



NOTICE TO MEMBERS

No. 2017 – 126

August 30th, 2017

REQUEST FOR COMMENTS

OMNIBUS AMENDMENTS TO RULE A AND D-6, THE OPERATIONS, RISK AND DEFAULT MANUALS OF THE CANADIAN DERIVATIVES CLEARING CORPORATION INTRODUCING THE LIMITED CLEARING MEMBERS CATEGORY AND ESTABLISHING ADDITIONAL RECOVERY POWERS (RECOVERY PHASE 2)

Summary

On August 1st, the Board of Directors of Canadian Derivatives Clearing Corporation (CDCC) approved omnibus amendments to Rule A and D-6 of CDCC's Rules as well as to the Operations Manual, Risk Manual and Default Manual. The purpose of the proposed amendments is to create a new category of Fixed Income Clearing Members, the "Limited Clearing Members", for qualified buy-side firms, enhance its Default Management process and establish and document additional recovery power granted to CDCC in the course of its Recovery Process.

Please find enclosed an analysis document as well as the proposed amendments.

Process for Changes to the Rules

CDCC is recognized as a clearing house under section 12 of the *Derivatives Act* (Québec) by the Autorité des marchés financiers (AMF) and is a recognized clearing agency under section 21.2 of the *Securities Act* (Ontario) by the Ontario Securities Commission (OSC).

The Board of Directors of CDCC has the power to approve the adoption or amendment of Rules and Operations Manual of CDCC. Amendments are submitted to the AMF in accordance with the self-certification process and the Ontario Securities Commission in accordance with the process provided in its Recognition Order.

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Comments on the proposed amendments must be submitted within 60 days following the date of publication of the present notice. Please submit your comments to:

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A copy of these comments shall also be forwarded to the AMF and to the OSC to:

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For any question or clarification, Clearing Members may contact CDCC's Corporate Operations.

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OMNIBUS AMENDMENTS TO THE RULES A-1, A-1A, A-1B, A-2, A-3, A-4, A-6, A-7, A-8, A-10 AND D-6, THE DEFAULT MANUAL, THE RISK MANUAL AND OPERATION MANUAL OF THE CANADIAN DERIVATIVES CLEARING CORPORATION

INTRODUCING THE LIMITED CLEARING MEMBERS CATEGORY FOR FIXED INCOME CLEARING MEMBERS AND ESTABLISHING NEW RECOVERY POWERS (RECOVERY RULES - PHASE 2)

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I. SUMMARY

The Canadian Derivatives Clearing Corporation (“CDCC” or the “Corporation”) is hereby proposing an omnibus Rules change in support of the expansion of its membership for Fixed Income clearing services (which comprises of Repurchase Transactions and Cash Buy or Sell Trade) by creating a new category of Fixed Income Clearing Members (the Limited Clearing Members or “LCM”) for qualified buy-side firms, and the introduction of Recovery Powers (Recovery Rules – Phase 2).

The LCMs will be governed by CDCC Rules subject to certain core principles. In essence, LCMs are not subject to Clearing Fund contribution but are required to deposit Margin subject to a multiplier. LCMs have no obligation resulting from the default of another Clearing Member and are subject to Recovery Powers in a modified fashion.

The introduction of the new category of Clearing Members, which will allow certain Canadian crown corporations and public sector pension plans to participate directly in the CCP, has prompted the amendments of the Corporation’s Rules as well as to its Operations, Risk and Default Manuals.

In addition, the Corporation is proposing changes supporting the enhancement of the Default Management Process and the adoption of new Recovery Powers, in support of its Recovery Plan.

These amendments, which include the introduction of additional recovery tools, are proposed in accordance with regulatory requirements and aim at supporting CDCC’s recovery planning. These amendments will enable CDCC to ensure the continuity of its critical services if, as a result of the default of a Clearing Member, CDCC were to face financial stress in excess of the capacity of its ordinary default management framework. This latter set of Rules changes is referred to as Recovery Rules Phase 2.

The proposed changes have been categorized as follows:

- 1) Introduction of the Limited Clearing Members Category: These amendments capture the changes necessary to address the introduction of a new Clearing Member category subject to distinct (i) eligibility criteria and governance framework for ongoing monitoring (ii) Margin framework, and (iii) operational timelines and processes. Such changes will introduce entirely new Rules which, by their nature, primarily concern not only the upcoming new type of Fixed Income Clearing Members, but also will directly and indirectly affect current Clearing Members participating in the system.
- 2) Ancillary changes affecting Margin: Ancillary to the introduction of the Limited Clearing Member category, the Corporation is proposing amendments affecting both operational processes related to Fixed Income Transactions and the Margin framework supporting

- it. These changes will introduce: (i) new operational process supporting the Fixed Income Variation Margin requirement, (ii) changes to the Margin calculation (including revision to the Initial Margin, Additional Margin and Variation Margin methodology) and (iii) the collateral policy.
- 3) Introduction of an optional tri-party structure for Initial Margin (Approved Custodian): Ancillary to the introduction of the Limited Clearing Member category, the Corporation is proposing amendments addressing the acceptable method for pledging Initial Margin by introducing the use of a tri-party structure for Initial Margin only.
 - 4) Enhance the Corporation's Default Management Process by:
 - (i) introducing the Escalation Procedure, a pre-default tool that allows the Corporation to manage any failure by a Clearing Member, as a result of an operational issue, to meet a payment, transfer, deposit, delivery, or acceptance of delivery when such obligation becomes due under the Rules (Section 11 of the Operation Manual); and
 - (ii) improving the terms governing the auction process and the addition of a new bidding incentives framework aimed to enhance the outcome of the auction (Section 2.13.3 and Appendix 1 and 3 of the Default Manual); and
 - (iii) clarifying the loss allocation process under which the default losses or Recovery Losses are attributed to the Default Waterfall (Section 3.6 and Appendix 2 of the Default Manual) and resources accumulated by the Corporation as a result of the exercise of the Recovery Powers (Section 4.4 and Appendix 2 of the Default Manual).
 - 5) Enhance the Corporation's Recovery Process and introduce Recovery Powers: (i) Reduced Amounts Distribution ("RAD") (Rule A-1005) which is a tool that supports the Corporation in its attempt to cover any losses; and (ii) Recovery Auction (Rule A-1007) and (iii) Voluntary Contract Tear-up (Rule A-1008), which are tools that will enable the Corporation to return to a matched book.

These initiatives will be treated therein highlighting the impact on the current Clearing Members and prospective Clearing Members.

II. ANALYSIS

a. Background

1. Introduction of the Limited Clearing Member Category

Throughout a long-time collaborative effort engaging CDCC's Fixed Income Clearing Members and the major Canadian participants active in the Canadian repo market, the Corporation has been striving to put forward a unique approach to direct clearing of Fixed Income Transactions (Repo and Cash Buy/Sell trades) for buy-side entities. The proposed approach, which is the

result of this industry-wide dialogue, aims at expanding CDCC's Fixed Income membership by targeting qualified buy-side entities that are active in the Canadian repo market and who meet very specific criteria, including operational readiness and stringent creditworthiness levels. As further explained below, the introduction of the Limited Clearing Members category will directly and indirectly impact the current Clearing Members, including through a number of changes of processes affecting all Fixed Income Clearing Members. That being said, the benefits of this comprehensive and unique proposal are critical to the Canadian repo market as they improve the viability of the CCP in stressed market conditions and outweigh the potential impacts of the changes being proposed. Indeed, the introduction of the LCMs is anticipated to foster liquidity in the repo market both under normal and stress market conditions and, as such, contributes to the financial strength and resilience of the CCP.

The proposed approach also led to several minor drafting clarifications and enhancements which contribute to the clarity and transparency of CDCC Rules and procedures as documented in CDCC's Operations, Default, and Risk Manuals which all form part of the Rules.

Core Principles

The LCMs will be governed by CDCC Rules subject to the following core principles: (1) LCMs are not subject to Clearing Fund contribution but will be required to deposit Margin subject to a multiplier, (2) LCMs have no obligation resulting from the default of another Clearing Member, and (3) LCMs are subject to Recovery Powers in a modified fashion as CDCC shall not reduce its obligation toward an LCM as part of the Recovery Process, with the exception of the application of Reduced Amounts Distribution, which shall be limited to such Fixed Income Transactions entered into before novation between the LCM and the suspended Clearing Member.

The core principles expressed under section A-1B01 are detailed and reflected throughout the Rules and the Manuals and form the basis of this distinct approach. Similarly, the core principles will be addressed within the relevant section in this analysis, where appropriate.

(i) Distinct Eligibility Criteria & Standard of Membership

CDCC's current membership is comprised of major Canadian financial institutions. As expressed under its Rules, CDCC membership is restricted to (i) Canadian Banks subject to OSFI minimum capital adequacy requirements, (ii) members of a Canadian exchange subject to IIROC capital adequacy requirements, and (iii) Financial Institutions that act as liquidity providers for cooperatives subject to minimum capital adequacy requirements. All current CDCC Clearing Members are thus subject to eligibility criteria (under Section A-101 of the Rules, "Eligibility for Membership") primarily focused on the entity's structure and standard of membership (under Section A-102, "Standard of Membership") which points to applicable minimum capital requirements and operating standards. In order for these buy-side participants to join the CDCC

Fixed Income clearing service on a direct basis as LCMs, amendments to the eligibility criteria and standards of membership were required to adapt to the diversity of constituting frameworks that represent these buy-side participants. The new chapter A-1B lays out the distinctive requirements applicable to Limited Clearing Members.

(ii) Distinct Margin Framework

Due to their public mandate and their fiduciary obligations, the participation of the LCMs in a CCP system that allows for loss mutualization was a distinct constraint. The investment policies of most LCM entities restrain the use of their assets for purposes other than investment, thereby preventing them from being exposed to losses via activities where they were not principals. As a means of ensuring parity across LCMs and existing Clearing Members, CDCC is introducing the distinct LCM Margin framework, which includes the Adjusted Base Initial Margin (IM) (affected by a multiplier called the Effective Ratio), an Additional Margin for Uncovered Risk (add-on), and the absence of a Clearing Fund contribution.

As such, the Limited Clearing Members will not participate in the Clearing Fund or be subject to those Recovery Powers which would be akin to a risk mutualization. Instead, they will contribute directly an amount of Margin (affected by the Effective Ratio) that will be equivalent to the amount of Margin and Clearing Fund deposits which another Clearing Member would be required to deposit for an equivalent position as explained in Section (1) of this analysis. This construct will ensure that the Corporation remains protected from any risk exposure created by an LCM by way of front-loading financial resources from said LCM. From the CCP standpoint, the amount of collateral provided by a Limited Clearing Member is equivalent to that of other Clearing Members when considering Margin and Clearing Fund deposits, thus ensuring the resilience of the system in the event that a Limited Clearing Member defaults.

Moreover, in order to guarantee that CDCC has sufficient financial resources to meet the Cover 1 requirement, the LCMs will be subject to an Additional Margin for Uncovered Risk. This Margin Requirement covers the risk exposure that arises if the total value of the risk represented by an LCM 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.

