rules, or otherwise as set forth in Section 8-2 hereof.

“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 with respect of which the Open Leg has not settled yet at the time of the relevant report.

“FTP Downloads” – Clearing Members’ 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.

“Fixed Income Mark-to-Market Amounts” – any and all Net MTM Repo Rate Payments, Net OCF MTM Payments and Net MTM Reversal Requirements, as such terms are defined in Section D-601 of the Rules.

"Mini Futures Contract" – a Future that has the same Underlying Interest as a Standard Futures Contract but having a Unit of Trading that is a ratio of the Standard Futures 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.

"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, and in all cases that create or increase the Clearing Member's Open Interest.

"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.*

"Position Transfer" – this is the CDCC Clearing Application function to move a position from one Clearing Member to another.

"Production Schedule" – sum of time lines that are followed by CDCC, as set forth in Section 2 of this Operations Manual.

"Request for Standard vs Mini Offset" – the request by a Clearing Member, in such form as prescribed by CDCC, to offset one (1) or more Long Position(s) on a Standard Futures Contract against the equivalent number of Short Positions on the corresponding Mini Futures Contract (totalling the same quantity of the Underlying Interest in accordance with the ratio prescribed in the Contract Specifications of the Mini Futures 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 with 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.

"Specific Wrong-Way Risk" – a Specific Wrong-Way Risk arises where an exposure to a counterparty is highly likely to increase when the credit worthiness of that counterparty is deteriorating.

"Standard Futures Contract" – a Future in relation to which a Mini Futures 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 Items**" – any delivery of the Underlying Interest of an Option that has not been settled at the Central Securities Depository.

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

CLEARING MEMBER SECURITY OFFICER

DIFFERENCE FUND

The Difference Fund is Margin Deposits held by CDCC as discretionary margin, such as: (1) Unsettled Items Margin, (2) Daily Capital Margin Monitoring, (3) Advance calls for settlement of losses, (4) OTCI Additional Margin, ~~and~~ (5) Intra-Day Margin, and (6) Specific Wrong-Way Risk for Unsettled Item. CDCC accepts Deposits to the Difference Fund in the forms of Margin set forth in Section A-709 of the Rules, in the proportions specified therein.

(1) Unsettled Items Margin

Security Funds, as such term is defined in Sections B-401, C-501 and D-301 of the Rules, corresponding to an amount equal to not less than 105% of the market value of the Underlying Interest which a Clearing Member has failed to timely deliver, in accordance with Sections B-412, C-517 and D-307 respectively of the Rules.

(2) Daily Capital Margin Monitoring

The amount by which the Margin requirements of a Clearing Member exceeds its capital, in accordance with Section A-710 of the Rules.

(3) Advance Calls for Settlement of Losses

An amount that CDCC estimates will be needed to meet losses resulting from particular marked conditions or price fluctuations, in accordance with Section C-303 of the Rules.

(4) OTCI Additional Margin

An amount representing the premium value collected from the Buyer before an OTCI Option is confirmed, which amount shall be available for withdrawal the morning after the Transaction has been processed, in accordance with Section D-107 of the Rules.

(5) Intra-Day Margin

Additional margin may be requested from a Clearing Member, at CDCC's sole discretion at any time and from time to time as it deems appropriate, due to some adverse change in the market of a given Underlying Interest or in the financial position of the Clearing Member, in accordance with Section A-705 of the Rules.

(6) Specific Wrong-Way Risk for an Unsettled Item

Additional margin may be requested from a Clearing Member, at CDCC's sole discretion, at the expiration of an Option position subject to Specific Wrong-Way Risk. For Specific Wrong-Way Risk for Unsettled Items, CDCC may charge the full strike value amount of the Option position.

Deposits, Withdrawals, Substitutions

Deposits, withdrawals and substitutions of assets (other than cash) in the Difference Fund are made in the same manner and subject to the same deadlines as Margin Fund deposits, withdrawals and substitutions of assets (other than cash), in accordance with Section 2 of this Operations Manual.

Note:
Information with respect to the Margin Fund is to be found in the Risk Manual, Schedule A of this Operations Manual.

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Risk Manual

OTCI TRANSACTIONS FOR WHICH THE UNDERLYING INTEREST IS A SECURITY

The Initial Margin calculation process for OTCI Transactions for which the Underlying Interest is a Security is the same as for listed options, except that the Corporation uses a theoretical price calculated using an in-house program, instead of the contractual option price.