(iii) Distinct Operational Timelines and Processes

Acknowledging the distinct structure of the LCMs, which generally rely on external service providers for most of their back-office functions, while representing a low credit risk for the CCP, the LCMs will be subject to distinct margining process.

The Corporation will be introducing specific timelines for LCMs without otherwise affecting the other Clearing Members' timelines, subject to the specific Fixed Income Variation Margin

changes addressed below in section 2. Specifically, LCMs will have specific timelines to satisfy their obligations relative to: (1) Overnight Settlement (9:00 a.m.), (2) Intra-Day Margin Calls (3:30 p.m.) and (3) a pledging window of collateral (6:30 p.m.) as highlighted in blue in the table below.

Additionally, as LCMs were unable to grant CDCC agency rights to their bank accounts to support any margin payment in cash, CDCC will establish at the Bank of Canada a distinct account for each LCM. Each account will be used by an LCM to meet, on exceptional basis, its Margin obligation in cash, if circumstances so warrant.

2. Ancillary Changes affecting Margin

Ancillary to the introduction of the LCM category, the Corporation is proposing amendments affecting the operational processes related to Fixed Income Transactions and the Margin framework that supports the service.

These changes will introduce:

- (i) a new risk management and operational process for Fixed Income Variation Margin Requirement;
- (ii) a change to the concentration methodology affecting real return bonds;
- (iii) an Additional Margin covering the delivery risk;
- (iv) a change to the intra-day variation margin process; and
- (v) a change to the collateral policy.

(iv) Change to the Fixed Income Transactions Variation Margin Process

Currently, with respect to a Repurchase Transaction, the calculated amount resulting from the change in the Market Value of the Purchased Securities and the Repurchase Price of the Repurchase Transaction (plus any Coupon Income payable to the holder between the calculation date and the Repurchase Date) and, with respect to a Cash Buy or Sell Trade, a change in the Market Value of the Purchased Security and the Purchase Price of the Cash Buy or Sell Trade, which in both cases amount to the gains calculated for Fixed Income Transactions, is aggregated and subject to a daily Margin requirement process. Such requirement is aggregated with the Initial Margin required from that Clearing Member and collateralized. In parallel, in respect of the Repurchase Transaction, the MTM Repo Rate Payment is calculated and exchanged daily in cash. Additionally, an OCF MTM Payment representing the opportunity cost of funds payment in respect of such MTM Repo Rate Payment is also calculated daily and paid cash.

The Corporation proposes that the payment of the gains calculated on the Market Value for all Fixed Income Transactions, which will be referred to as Price Valuation Requirement, no longer be aggregated with Initial Margin. In addition, the Corporation proposes that the MTM Repo

Rate Payment for Repurchase Transactions, which will be referred to as the Repo Rate Requirement, no longer be paid cash. This latter change would eliminate the need for an OCF MTM Payment. Instead, a Net Variation Margin Requirement, integrating both notions of Price Valuation Requirement and Repo Rate Requirement, will be calculated for all Fixed Income Transactions to which a Clearing Member is a party.

- (v) Additional Margin for Concentration Risk - Fixed Income Transactions on Real Return Bonds (“RRB”)

Under the Corporation’s current Margin framework, an Additional Margin is required for Concentration Risk, which refers to the risk of loss that may result when liquidating a large position relative to the assumed ex ante market liquidity in a particular security. In such a scenario, the realized and assumed closeout periods would not match, thereby exposing CDCC to a financial loss. As a means of mitigating this risk, CDCC requires Additional Margin for Concentration Risk when positions exceed certain thresholds. For Fixed Income Transactions, these thresholds are currently estimated per ISIN, based on activity in the secondary market. For Fixed Income Transactions on RRBs, the Corporation is proposing that the current methodology used to determine the Concentration Risk for RRBs be adopted. The proposed methodology will enable the threshold for RRBs (i) to be based on average amount of bids in the primary market auctions and (ii) to be applied at the asset class level.

- (vi) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

As a result of the introduction of the new process supporting the Variation Margin Requirement for Fixed Income Transactions, the Corporation will be guaranteeing the return of the securities pledged to it for the purpose of the Variation Margin Requirement.

Thus, CDCC is proposing to introduce a new Margin Requirement which will cover the risk incurred by CDCC 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 a Non-Conforming Member.

- (vii) Additional Margin for Intra-Day Variation Margin for Fixed Income Transactions

The Intra-Day Variation Margin (VM) Risk arises when market volatility of cleared volumes produces unusually large Variation Margin exposures. As a result of the change of process for Variation Margin for Fixed Income Transactions, the Corporation is proposing to amend the Additional Margin for the Intra-Day Variation Margin Risk to also capture the intra-day risk stemming from the Variation Margin for Fixed Income Transactions.

(viii) Amendments to the Collateral Policy

In an effort to enhance efficient use of collateral, the Corporation is proposing to increase the threshold of certain securities under the current collateral framework.

3. Introduction of an Optional Tri-Party Structure for Initial Margin (Approved Custodian)

With the introduction of LCMs, the Corporation has been prompted to revise certain processes in order to facilitate the expansion of its membership. The current CDS process supporting the pledging of any securities for Initial Margin purposes has been subject to such revision. The requirement that a Clearing Member also be a CDS participant, or enter into an agreement with a CDS participant, for the purpose of satisfying any pledging obligation, has proven efficient and reliable. Similarly, the use of the Approved Depository for providing Margin for certain Futures or Options has been seen as a flexible alternative.

However, in the context of the expansion of its membership, certain applicants, including the prospective LCMs that are not otherwise participants of CDS, were more accustomed to the process of pledging securities in a securities account held by a third party securities account (in this case, a custodian). CDCC is therefore proposing to its Clearing Members the use of a tri-party structure, provided that the service provider be considered an Approved Custodian, and the securities account be subject to an Account Control Agreement between the Clearing Member, the Approved Custodian and CDCC, which agreement shall be in the form and substance acceptable to CDCC.

4. Enhancement to the Default Management Procedure

As an FMI designated by the Bank of Canada as systemically important, CDCC must have in place appropriate policies and procedures to handle participants' defaults and a comprehensive recovery plan which defines, inter alia, the set of actions that it can take to address any uncovered loss, liquidity shortfall or capital inadequacy arising from a participant's default. Consistent with its regulatory requirement and the Recovery Guidance published by the Committee on Payments and Market Infrastructures ("CPMI") and International Organization of Securities Commissions ("IOSCO") (hereafter the "CPMI-IOSCO Recovery Guidance"¹), CDCC proposed a first set of rules on February 7, 2017 and which was self-certified on July 11, 2017 to (i) modify certain sections of the Rule A-4 (Enforcement) and Rule A-6 (Clearing Fund Deposits), and (ii) adopt new rules governing its recovery process (Rule A-10 Recovery).

¹ Recovery of Financial Market Infrastructure, CPMI-IOSCO, October 2014, <http://www.bis.org/cpmi/publ/d121.pdf>. ("CPMI-IOSCO Recovery Guidance").

In line with the CPMI-IOSCO Recovery Guidance, CDCC has reviewed its default management policies and procedures to ensure that these policies and procedures appropriately capture any key dependencies, including as a result of the introduction of an optional third party structure for the holding of Initial Margin (Approved Custodian), and consider broader financial stability interests. CDCC identified sources of external operational risk which could lead to a default of a participant and is proposing to mitigate the impact of these risks through the use of appropriate policies and procedures.

This review led to the introduction of an Escalation Procedure (Section 11, Operations Manual) for operational events, the modifications to the current auction process (Subsection 3.3, Default Manual) and the introduction of a loss allocation methodology (Subsection 3.6, Default Manual). Such rules aim to (i) supplement CDCC's existing tools and procedures to manage a Clearing Member's default under financial stress in excess of the capacity of CDCC's ordinary default management framework and return to a matched book; (ii) enhance the auction process and establish new bidding incentives for Clearing Members to participate in the auction; and (iii) document the loss allocation methodology to allocate losses to both the standard Default Waterfall and the recovery enhanced waterfall.

5. Introduction of new Recovery tools

CDCC's recovery planning exercise identified scenarios that could prevent the Corporation from being able to provide its critical operations and services as a going concern and assessed the effectiveness of a full range of options for recovery. CDCC must articulate the rights and remedies of its business recovery plan in its Rules and procedures. In line with the above, a second set of rule changes is proposed to supplement the existing Recovery Process set out in the Default Manual and Rule A-10 Recovery. As set out in the CPMI-IOSCO Recovery Guidance and National Instrument 24-102 - *Clearing Agency Requirements ("National Instrument 24-102")* and the regulatory guidance on recovery planning ("*Regulatory Recovery Guidance*")², the Corporation must adopt tools that are comprehensive, effective, transparent, measurable, manageable and controllable, create appropriate incentives, and minimize negative impact on the Corporation, the Clearing Members and the market. The introduction of new Recovery tools are primarily designed to satisfy such requirements and to remain consistent with relevant international standards including the IOSCO-CPMI Recovery Guidance and Principles of Financial Market Infrastructure ("*PFMI*"). CDCC is therefore proposing the introduction of the following Recovery tools:

- (i) Reduced Amounts Distribution;

² National Instrument 24-102 Companion Policy which incorporates a Joint Supplementary Guidance on Recovery Planning (Box 3.1: Joint Supplementary Guidance -- Recovery Plans, Selection and Application of Recovery Tools) in supplement of the Principles for Financial Market Infrastructures (PFMIs) issued by the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions (CPMI-IOSCO).

- (ii) Voluntary Tear-up; and
- (iii) Recovery Auction.

b. Description and Analysis of Impacts

1. Introduction of the Limited Clearing Members Category

By virtue of its idiosyncrasies, the introduction of the Limited Clearing Members category requires the introduction of a distinct chapter of the Rules (Rule A-1B – Limited Clearing Members’ Membership) and the modification of several existing sections (A-1A01, A-1A02, A-1A03, A-1A04, A-301, A-302, A-303, A-304, A-305, A-306, A-307) either to adjust or broaden certain notions applicable to both current Clearing Members and Limited Clearing Members, or to clarify existing language. In the same vein, the Operation, Risk and Default Manuals have been remodeled as a result of the introduction of specific notions relevant to the Limited Clearing Members and also for clarification purposes.

Any and all Sections of the Rules and Manuals that are of general application and refer to Clearing Members apply to Limited Clearing Members, *mutatis mutandis*.

(i) Distinct Eligibility Criteria & Standard of Membership

A rigorous admission process based on stringent eligibility criteria and standards of memberships are the first line of defense for CCP resilience. As such, maintaining a membership constituted of only those entities that demonstrate high financial strength and operational capabilities is CDCC’s foremost interest. CDCC’s admission criteria must, however, be risk based and promote fair and equitable access to its Fixed Income Clearing service. As previously discussed, LCM membership status will be available only to such buy-side participants that are federal or provincial crown, or crown-related, entities and provincially or federally regulated pension funds that manage public sector pension plans. Such entities are structured under a variety of legal frameworks and subject to very different oversight relative to existing Clearing Members. In order to adapt to the diversity of buy-side participants that share a high creditworthiness and a public sector mandate, in its broad sense, CDCC is proposing to introduce the Limited Clearing Member category.

Eligibility Criteria

Specifically, an LCM is an entity that falls under any of the following categories and can demonstrate at the moment of its application that it meets the Designated Eligibility Rating assigned to it. The Limited Clearing Member category also enables the Bank of Canada to become a Fixed Income Clearing Member but does not contemplate any Designated Eligibility Rating given the nature of the entity.

ELIGIBILITY FOR MEMBERSHIP & DESIGNATED ELIGIBILITY RATING			
Criteria	A-1B03(a)	A-1B03(c)	A-1B03(d)
Type of Entity	Crown, a public body of a Crown, an agency of the Crown, a mandatary of the Crown or a Crown corporation other than the Bank of Canada	A federally or provincially regulated pension plan board, pension fund or compensation fund, the majority of whose assets under management are used to fund obligations under one or more pension plans serving the retirement needs of employees in the broader public sector, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable, or in relation to which bankruptcy and insolvency laws do not apply and a winding-up of such entity is subject to an administrator's fiduciary and statutory obligations.	A Crown, a public body of a Crown, a Crown corporation or an agency or mandatary of the Crown, the majority of whose assets under management are assets used to fund obligations under one or more pension plans and, if applicable to such entity, government funds, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable.
Designated Eligibility Rating (A-1B04(a))³	DBRS : A Low Fitch : A- Moody's : A3 S&P: A-	DBRS : AA Fitch : AA Moody's : Aa2 S&P: AA	DBRS : AA Fitch : AA Moody's : Aa2 S&P: AA

The category contemplated under A-1B03(a) enables any federal or provincial crown, public body of a Crown, agency, mandatary or crown corporation that meets its designated Eligibility Rating to become an LCM (see Crown definition under A-102). Section A-1B03(c) will allow a federally or provincially regulated pension fund which meets the asset and insolvency criteria described therein to become an LCM. Section A-1B03(d) will allow for entities that are similar in structure to those defined under A-1B03(a) but meet the same asset and insolvency criteria applicable to A-1B03(c) to become an LCM.

As per the applicable Sections, entities described in Sections A-1B03 (c) and (d) must manage a majority of assets which serve to fund obligations of public sector pension plans and be subject

³ Respectively, for DBRS Limited, Fitch Inc., Moody's Canada Inc., and Standard & Poor's Rating Services (Canada).

to specific insolvency proceedings. Such criteria ensure that the public mandate of such entities is reflected not only by the nature of the assets they manage, but also by the oversight that a federal or provincial legislative body, governmental body, or organization or agency having jurisdiction over them may exercise up to the point of insolvency or bankruptcy.

Entities contemplated under Sections A-1B03(c) and (d) must also meet a Designated Eligibility Rating slightly higher than the type of entities contemplated in Section A-1B03(a), yet an entity that falls in the latter Section must also have a credit rating equivalent to its Reference Crown, as evidence of the inherent link between both. In essence, such criteria presume that the proximity to the Crown, even absent any explicit guarantee by the Crown, is a measure of stability and creditworthiness that distinguishes such entities from purely commercial buy-side firms.

Consequent with the above postulate, an entity that does not have a credit rating but that otherwise meets all other Eligibility Criteria under A-1B03, may also be admitted by the Corporation based on other metrics that are acceptable to the Corporation for such purposes.

Finally, at entry, any applicant to become a Limited Clearing Member must also demonstrate (i) sufficient activity in Canadian Fixed Income (both Repo and Cash Buy or Sell Trade) markets, (ii) self-execution in the Canadian repurchase transactions market for a continuous period of a minimum of three years prior to applying for membership with the Corporation, (iii) that it is a party to, at a minimum, three standard market repurchase agreements, (iv) operational readiness, (v) capacity, power and authority to execute and deliver the Application for Membership to CDCC and perform its obligations under CDCC Rules, (vi) capacity, power and authority to grant in favour of CDCC a first ranking pledge, lien, security interest and hypothec on any Margin Deposit, collateral or property deposited to secure the performance of all of its obligations to CDCC, and (vii) have sound corporate governance practices, an effective corporate structure, prudent portfolio and risk management practices and procedures, a risk profile and other elements and factors. LCM applicants will be required to provide a netting and insolvency opinion, in the form and substance satisfying to the Corporation, which will ensure sound legal basis for (v) and (vi) above.

The eligibility criteria described above replace, for the purposes of a Limited Clearing Member, the criteria described in Section A-1A01(a). The subsequent subsections remain unchanged in substance.

Standard of Membership and Ongoing Monitoring

A Clearing Member applicant must meet certain capital requirements designated by its regulators. Limited Clearing Members, however, are governed and subject to the oversight of a variety of regulatory bodies, and capital requirement is not usually a measure applicable in

these cases. As a result, the use of credit rating has been deemed to be an acceptable proxy to assess the financial resilience of such entities. However, considering the interconnection between a Limited Clearing Member’s credit rating and its Reference Crown rating, exogenous factors, including the downgrade of the Reference Crown, could lead to the downgrading of a Limited Clearing Member, and such outcome would be problematic as deemed uncontrollable and unpredictable by the LCM. The notion of Designated Maintenance Rating and Ongoing Monitoring will therefore supplement the limits of these measures. At entry and at least annually, the Corporation will have an extensive power to conduct a due diligence review of each Limited Clearing Member to assess its financial condition (including its books and records), business, risk management, technology infrastructure, operations, corporate governance, assets and affairs. Please refer to Section A-1B06 for full details.

Additionally, upon admission, an LCM applicant must demonstrate that it meets the Designated Eligibility Rating, but a possible downgrade will be permitted before such LCM automatically becomes Non-conforming. In the interval, an entity whose current credit rating is downgraded below the Designated Eligibility Rating but nevertheless remains above the Designated Maintenance Rating will be subject to enhanced scrutiny by the Corporation. As described in Section A-1B07, the Corporation will have the power to take certain actions to assess more closely the financial resilience of a Limited Clearing Member and the sources of any credit downgrade. The Corporation will engage in discussions with the Limited Clearing Member to determine any remedial action to be taken by the LCM, and, where applicable, provide a plan to address the situation. The ongoing monitoring contemplated in the Rules (please refer to new Section A-1B05 and A-1B07 for the details) will enable the Corporation to play a more active role in the assessment of a Limited Clearing Member’s financial resilience, where needed.

ELIGIBILITY FOR MEMBERSHIP & DESIGNATED MAINTENANCE RATING			
Criteria	A-1B03(a)	A-1B03(c)	A-1B03(d)
Type of Entity	A Crown, a public body of a Crown, an agency of the Crown, a mandatary of the Crown or a Crown corporation other than the Bank of Canada.	A federally or provincially regulated pension plan board, pension fund or compensation fund, the majority of whose assets under management are used to fund obligations under one or more pension plans serving the retirement needs of employees in the broader public sector, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial	A Crown, a public body of a Crown, a Crown corporation or an agency or mandatary of the Crown, the majority of whose assets under management are assets used to fund obligations under one or more pension plans and, if applicable to such entity, government funds, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial

		legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable, or in relation to which bankruptcy and insolvency laws do not apply and a winding-up of such entity is subject to an administrator's fiduciary and statutory obligations.	legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable.
Designated Maintenance Rating (A-1B05) ⁴	DBRS : BBB Fitch :BBB Moody's : Baa2 S&P: BBB	DBRS : A Fitch : A Moody's : A2 S&P: A	DBRS : A Fitch : A Moody's : A2 S&P: A

(ii) Distinct Margin Framework

LCMs are subject to a distinct LCM Margin framework, which includes the absence of a Clearing Fund contribution, an Adjusted Base Initial Margin (IM) (affected by the Effective Ratio), an Additional Margin for Uncovered risk and a limited participation in the Recovery Powers.

No Clearing Fund Contribution

In line with an objective of fairness and equity, yet acknowledging the distinct nature of the LCMs, the introduction of the new category of Clearing Members implies certain changes to the Margin methodology. In the absence of the loss mutualization through the Clearing Fund, indeed, the LCMs shall have no obligation to contribute to the Clearing Fund, to ensure fairness between current Clearing Members contributing to the Clearing Funds and the LCMs, and in order to guarantee that CDCC has sufficient financial resources to meet the Cover 1 requirement, the proposed approach will subject LCMs to higher level of Margin. As a result of these two core principles, CDCC will also be amending certain rules governing the Margin and Clearing Fund's obligations as well as implementing certain distinctions in the Recovery Rules.

Distinctions in application of the Recovery Powers for LCMs

As part of the core principles guiding the rules governing LCMs membership, LCMs are subject to Recovery Powers in a modified fashion, as a means to limit their exposition only to transactions opened with a suspended Clearing Member, and not subject to such Recovery Powers that would be akin to a risk mutualization. For instance, Limited Clearing Members are not subject to the Recovery Loss Cash Payment; however, they are exposed to the Reduced Amounts Distribution on such Fixed Income Transactions that were originally entered into by an LCM with the suspended Clearing Member. In the case of the suspension of more than one Clearing

⁴ Ibid.

Member, amounts that may be retained from a Limited Clearing Member in connection with the suspension of one Clearing Member shall only be used to extinguish losses in relation to the same suspended Clearing Member.

Limited Clearing Members' participation in other Recovery Powers such as the Recovery Auction and the Voluntary Contract Tear-up is otherwise subject to the same conditions applicable to all Clearing Members. Please refer to section 5 for further details.

Effective Ratio and Adjusted Base Initial Margin

Currently, under the Margin Framework, the Base Initial Margin calculated for all types of Transactions covers the potential losses that may occur over the next liquidation period as a result of a market fluctuation. The Initial Margin component takes into consideration security price, margin interval (number of liquidation days, standard deviation of the yield to maturity), duration, contract size, and intra-commodity spread charge. As provided under the core principles, the Base Initial Margin required from Limited Clearing Members will be multiplied by a quotient, the Effective Ratio, initially set at 1.3. The Effective Ratio will be revised annually in accordance with the Recalibration Methodology. The proposed Recalibration Methodology 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 LCMs) and addresses the permanence and persistence of a change to the latter. Over the course of a year, the Corporation will determine a Daily Ratio on every Business Day by dividing the total amount of Clearing Fund Requirements on that Business Day by the aggregate amount of the Base Initial Margin of all Clearing Members (other than LCMs) on the same Business Day. The highest and lowest ratio obtained throughout the year, rounded up to the nearest 0.1 increment, will determine the boundaries of the Effective Ratio. If the Effective Ratio is higher or lower than the highest or lowest Daily Ratio obtained that year, it shall be recalibrated to the highest or lowest Daily Ratio obtained, as applicable. The methodology ensures that the Effective Ratio will not be affected by exogenous factors but really harnesses the Clearing Fund methodology. Please refer to Section 6 of the Risk Manual for details.

Additional Margin for Uncovered Risk for LCMs

Currently, in order for CDCC to meet its Cover 1 requirement, CDCC ensures on a daily basis that each Clearing Member's Uncovered Residual Risk (URR) does not exceed the Clearing Fund amount. An URR for a Clearing Member is the difference between its stress testing results and its Base Initial Margin. Any excess of an URR over the Clearing Fund triggers the re-sizing of the Clearing Fund.