Theoretical Price Calculation

The Corporation uses the Barone-Adesi and Whaley (BAW) model to evaluate the Options that have an American style and the Black and Scholes (BS) model to evaluate the Options that have a European style. In order to evaluate the Option price, we need to determine the implied volatility to be used. For this, two different methodologies are used depending whether the Option is an Exchange traded Option.

If the Option contract is an Exchange traded Option, the Corporation uses the Option's data (the entire Option series for one expiry month) available at the Exchange and builds a Smile Volatility Curve using a Cubic Spline function. After building the Smile 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 Smile 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 to be evaluated.

Then, the volatility that corresponds to the strike price of the Option to be evaluated is determined on each curve. Finally, a linear interpolation is done to determine the volatility that corresponds to the strike and to the expiry date of the Option to be evaluated. However, if the expiry date of the Option to be evaluated is before (after) the first (last) expiry date of the listed Options series, the Corporation uses the volatilities of the Smile 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.

Liquidity Interval

To calculate the Margin Interval for OTCI transactions for which the Underlying Interest is a Security, the Corporation may apply a different number of liquidation days. In addition, for OTCI with Physical Settlement/Delivery, the Corporation calculates an additional Liquidity Interval and adds it to the Margin Interval.

The assumptions under which the Liquidity Interval is calculated are similar to the assumptions the Corporation uses to calculate the Margin Interval, i.e., the confidence interval over 99% is obtained by using 3 standard deviations (based on the normal distribution's assumptions). The Liquidity Interval is calculated based on the historical bid-ask price spread of the Underlying Interest according to the same formula for Margin Interval.

Unsettled Items

Options contracts with physical delivery that have been exercised or expired in the money without being settled (i.e. the Underlying Interest is not delivered yet) are considered as Unsettled Items and the Corporation has to manage the settlement risk associated with these products until the whole quantity of the Underlying Interest is completely delivered/settled. For instance, when such Option contract expires in the money, the Underlying Interest is delivered three days after the expiry date consistent with current market settlement conventions. The Corporation has to charge a Margin requirement to cover the Replacement Cost (RC) of the Option contract and its Potential Future Exposure (PFE) as well. The procedure is as follows:

To cover the Replacement Cost of the Option contract, the Corporation requests a Margin requirement equal to the intrinsic value of the Option times the position (quantity of Options). However, when the writer of a put Option has deposited a Put Escrow Receipt to cover the total amount of the strike price in accordance with Section A-708 of the Rules, the Corporation will not require Margin on the relevant put Option. In the same manner, when the writer of a call Option has deposited a Call Underlying Interest Deposit to cover the total quantity of the Underlying Interest deliverable thereunder in accordance with Section A-708 of the Rules, the Corporation will not require Margin on the relevant call Option.

To cover the Potential Future Exposure of the Option contract, the Corporation requests a margin requirement amount to cover any potential Underlying Interest price movement over two days and within three standard deviations (under the normal distribution's assumption).

Specific Wrong-Way Risk

The Specific Wrong-Way Risk arises where an exposure to a counterparty is highly likely to increase when the credit worthiness of that counterparty is deteriorating.

CDCC had identified two particular situations where the Specific Wrong-Way Risk exists and it addresses them as follows:

Put Options: When a Clearing Member takes a Short Put Option position on the shares of its own company or affiliates, the full strike value amount is charged as margin requirement.

Unsettled Items: For an Unsettled Item that is related to the Specific Wrong-Way Risk, the full strike value amount is charged as margin requirement. In such case, the margin requirement is collected in the Difference Fund.

Initial Margin for Futures Contracts

This section describes how the initial margin is calculated for the Futures contracts, which includes the Index Futures, Interest Rate Futures, Government of Canada

Bonds Futures and Shares Futures.

The first part of the example # 2 of the previous section on Risk Arrays shows how the Scanning Risk is calculated. The Scanning Risk represents the most unfavourable projected liquidation value of the futures position. The calculated Scanning Risk is the Initial Margin for a Futures contract. However, since the Futures contract prices are linear with respect to their Underlying Interest prices, the Active Scenario for a Futures contract is always the one with the positive amount between scenario 5 and scenario 6. In other words, the Initial Margin for a Futures contract is always equal to its Price Scan Range (PSR).

However, when the holder of a short position on a Futures contract has deposited a Futures Underlying Interest Deposit to cover the total quantity of the Underlying Interest deliverable thereunder in accordance with Section A-708 of the Rules, the Corporation will not require Margin on the relevant Futures contract.