Following the introduction of the LCMs, CDCC will need to enhance its Cover 1 monitoring process. The current process will be maintained for all Clearing Members except LCMs.

However, CDCC will introduce a similar process for LCMs which may lead to an Additional Margin for Uncovered Risk for LCMs. This new Margin Requirement will cover the risk exposure that arises if the total value of the estimated risk represented by an LCM to the Corporation, based on extreme but plausible market conditions, is greater than the aggregate amount of the Limited Clearing Member's Adjusted Base Initial Margin and the total value of the Clearing Fund. Please refer to Section 1.1.1.2 of the Risk Manual for details.

This Additional Margin is calculated on a daily basis and is required from Limited Clearing Members only. This proposed change is thus not anticipated to negatively impact other Clearing Members.

(iii) Distinct Operational Timelines and Processes

As indicated in blue (for LCMs) and orange (for all Clearing Members) in the table below, the introduction of distinct operational timelines for Margin Requirements applicable for Limited Clearing Members only affects (1) the LCM deadline for settlement of payments for overnight settlement (which includes Adjusted Base Initial Margin and Additional Margin for Concentration Risk), (2) the LCM deadline for the Intra-day Margin call, and (3) the expansion of the LCM pledging Window to 6:30 p.m. (currently, the cutoff is 3:30 p.m.).

Considering the inherent low credit risk represented by the Limited Clearing Members, as a result of the strict eligibility criteria, delaying the deadline for Overnight Settlement and merging of the two intra-day Margin calls into one does not further expose CDCC to a risk exposure beyond its risk tolerance. The expansion of the pledging window has no impact on the risk exposure incurred by the Corporation as such process occurs prior to any payment obligation. Please refer to Section 2.2 of the Operations Manual for details.

5:30 AM	Start of settlement day at CDS and Clearing Day at CDCC
9:00 AM	Deadline for settlement time with respect to payments for overnight settlement
9:30 AM	Deadline to deliver securities to CDCC to settle the Variation Margin amount
10:00 AM	Deadline to submit to CDCC a buy-in request (after a T+2/T+3 failed substitution return)
10:15 AM	Morning Net DVP Settlement calculation
10:30 AM	Deadline to deliver securities to Clearing Members by CDCC to settle (Fixed Income) Variation Margin amount
10:30 AM	Deadline for morning Net DVP settlement
11:00 AM	Deadline to submit substitutions for same day settlement
11:45 AM	Assets Concentration Limit breach correction deadline
12:00 PM	Deadline for CDCC to submit substitution instructions to Members for same day settlement
12:45 PM	Calculation for LCM CCP Intra-day Initial Margin and Additional Margin

1:30 PM	Call: LCM IM and margin for Mismatched Settlement Risk, Intra-Day Variation Margin Risk, Variation Margin Delivery Risk, LCM's URR exceeding the Clearing Fund size
3:00 PM	Deadline to deliver same day substitutions to CDCC (VM)
3:30 PM	Deadline to settle afternoon Intra-Day Margin Call (The later of 3:30 p.m. or 2 hours after notification)
3:30 PM	Deadline for additional Charge for Mismatched Settlement Risk, for Intra-Day Variation Margin Risk, for Variation Margin Delivery Risk, for LCM's URR exceeding the Clearing Fund size (The later of 3:30 p.m. or 2 hours after notification)
4:00 PM	Deadline for CDCC to deliver same day substitutions (VM)
4:00 PM	CDS payment exchange, Net Wire Payment
4:00 PM	End of Day DVP Settlement Time
4:30 PM	EOD margin reports for projection and EOD Net Variation Margin Requirement Computation
5:00 PM	If LVTS payment not made, LCM deemed non-conforming by CDCC (Cycle 9)
5:30 PM	CDCC Clearing Application shutdown – Close of Business
6:30 PM	LCM Only - All assets deposits other than cash (in respect of all Margin requirements)
7:00 PM	EOD CCP Daily Margin Requirements (CDCC EOD Reports)
	Common timeline for all Clearing Members
	LCM only timeline

Additionally, the establishment by CDCC of a distinct account at the Bank of Canada for each LCM is solely provided to the LCM to facilitate its access to the CCP. LCMs are anticipated to use such accounts on an exceptional basis only to mitigate the risk that might otherwise arise from their reliance on a third party structure for Initial Margin held by an Approved Custodian. Such construct does not otherwise affect the current Clearing Members' banking process.

The proposed changes discussed in this section support the introduction of the Limited Clearing Members only and do not otherwise affect other Clearing Member's rights and obligations.

2. Ancillary Changes to Margin

(i) Changes to Variation Margin Process for Fixed Income Transactions

In light of the CPMI-IOSCO and Regulatory Recovery Guidance, the Corporation is proposing amendments to the Fixed Income Transactions Variation Margin process to enable the Variation Margin Gains Haircut, or similar tool, in the event that Corporation enters into Recovery.

In the view of the current construct, the daily gains on Fixed Income Transactions are calculated by comparing on any Business Day the Market Value to the Repurchase Price or the Purchase Price. Since both prices are fixed over the life of a transaction, it follows that the Fixed Income Variation Margin Requirement represents an accumulated amount. Resorting to cash to support the Fixed Income Variation Margin would have been unsustainable for certain participants.

Alternatively, the system changes which would have been required to replicate a Futures-like construct were seen as heavily disturbing for the market participants.

The proposed Variation Margin Requirement for Fixed Income, which will aggregate two components referred to as the Price Valuation Requirement and the Repo Rate Requirement, will thus be supported by securities exchanged through CDSX with a process distinct from Initial Margin.

This proposed change will require an amendment to the timelines for payments of the Net Variation Margin Requirement in support of the new process. Such process will harness existing CDCS procedures with respect to a specific pledge type and continue to require double entry in CDCS of any securities being pledged via CDSX by the Clearing Member to the Corporation. This change was adopted in an effort to ensure that all Clearing Members operate on the same platform, and it increases market efficiency. Please refer to Sections D-601 and D-607 of the Rules and Section 8.4 of the Operations Manual for details.

Return and Substitution

The Clearing Member receiving a specific securities for Variation Margin Requirements purposes will be obliged to return the same specific securities pledged to it by the Corporation. The Corporation will guarantee the return to the initial provider of such securities. Clearing Members will be allowed to ask for a substitution of a security previously pledged. In the event of a failure by a Clearing Member to return securities previously pledged to it in support of the Net Variation Margin Requirement, the proposed procedure simply adapted and expanded the existing Fixed Income buy-in procedures, as per the revised Section 8-6 of the Operations Manual.

Eligible Collateral

Eligible collateral used to cover the Variation Margin Requirements will be subject to the current collateral framework with certain restrictions. 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.

This proposed change does not impact non-Fixed Income Clearing Members.

(ii) Amendment to Concentration Margin on Fixed Income Transactions on RRBs

As a result of the anticipated increase of Fixed Income Transactions over RRBs being cleared by the Corporation, following the introduction of the LCM activity, the Corporation is proposing amendments to the risk methodology supporting the Additional Margin for Concentration Risk in respect of Fixed Income Transactions on RRBs.

The calculation of the concentration charge for RRBs has proven challenging given the lower level of trading in secondary markets for such securities when compared with other Government of Canada securities. The RRB market can be broadly characterized as “buy-and-hold” market. Several metrics support that statement including (i) the high auction participation, (ii) the bid-to-cover ratio at every RRB auction is very high, historically grossly above 2, and (iii) the pre- and post-auction yield behavior results indicates that RRBs are in an environment where demand is greater than supply. As a result, concentration thresholds were very low under the current methodology, while in fact, RRBs would attract large demand in a liquidation event.

As such, the Corporation is proposing that the methodology to establish the threshold for RRBs (i) be based on average amount of bids in the primary market auctions and (ii) be applied at the asset class level. The proposed changes, which will increase the concentration threshold, are anticipated to result in lower Additional Margin on Concentration Risk for such entities transacting Fixed Income Transactions on RRBs. However, it will ensure that the Additional Margin level appropriately reflects the level of risk generated by such concentration, thus fostering fairness among its participants. Indeed, in accordance with their respective RRB’s transaction level, Clearing Members will be subject to fairer Additional Margin for Concentration Risk that is in line with their market appetite for such securities. Please refer to Section 1.1.1.2 of the Risk Manual for details.

(iii) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

As a result of the introduction of the new process supporting the Variation Margin Requirement for Fixed Income Transactions, the Corporation will be 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. As a result, CDCC may face the risk of having to buy back these securities and be exposed to losses. To cover this potential risk, an amount representing the Haircut percentage set at the securities will be collected from the Clearing Member who initially received the specific securities as Additional Margin for Variation Margin Delivery Risk. Please refer to Section 1.1.1.2 of the Risk Manual for details.

This new Additional Margin Requirement, which will only be applicable to Fixed Income Transactions, will affect every Fixed Income Clearing Member equally, in accordance with its activity.

(iv) Amendment to the Additional Margin for Intra-day Variation Margin Risk

Currently, if the Intra-day Variation Margin Risk exposure to a Clearing Member Futures market activities exceeds 25% of such member Margin Requirements or Clearing Fund contribution, subject to a floor of \$10 million, the Corporation may call Additional Margin to cover such Intra-day Variation Margin Risk.

As a result of the introduction of the New Variation Margin Requirement process for Fixed Income, the Variation Margin for Fixed income Transactions will no longer be calculated on an intra-day basis and netted with Initial Margin. Fixed Income Transactions will thus need to be considered as part of the Intra-day Variation Margin Risk. The proposed changes will aggregate Intra-day Variation Margin Risks from both Fixed Income and Futures transactions for the purpose of calculating the Additional Margin for Intra-day Variation Margin Risk. Please refer to Section 1.1.1.2 of the Risk Manual for details.

The proposed changes will provide CDCC with the ability to mitigate the impact that intra-day price fluctuations on Fixed Income Transactions in the same way as for Futures positions.

All other things being equal, this proposed change will impact all Fixed Clearing Members alike.

(v) Amendment to Collateral Policy

The Corporation is proposing to modify the thresholds for collateral eligibility for the following categories of instruments used as collateral which are currently set in % of the Margin Fund:

- All provincial issued and guaranteed Debt Securities: maximum 40%
- Ontario Bonds and Treasury bills: maximum 20%
- Quebec Bonds and Treasury bills: maximum 20%

To be increased to the following thresholds in % of the Margin Fund:

- All provincial issued and guaranteed Debt Securities: maximum 50%
- Ontario Bonds and Treasury bills: maximum 30%
- Quebec Bonds and Treasury bills: maximum 30%

The proposed changes to the collateral eligibility threshold are not anticipated to have any negative impact on the Clearing Members. Instead, they will benefit Clearing Members that hold large portfolios of Ontario and Quebec bonds and Treasury bills. Given the high quality of these securities, increasing such threshold will be a benefit to the financial strength, stability and

resilience of CDCC. Such changes will be reflected in the Risk Manual. Please refer to Section 2.5.2.4 of the Risk Manual for details.

This proposed change will benefit all Clearing Members alike and is not anticipated to impact Clearing Members negatively.

3. Introduction of an Optional Tri-Party Structure for Initial Margin (Approved Custodian)

The introduction of an optional third party structure for the holding of non-cash collateral to satisfy Initial Margin is proposed to further enhance the Clearing Members' services. Flexibility of collateral management is key to the Clearing Members, and, as such, CDCC will be building on the existing operational and risk framework used for the Approved Depository. The Approved Custodian's structure, ownership, capital requirement and participation in CDS will be the same as for the Approved Depository, as further described under Section A-224. All securities held by the Approved Custodian will be subject to an Account Control Agreement.

The Account Control Agreement governing the use of the securities account will provide the Corporation, as a secured party, with the control (in the legal sense) over the securities pledged, thus granting it with the exact same rights and obligations provided under the Rules, both in business as usual, as well as in the case of a suspension of a Clearing Member. In the latter case, the Corporation will issue a notice of exclusive control to the Approved Custodian, thereby terminating the rights of the Clearing Member, as the Account Holder, to give any instructions to its Approved Custodian.

The Corporation will have near real-time access to the Clearing Member's securities account at the Approved Custodian, and withdrawals will be subject to the Corporation's authorization in all cases. The Corporation will perform additional reconciliations daily.

The use of an Approved Custodian for Initial Margin purposes does not affect a Clearing Member's timeline or Margin Requirement. Any Clearing Member using an Approved Custodian for pledging of securities will remain subject to double entry through CDCS for any deposit or withdrawal.

In line with best practices and regulatory requirements to manage critical service providers, Approved Custodians will be subject to annual due diligence, enabling the Corporation to appropriately identify and manage operational risks stemming from the introduction of such type of entity. CDCC is also proposing to introduce an Escalation Process (described under Section 11 of the Operations Manual and mentioned under 4)i) below) which will integrate any Approved Custodian at the source of, or impacted by, an Operational Event in the communication protocol with the affected Clearing Member.

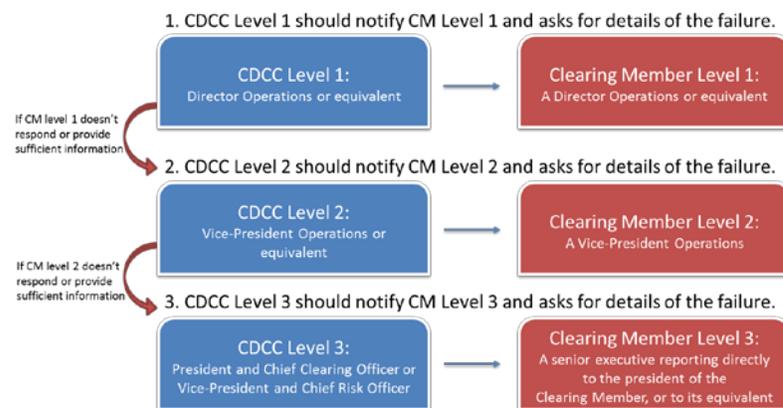
This proposed change may be used by any Clearing Members and will not impact other Clearing Members.

4. Enhancement of the Default Management Process

(i) Introduction of the Escalation Procedure

Section 11 of the Operations Manual introduces the Escalation Procedure, which is a pre-default tool enabling appropriate response to a failure by a Clearing Member, as a result of an operational issue, to meet a payment, transfer, deposit, delivery, or acceptance of delivery when such obligation becomes due under the Rules.

The Escalation Procedure offers guidelines to be followed before, during and after a default, as a result of an operational issue, in order to establish an efficient communication between CDCC and the Clearing Member. The graph below illustrates the communication path to be followed by CDCC and the Clearing Member under the Escalation Procedure:



The introduction of the new Escalation Procedure intends to:

- clarify the path under which CDCC and the Clearing Member shall communicate in order to manage a failure, as a result of an operational issue, to meet a payment, transfer, deposit, delivery, or acceptance of delivery when such obligation becomes due under the Rules;
- describe the tools that may be used by such Clearing Member during the execution of an Escalation Procedure; and
- describe the possible actions to be taken by CDCC in the event the Escalation Procedure does not succeed in managing the operational issue.

(ii) Enhancement to the Default Auction Procedures

The Corporation is proposing certain amendments to further detail the terms and the procedures governing the Default Auction, supplemented by a bidding incentives framework. CDCC's current auction procedure provides few details and does not include any bidding incentives.

The proposed amendments, which are reflected in Section 3 of the Default Manual in Appendix 1 (Allotment of Prefunded Financial Resources to Portfolio Incentives Pools) and Appendix 3 (Bidding Incentives), will provide more transparency with respect to the procedures of the Default Auctions and will introduce a new bidding incentives framework aimed at enhancing the outcome of the auction. The Default Auction is an important tool that allows the Corporation to return to a matched book and crystallize the value of the defaulter's positions.

The proposed terms and procedures of the Default Auction process are composed of the following sections: (i) pre-auction procedures, (ii) auction; and (iii) post-auction procedures, and are described below.

Pre-auction procedures (Subsection 3.3.1)

Participation Conditions:

Participation in the auction will be based on demonstrated operational capacity and sufficient competence to clear. Clearing Members that can clear the asset class(es) contained in the Auction Portfolio, either directly in accordance with the asset classes covered by its CDCC membership or indirectly through a pre-existing relationship with another direct Clearing Member that clears the relevant asset class(es) with CDCC, will be considered Eligible Clearing Members.

Bidding Incentives:

In order to improve the probability of an auction that results in a matched book with minimum use of financial resources, CDCC is proposing to introduce a new bidding incentives framework that ties the allocation of the Clearing Fund of the surviving Clearing Members to extinguish losses with the bidding behaviour of such Clearing Members during the auction. As per the bidding incentives framework, the Corporation will calculate the share of the Clearing Fund Requirement of each Eligible Clearing Member, which will be allotted to each Auction Portfolio. Such allotted Clearing Fund amount represents the Clearing Member's amount at risk as such amount may be subject to use in accordance to priority rules, or seniorization, depending on its bidding behavior.

Given the structure of the proposed framework, and the resources tied to it, CDCC anticipates the bidding incentives to be especially effective if the loss of auction portfolios is not expected to exceed two times the total Clearing Fund amount.

Relevant Information to be sent to the Auction Participants:

Prior to the start of the auction, CDCC shall provide, on a confidential basis, relevant information with respect to each Auction Portfolio and indicate to each Eligible Clearing Member the preliminary amount of its Clearing Fund Requirement allotted to each Auction Portfolio.

Auction Process (Sub-section 3.3.2)

The Auction Participants will be required to submit their bids within a specific bidding window determined by the Corporation. After the end of such bidding window, the Corporation will determine the Prevailing Bidder, which shall be the Auction Participant that has requested the least amount of collateral to accept all the positions associated with the Auction Portfolio. However, the Corporation has full discretion in accepting or rejecting a bid.

Following the results of the Default Auction, Auction Participants will be categorized as follows, depending on their bids:

- Non-bidders: Eligible Clearing Members that did not submit a bid;
- Low-bidders: Eligible Clearing Members that submitted a higher bid in respect of the prevailing bid; and
- High-bidders: The Prevailing Bidder plus any Eligible Clearing Member that submitted an equal bid in respect to the prevailing bid.

Post-Auction Procedures (Sub-section 3.3.3)

If the auction is successful, the Prevailing Bidder will be immediately notified and deemed the beneficial owner of the portfolio.

These proposed changes primarily intend to:

- clarify the different steps to be followed by CDCC for the execution of the auction;
- clarify the required criteria for participation in the auction, in addition to presenting the rights and obligations of both Clearing Members and CDCC; and
- introduce a new bidding incentives framework intended to increase the probability of success of the auction by associating the manner of attributing losses to the Clearing Members' bidding behavior.

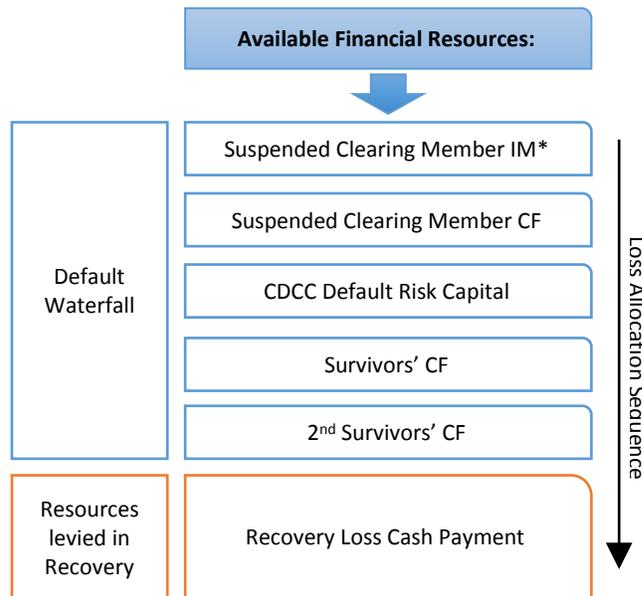
(iii) Clarification of the Loss Allocation Mechanism

These amendments aim to provide more information on the Default Management Process and specifically to clarify the methodology of the loss attribution to both Default Waterfall resources and the resources levied through the exercise of Recovery Powers. Such amendments will allow Clearing Members to better assess their exposures in the event of a default.

The proposed amendments are reflected primarily in:

- the addition of Appendix 1 (Allotment of Prefunded Financial Resources to Portfolio Incentives Pools), Appendix 2 (Loss Allocation Methodology) and Appendix 3 (Bidding Incentives); and
- the revising of Section A-609 (2) of the Rules to refer to the bidding incentive framework (please refer to Appendix 3 (Bidding Incentives)).

The current financial resources available to extinguish losses is composed of the Default Waterfall and the resources levied through the exercise of the Recovery Loss Cash Payment (as indicated in the image below). The current loss allocation methodology is simply performed following the calculation of the aggregate amount representing all losses incurred in connection with the Default Management (irrespective of the portfolios) and applying successively each layer of the Default Waterfall and the resources levied through the exercise of the Recovery Loss Cash Payment until the amount is fully extinguished.



Consistent with the introduction of the bidding incentives framework and the introduction of new Recovery Powers (Reduced Amounts Distribution, in addition to the existing Recovery Loss Cash Payment) described in section 2 below, the following amendments to the loss allocation methodology are proposed:

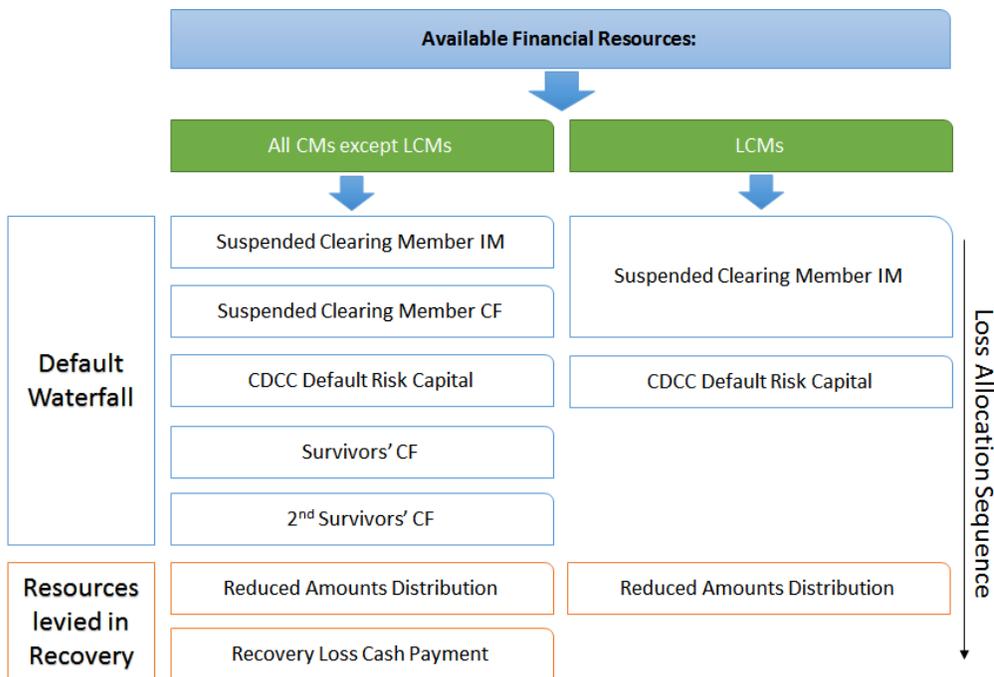
1. CDCC shall aggregate in distinct portfolios the suspended Clearing Member's positions that were liquidated, auctioned or torn-up together and shall calculate separately the loss incurred in connection with each portfolio. Subsequently, the financial resources of the Default Waterfall and those levied by the Recovery Powers will be sequentially allocated to each portfolio and losses will be extinguished within each portfolio, as described below:
 - For each portfolio, the loss will first be attributed to the financial resources associated with the same portfolio; then
 - If any loss remains, such loss will be attributed to excess resources associated with the same asset class as the relevant portfolio; and then
 - If any loss remains, such loss will be attributed to excess resources associated with the other asset classes.
2. The bidding results will be used to determine the allocation of the first and second Clearing Fund Requirements of surviving Clearing Members to successfully auctioned portfolios.
3. The addition of the resources levied as a result of the exercise of the Reduced Amounts Distribution to the recovery enhanced waterfall shall be covered by the loss allocation methodology.

Specifically, based on the new loss allocation methodology, the resources levied through the exercise of Recovery Powers will be used as follows to absorb the losses:

1. the suspended Clearing Member's resources (including Margin and Clearing Fund deposits) are first used to absorb the loss;
2. any remaining loss will be absorbed with the CDCC Default Risk Capital;
3. any remaining loss will be absorbed with the Clearing Fund Requirements of the surviving Clearing Members as follows:
 - (i) for auctioned portfolios, losses are attributed to each Clearing Member's Clearing Fund Requirement based on the bidding behaviour during the auction; and
 - (ii) for liquidated portfolios, losses are attributed pro-rata to each Clearing Member's Clearing Fund Requirement divided by the aggregate amount of all surviving Clearing Members' Clearing Fund Requirements;
4. any remaining loss will be absorbed with the second Clearing Fund Requirements of the surviving Clearing Members following the methodology described in section (3) above;

5. any remaining loss will be absorbed, using the amounts retained through the exercise of the Reduced Amounts Distribution (“Retained Amounts”), pro-rata of each Clearing Member’s Retained Amounts divided by the aggregate Retained Amounts of all Clearing Members. However, in the case of the suspension of more than one Clearing Member, amounts that may be retained from a LCM in connection with the suspension of one Clearing Member may only be used to extinguish losses in relation to the same suspended Clearing Member; and
6. any remaining loss is attributed to Clearing Members’ Recovery Loss Cash Payment contributions pro-rata to each Clearing Member’s Clearing Fund Requirement divided by the aggregate amount of all surviving Clearing Members’ Clearing Fund Requirements.

The following picture summarizes CDCC enhanced Default Waterfall, including the resources levied through the exercise of the Recovery Powers, in accordance with the proposed Rules changes.



5. Enhancement of the Recovery Process

The Corporation is proposing to supplement its existing Recovery Powers by introducing new Recovery Powers (or recovery tools) that may be used by CDCC to manage a Clearing Member default and return to a matched book under extreme financial stress in excess of the capacity of its ordinary default management framework. Specifically, three recovery tools were added to the recovery plan:

- (i) the Reduced Amounts Distribution;
- (ii) the Recovery Auction; and
- (iii) the Voluntary Contract Tear-Up.

In compliance with its Regulatory Recovery Guidance, all of CDCC Recovery Powers, existing and proposed, ensure that each Clearing Member's exposure is measureable, manageable and controllable. Accordingly, in limiting Clearing Member's exposure to fixed or determinable amounts, CDCC's proposed set of tools aim for, but does not guarantee, a full allocation of losses.

(i) Reduced Amounts Distribution

Section A-1005 introduces a Recovery Power in the form of Reduced Amounts Distribution ("RAD"). The RAD allows CDCC to withhold the payment of certain amounts owed to Clearing Members in order to absorb Recovery Losses incurred in connection with the suspension of a Clearing Member. Such amounts mainly include but are not limited to: (1) for Futures, the net positive Gains and Losses; (2) for Options, the net receivable premium in relation to options positions; and (3) for Fixed Income Transactions, the decrease in Variation Margin Requirement since the last Business Day prior to the commencement of RAD.

The exercise of the RAD by the Corporation requires that certain conditions be met. Notably, RAD can only be used upon a declaration of a Recovery Process if the Corporation believes that the Recovery Event may result in CDCC's incurring obligations, losses and expenses in excess of the financial resources contemplated in the Default Waterfall. While the amounts that may be retained using the RAD are not subject to any cap, CDCC shall not exercise this recovery tool for more than four consecutive Business Days during a single Default Management Period.

- **Legal Basis:** The adoption of the RAD as a recovery tool will be implemented through CDCC's Rules. All Recovery Powers affecting Clearing Members are incorporated in CDCC's Rules and constitute an extension of the framework governing the default management. CDCC's Rules, which are public and form part of the binding contract with its Clearing Members, are considered settlement rules under the *Payment Clearing and Settlement Act* (the "PCSA") and benefit from the paramouncy protection under the Act.

- **Reliability:** The RAD is reliable and timely, as CDCC will reduce and withhold payment to a Clearing Member.
- **Measurability:** A Clearing Member's exposure is measurable as it is capped to a predetermined number of days and can be reasonably estimated by Clearing Members. It is also controllable as the Clearing Members can either reduce their positions, thereby limiting the potential amount of variation margin, or refrain from opening new short option positions, thereby limiting the amount of premium subject to RAD.
- **Incentives:** Financial resources retained as part of the RAD are used by CDCC in a prescribed order to absorb losses resulting from the auction. Due to the targeted nature of this recovery tool, Clearing Members are incentivized to participate actively in the Default Auction (i.e., in the Default Management Process taking place prior to Recovery being triggered) to avoid the implementation of the RAD. Furthermore, Clearing Members that are the receivers of positive variation margin may choose to actively close out their positions on their own to reduce their exposure and limit potential RAD. Such actions will contribute to minimize the risk and help CDCC to either (1) restore a matched book and/or (2) reduce the outstanding positions with the defaulter, thus limiting the need to resort to Voluntary Contract Tear-up.
- **Impact:** The RAD is a very precise tool that does not impact Clearing Members that are already negatively impacted by market fluctuations.
- **LCM Modified Application:** Specifically for LCMs, RAD shall only be applied to Fixed Income Transactions that were originally entered into with the suspended Clearing Member. Furthermore, in the case of the suspension of more than one Clearing Member, amounts that may be retained from a Limited Clearing Member in connection with the suspension of one Clearing Member may only be used to extinguish losses in relation to the same suspended Clearing Member.

(ii) Recovery Auction

Section A-1007 introduces a Recovery Power in the form of Recovery Auction.

CDCC proposes to use the Recovery Auction for Fixed Income Transactions only upon declaration of a Recovery Process if the Corporation believes that such Recovery Powers may allow it to close-out the remaining suspended Clearing Member's positions. The Recovery Auction relies on the same participation, bidding rules and principles governing the Default Auction as set out in Sub-section 3.3 of the Default Manual. Therefore, all Clearing Members, including LCMs, are encouraged to participate in a Recovery Auction on a voluntary basis. Contrary to the principles governing the Default Auction, the bidding behavior of a Clearing Member in the Recovery Auction has no impact on the loss allocation methodology.

- **Legal Basis:** The adoption of the Recovery Auction will be implemented through CDCC's Rules. All Recovery Powers affecting Clearing Members are incorporated in CDCC's Rules and constitute an extension of the framework governing the default management. CDCC's Rules, which are public and form part of the binding contract with its Clearing Members, are considered settlement rules under the PCSA and benefit from the paramountcy protection under the Act.
- **Reliability:** Auction process is a reliable and timely method to re-establish a matched-book within a closed clearing environment. It limits the potential for significant credit losses given that the participants to the auction are all incentivized by their participation in the Clearing Fund and other financial resources at stake to reduce the overall losses stemming from the auction process. Indeed, if such loss exceeds the defaulter's financial resources, it will be absorbed by the Clearing Members indirectly.
- **Measurability:** Participation in the Recovery Auction is voluntary. Clearing Members bid on positions in which they believe the risk to be manageable at a price they feel appropriate.
- **Incentives:** Auctions are a competitive process whereby Prevailing Bidders are compensated financially for their participation.
- **Impact:** Since participation at the Recovery Auction is voluntary, any Eligible Clearing Member, including a Limited Clearing Member, can actively bid in the limit of the risks that it is willing to take, and therefore any impacts are bestowed upon those that are willing to bear the risk.
- **LCM Application:** When choosing to participate in the Recovery Auction, LCMs are subject to the same terms and conditions applicable to other Clearing Members.

(iii) Voluntary Contract Tear-Up

Section A-1008 introduces a Recovery Power in the form of Voluntary Contract Tear-Up.

In order to return to a matched book, the Corporation may ask the surviving Clearing Members, on a voluntary basis, to tear-up outstanding positions. The purpose of a Voluntary Contract Tear-Up is to close-out the remaining suspended Clearing Member's positions by simultaneously terminating the offsetting positions held by the surviving Clearing Members.

The exercise of the Voluntary Contract Tear-Up by the Corporation requires that certain conditions be met. Notably, Voluntary Contract Tear-Up can only be used upon a declaration of Recovery Process if the Corporation is unable to transfer, close-out, or otherwise liquidate all the positions of the suspended Clearing Members. Moreover, for Fixed Income Transactions, the Voluntary Contract Tear-Up can only be offered following the holding of a Recovery Auction. In order to implement the Voluntary Contract Tear-up, CDCC will initially determine the suspended Clearing Member's positions that have not already been matched and that are to be terminated.

Then, a portion of such position will be attributed to each Clearing Member, holding the opposite position in regard to the suspended Clearing Member. As explained in Section A-1008, the attribution to Clearing Members (including Limited Clearing Members) is fulfilled based on the relative size of open positions in the opposite side of the unmatched positions of the suspended Clearing Member. The relevant Clearing Members are notified by CDCC of their attributed portion of positions to be terminated and have the option to accept or refuse such termination.

- **Legal Basis:** The adoption of the Voluntary Contract Tear-Up as a recovery tool will be implemented through CDCC's Rules. All Recovery Powers affecting Clearing Members are incorporated in CDCC's Rules and constitute an extension of the framework governing the default management. CDCC's Rules, which are public and form part of the binding contract with its Clearing Members, are considered settlement rules under the PCSA and benefit from the paramountcy protection under the Act.
- **Reliability:** The Voluntary Contract Tear-Up is reliable and timely since such agreement to tear-up any outstanding contract immediately neutralizes the loss and allows the CDCC to re-establish a matched book.
- **Measurability:** As the Corporation notifies the Clearing Members of the closeout value of any contracts to be torn up, the Clearing Members are in a position to assess impact against other positions in the marketplace (i.e., hedges in place).
- **Incentives:** Participation in a Voluntary Contract Tear-up allows a Clearing Member to manage its exposure on open positions which can be subject to RAD. Furthermore, by voluntarily tearing-up a contract and helping CDCC to return rapidly to a matched book, such Clearing Member contributes to the overall loss reduction - losses which will indirectly be borne by Clearing Members.
- **Impact:** Clearing Members can determine the closeout value of any contracts to be torn up and, therefore, are fully cognizant of the financial impact of a Voluntary Contract Tear-up and are in a position to evaluate this impact against other positions in the marketplace (i.e., hedges in place).
- **LCM Application:** When consenting to a Voluntary Contract Tear-up, LCMs are subject to the same terms and conditions applicable to other Clearing Members.

c. Proposed Amendments

Please refer to the appendix attached.

d. Benchmarking

1. Introduction of Limited Clearing Members

Through the introduction of the Limited Clearing Members category, the Corporation is proposing a unique approach to provide buy-side participants with direct clearing access. While the introduction of the new LCM category was mostly achieved as a result of the industry consultation, the Corporation has reviewed the existing buy-side clearing models offered by three other CCPs, namely CME, ICE Europe and Eurex.

The CME, Eurex and ICE have or will be introducing some form of sponsored clearing membership models that provide end-user market participants with a direct connection to the clearing house. All models reviewed differed from CDCC's proposed Limited Clearing Members model. Sponsored membership typically combines elements of a traditional FCM clearing with elements of margin and collateral management clearinghouse connectivity associated with direct clearing memberships.

The information summarized below has been extracted from the website and regulatory filings of each respective clearing house. The Corporation does not make any representation as to its accuracy.

Clearing house	Key Features
CME - Direct Funding Participant (DFP)	<p><u>Direct Access and CCP Counterparty</u></p> <ul style="list-style-type: none"> - A DFP can clear trades for its own account as long as a clearing member registered as its guarantor (a FCM) guarantees the financial and operational obligations of the DFP. <p><u>Type of Entities</u></p> <ul style="list-style-type: none"> - Sell side and buy side market participants. <p><u>Margin and Settlement</u></p> <ul style="list-style-type: none"> - A DFP margin and collateral requirements are settled directly with the CME clearinghouse through an approved settlement bank. <p><u>Clearing Fund Contribution</u></p> <ul style="list-style-type: none"> - The DFP does not contribute to the guarantee fund. The financial guaranty and margin performance obligations of the DFP remain the responsibility of a CME Group clearing member (FCM) guarantor. <p><u>Product Coverage</u></p> <ul style="list-style-type: none"> - DFPs may participate in the asset classes in which their Guarantors maintain a membership (Futures and Swaps).
ICE Clear Europe - Sponsored Principal Account	<p><u>Direct Access and CCP Counterparty</u></p> <ul style="list-style-type: none"> - The Sponsored Principal is a legal counterparty to trades with the clearing house. The Sponsored principal and the Sponsor are jointly liable to the clearing house. <p><u>Type of Entities</u></p> <ul style="list-style-type: none"> - Unknown. <p><u>Margin and Settlement</u></p> <ul style="list-style-type: none"> - A Sponsored Principals margin and collateral requirements may be settled directly with

	<p>the clearinghouse through an approved settlement banking relationship or through the Sponsor.</p> <p><u>Clearing Fund Contribution</u></p> <ul style="list-style-type: none"> - The Sponsored Principal does not contribute to the Guaranty Fund but the Clearing Member will be responsible for increase GF contributions. <p><u>Product Coverage</u></p> <ul style="list-style-type: none"> - Any ICE Clear Europe's clearing services (i.e. Futures and Options, OTC CDS and OTC FX clearing).
EUREX – ISA Direct	<p><u>Direct Access and CCP Counterparty</u></p> <ul style="list-style-type: none"> - Market participants establish direct contractual relationships with EUREX. <p><u>Type of Entities</u></p> <ul style="list-style-type: none"> - Insurance companies, financial institution, pension funds, investment funds. <p><u>Margin and Settlement</u></p> <ul style="list-style-type: none"> - Margin and collateral movements may be done through the Clearing member or via the ISA Direct participant's own banking arrangements. <p><u>Clearing Fund Contribution</u></p> <ul style="list-style-type: none"> - Clearing Agent acts as an agent to cover the default fund contribution. <p><u>Product Coverage</u></p> <ul style="list-style-type: none"> - Eurex OTC IRS Clear and Eurex Repo.

2. Ancillary Changes Affecting Margin

(i) Fixed Income Variation Margin Process

None of the CCPs reviewed by CDCC provides for an exchange of securities as proposed by CDCC.

Instead, the Variation Margin for repo services of LCH Ltd and Eurex is settled daily in cash, whereas the Variation Margin for LCH SA is aggregated to the Initial Margin and results in a margin credit or debit depending on whether it represents a gain or a loss for the Clearing Member.

(ii) Additional Margin for Concentration Risk on Fixed Income Transactions on RRBs

No benchmark is available as CCPs do not disclose such granular information.

(iii) Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

No benchmark is available as CCPs do not disclose such granular information.

(iv) Additional Margin for Intra-day Variation Margin for Fixed Income Transactions

The majority of the benchmarked CCPs provide for an intra-day margin call in case a Clearing Member’s exposure exceeds a certain threshold.

Specifically,

- Ice Clear Europe indicates that exposure is monitored during the day on an ongoing basis and may subject its Clearing Members to an additional Intra-day Margin Call in the event that the Initial Margin requirement and Intra-day VM losses exceeds a predefined limit.
- Hkex OTC Clear provides, in addition to its routine Intra-day VM Calls, for the possibility to subject its Clearing Members to an *ad hoc* Intra-day VM at any time during a day in the event of an increase of VM losses above a certain predefined limit.

(v) Collateral Policy

The following table presents some of the eligible collateral limits of four other CCPs.

CCP	Eligible Collateral
Ice Clear Credit	<ul style="list-style-type: none"> ● US treasuries can represent 65% for client-related Initial Margin. ● US treasuries can represent 35% for non-client related Initial Margin.
CME Group	<ul style="list-style-type: none"> ● CME both has hard dollar and percentage limits. ● US Government Agencies: Max 100% of the Initial Margin requirement up to \$2 billion. ● US TIPS: Max 100% of the Initial Margin requirement up to \$1 billion.
Eurex	<ul style="list-style-type: none"> ● No limit on EUR Government Bonds. ● CAD or USD government bonds is limited to 25% of the issued capital.
SGX-DC	Sovereign limits for Government securities: <ul style="list-style-type: none"> ● Tier 1 (Singapore issuer): 100% of the CM’s Total Margin Held; ● Tier 2 (US issuer): 90% of the CM’s Total Margin Held; and ● Tier 1 (Japan, France and Germany issuer): 80% of the CM’s Total Margin Held.

3. Tri-Party Structure for Initial Margin (Approved Custodian)

Clearing House	Description
CME	Clearing members can pledge collateral to an approved depository in a CME account and the CME, over which CME has control. It is unclear if a tri-party structure under which the Clearing Member’s account at a third party is permitted.
ICE Clear Europe	Clearing members can pledge collateral in a tri-party structure at Euroclear Bank in the

and LCH Clearnet SA	Clearing Member's account, subject to specific terms and conditions.
Eurex Clearing	Clearing members can pledge collateral in a tri-party structure (e.g., Clearstream banking) in the Clearing Member's account, subject to specific terms and conditions.

4. Enhancement of Default Management Process

CDCC has completed a review of the recovery rules of four CCPs, namely LCH.Clearnet LLC, CME Group, ASX (Futures) and Eurex.

(i) Escalation Procedure

The benchmarked CCPs do not explicitly disclose their escalation procedures. However, escalation procedures are supported by the PFMI Guidance with default management and operational risk management.

(ii) Auction rules

All benchmarked CCPs have comparable rules governing the auction during a Default Management Period. The benchmarked clearing houses have also all included bidding incentives comparable to the ones proposed by CDCC.

(iii) Loss allocation mechanism

Although not all the benchmarked CCPs have public rules that explicitly explain the loss allocation mechanism, CME Group and LCH.Clearnet LLC have comparable loss allocation mechanisms that allow them to extinguish losses with the CCP's default waterfall following the Default of a Clearing Member.

5. Enhancement of Recovery Process

CDCC has completed a review of the recovery rules of four CCPs, namely LCH.Clearnet LLC, CME Group, ASX (Futures) and Eurex.

(i) Reduced Amounts Distribution

CME, LCH.Clearnet and ASX have comparable Recovery Powers which provide for the withholding of a portion or the entirety of Clearing Members' gains in order to cover any outstanding losses during the recovery process. However, no CCP has been found to apply a tool such as RAD for Fixed Income products.

(ii) Recovery Auction

Although not explicitly disclosed in the rules, the benchmarked CCPs do not provide specifically for a Recovery Auction. However, the rules of all these CCPs allow for holding auction(s) following the default of a Clearing Member.

(iii) Voluntary Contract Tear-up

CME and ASX have comparable rules that provide for the termination of any remaining unmatched positions following the default of a Clearing Member. However, this process is not voluntary, and Clearing Members are forced to accept the termination of the allocated portion of positions. Clearing Members only have the opportunity to choose an allocation of such positions across their accounts.

III. PRIMARY MOTIVATION

1. Introduction of the Limited Clearing Members Category

Consistent with the G20 commitment to address resiliency in the OTC markets and the liquidity pressure on the Canadian repo markets following the 2008 financial crisis, the Bank of Canada has continuously promoted the development of a CCP cleared repo service in Canada. The Corporation first launched its CCP Fixed Income Clearing service in 2012. While the admission of the large Canadian banks and their affiliates (which are IIROC dealer members) as Fixed Income Clearing Members represented a key milestone, the large investment institutions (buy-side), such as the Canadian pension funds which are active in the Canadian repo market, remained excluded from the CCP Fixed Income Clearing service. The expansion of its membership to Limited Clearing Members thus constitutes a major initiative for CDCC and the Canadian repo market.

2. Ancillary Changes Affecting Margin

(i) Changes to Variation Margin Process for Fixed Income Transactions

The primary motivation for the introduction of the new Variation Margin Process for Fixed Income Transactions is to enable the use of Reduced Amounts Distribution (or VMGH) in the event of a Recovery Process without increasing the liquidity pressure on the Clearing Members by resorting to cash.

(ii) Concentration Margin on Fixed Income Transactions on RRBs

The primary motivation for changes to the Concentration Margin on Fixed Income Transactions on RRBs is to ensure a fair concentration charges for such Fixed Income Transactions. This is accomplished by accessing all sources of RRB liquidity venues, including the Bank of Canada auction process for these securities.

(iii) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

The primary motivation for the introduction of an Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions is to protect the CCP that incurs additional risk by guaranteeing the return of specific securities in the course of the new Variation Margin Requirement for Fixed Income Transactions.

(iv) Amendment to Margin for Intra-day Variation Margin Risk for Fixed Income Transactions

The primary motivation of the introduction of the amendment to the Additional Margin for Intra-day Variation Margin Risk to capture Fixed Income Transactions is to protect the CCP as a result of the increase of intra-day exposure resulting from the change of process for the new Variation Margin Requirement for Fixed Income Transactions.

(v) Amendment to Collateral Policy

The primary motivation of the introduction of amendment to the collateral policy is to provide Clearing Members with greater flexibility with their collateral management while ensuring CDCC is entrusted with high quality collateral at all time.

3. Introduction of an optional third party structure for Initial Margin (Approved Custodian)

The primary motivation of the introduction of an optional third party structure for Initial Margin (Approved Custodian) is to facilitate access to the CCP for such entities that do primarily rely on a custodian to manage their collateral. The use of an Approved Custodian for Initial Margin purposes will enable direct access while requiring limited changes to the Clearing Members' operations and systems.

4. Enhancement of Default Management Process

The primary motivation of the proposed amendments is to ensure ongoing compliance with the regulatory requirements applicable to CDCC, including the PFMI and the CPMI-IOSCO Recovery Guidance.

5. Enhancement of Recovery Process

The primary motivation of the proposed amendments is to ensure ongoing compliance with the regulatory requirements applicable to CDCC, including the PFMI and the CPMI-IOSCO Recovery Guidance.

IV. IMPACTS ON TECHNOLOGICAL SYSTEMS

1. Introduction of the Limited Clearing Members Category

Technical Changes in CDCS Configuration

As a result of the introduction of a new category of Limited Clearing Members, certain changes will be implemented in CDCS (Sola Clearing) in order to fully support the integration of such members. Specifically, the CDCS Clearing Member interface (accessible to CDCC) will offer two different risk models: (i) Clearing Members with the Principal Risk Model (i.e., Current Model) and (ii) Clearing Members with the LCM Risk Model. When CDCC creates a Clearing Member's configuration for a member subject to the LCM Risk Model in the system, the Base Clearing Fund Requirement configuration will be configured as zero. Such enhancement will also enable the Corporation to define a margin multiplier to support the Effective Ratio to which Limited Clearing Members are subject. As for the New Additional Margin for Uncovered Residual Risk, there are no direct impacts on technological systems since the analytic tools which support the intra-day risk management process are developed and tested internally by CDCC, separately from CDCC's current technological systems.

There are no technical changes to support the different operational timelines. However, as a result of their distinct banking arrangement, the Limited Clearing Members will be excluded from the Overnight Settlement bank transfer process (which currently takes place at 7 a.m.). Each Clearing Member configuration will define if a member is covered by the Overnight Settlement process. In the case of the LCM Risk Model, the configuration will exclude the Limited Clearing Members from this process.

Such changes do not otherwise affect the current Clearing Members.

2. Ancillary Changes Affecting Margin

(i) Changes to Variation Margin Process for Fixed Income Transactions

As a result of the introduction of the new process for Variation Margin for Fixed Income Transactions, the Intra-Day and End-of-Day batches have been modified to separate the gains calculated on the Market Value for all Fixed Income Transactions (MTM) from the aggregation of the Base Initial Margin and the Additional Margin for Concentration Risk. The Repo Rate Payment (in cash) will no longer be necessary.

The new Net Variation Margin Requirement will be now subject to a new collateral exchange process federated by CDCC. On a daily basis, collateral pledged from any Clearing Member to cover a positive Variation Margin Requirement will be reallocated amongst other Clearing Members to cover a negative Variation Margin Requirement. CDCC will calculate the quantity of securities to distribute to each receiving Clearing Member.

Clearing Members reports will be updated with the addition of: (1) a new Entitlement Report (MS73) for Coupon Payments and bond conversion to cash at maturity issued to all Fixed Income Clearing Members; (2) a new Variation Margin Report (MS10) exposing the Net Variation Margin Requirement for Fixed Income Transactions and details of securities pledged (by ISIN) by the Clearing Member to meet its requirements (which report is issued to all Fixed Income Clearing Members); and (3) a new internal report, added to provide a Variation Margin summary per member to the clearinghouse (CS10).

The End of Day Report (TLG) provided to the members will be updated to detail any information used to build the MS73 and MS10 reports.

(ii) Amendment to Concentration Margin on Fixed Income Transactions on RRBs

No technological changes were required to support this amendment.

(iii) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

There are no direct impacts on the systems as the analytic tools to support intra-day risk management process are developed and tested internally by CDCC, separately from CDCC's current clearing systems.

- (iv) Amendment to Margin for Intra-day Variation Margin Risk for Fixed Income Transactions

There are no direct impacts on the systems as the analytic tools to support intra-day risk management process are developed and tested internally by CDCC, separately from CDCC's current clearing systems.

- (v) Amendment to Collateral Policy

No technological changes were required for this amendment.

- 3. Introduction of an optional third party structure for Initial Margin (Approved Custodian)

No technological changes were required following the introduction of the optional third party structure for Initial Margin (Approved Custodian).

- 4. Enhancement to the Default Management Process

There are no impacts contemplated on the Corporation's technological systems for this amendment.

- 5. Enhancement to the Recovery Process

There are no impacts contemplated on the Corporation's technological systems for this amendment.

V. OBJECTIVES OF THE PROPOSED MODIFICATIONS

- 1. Introduction of the Limited Clearing Members Category

In line with the Bank of Canada's promotion of central clearing of OTC instruments, CDCC is proposing to expand its membership by the introduction of a new type of Clearing Member called Limited Clearing Members that are buy-side participants active in the Canadian repo market and have strong creditworthiness. Expanding membership to include buy-side participation will greatly reduce the likelihood of repeating the liquidity pressure that occurred in the Canadian repo market during the crisis of 2008.

2. Ancillary Changes Affecting Margin

(i) Changes to Variation Margin Process for Fixed Income Transactions

By introducing the changes to Variation Margin process for Fixed Income Transactions, the Corporation enabled the application of Reduced Amounts Distribution (VMGH) on Fixed Income Transactions, in the event of the declaration of a Recovery Process, consistent with its Futures and Options application, while limiting changes to its Clearing Members' system and liquidity impact.

(ii) Concentration Margin on Fixed Income Transactions on RRBs

By introducing such changes to the Margin methodology, the Corporation intends to ensure appropriate risk coverage.

(iii) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

By introducing such changes to the Margin methodology, the Corporation intends to ensure appropriate risk coverage.

(iv) Amendment to Margin for Intra-day Variation Margin Risk for Fixed Income Transactions

By introducing such changes to the Margin methodology, the Corporation intends to ensure appropriate risk coverage.

(v) Amendment to Collateral Policy

By introducing such changes to the collateral policy, the Corporation intends to expand the usage of provincial government bonds, thereby alleviating the reliance on Government of Canada collateral.

3. Introduction of an Optional Tri-Party Structure for Initial Margin (Approved Custodian)

By introducing the proposed optional tri-party structure, the Corporation intends to facilitate access to the CCP to the Clearing Members that rely on external service providers, such as the Approved Custodian, to manage their collateral.

4. Enhancement to the Default Management Process

The proposed amendments will enhance the effectiveness of the Default Management Process, thereby limiting the losses incurred as a result of the suspension of a Clearing Member.

5. Enhancement to the Recovery Process

The proposed amendments will establish appropriate Recovery Powers to enhance the existing tools and procedures to manage a Clearing Member default and return to a matched book, thereby increasing the likelihood that the FMI can recover from a Recovery Event and continue to offer its critical services.

VI. PUBLIC INTEREST

1. Introduction of Limited Clearing Members Category

The Corporation, as a designated Financial Market Infrastructure of systemic importance, plays a critical role in reducing system risk and increasing efficiency and transparency. CDCC provides multilateral netting, cost efficiency through an efficient use of collateral and capital, and a solid risk management framework to all Clearing Members. The amendments are designed to extend CDCC's benefits to the buy-side repo market activities not currently serviced by a CCP. Central clearing of OTC repo market activities will greatly contribute to reducing leverage and concentration in the market and thus to systemic risk reduction.

Under the current regulatory environment, bilateral repo transactions increase the balance sheet, whereas cleared repo are netted at the CCP, thus limiting the balance sheet impact. Unlike the banks and their affiliates, investment institutions are considered to be net borrowers of cash in the repo market. This key feature, given the treatment of bilateral repos, hinders financing transactions and negatively impacts bond market liquidity. By expanding membership to the buy-side participants, entities subject to regulatory standards will benefit from netting and reduction of their counterparty risk exposure. This should, in turn, allow banks and their affiliates to more effectively deploy their capital.

Impact of the Introduction of Limited Clearing Members on the Clearing Fund

Following the introduction of the Limited Clearing Members' activity in Fixed Income, in accordance with the Clearing Fund methodology, the Corporation anticipates an increase of the Clearing Fund size of approximately \$140 million. In the absence of the Limited Clearing Members' contribution in the Clearing Fund, the total increase of the Clearing Fund will be chiefly supported by Fixed Income Clearing Members (excluding Limited Clearing Members)

submitting for clearing with the Corporation Fixed Income Transactions first entered into with a Limited Clearing Member. The Corporation, however, anticipates such increase to be relatively moderate when compared to the significant increase in the volume cleared at CDCC. Most importantly, it should be noted that non-Fixed Income Clearing Members should not anticipate an increase in their Clearing Fund contribution as the overall increase of the Clearing Fund size will be offset by a reduction of their respective weight in the Clearing Fund.

Notwithstanding the paragraph above, the increase of cleared activities will greatly contribute to the transparency of the repo market activities, enabling CDCC, through its risk management framework, of which the Clearing Fund is a key component, to adequately and appropriately manage the risk and ensure financial resilience.

2. Ancillary Changes Affecting Margin

In CDCC's opinion, the proposed amendments are not contrary to the public interest.

3. Introduction of an optional tri-party structure for Initial Margin (Approved Custodian)

By facilitating access to the CCP for such entities that primarily rely on the Approved Custodian to manage their collateral, the Corporation fulfills its public interest mandate. In CDCC's opinion, the proposed amendments are not contrary to the public interest.

4. Enhancement to the Default Management Process

The proposed amendments are designed to extend and improve CDCC's current risk management framework. In CDCC's opinion, the proposed amendments are not contrary to the public interest.

5. Enhancement to the Recovery Process

The proposed amendments are designed to extend and improve CDCC's current risk management framework, including in times of extreme market conditions. Such amendments contribute to the FMI financial resilience and, as such, are not contrary to the public interest.

VII. MARKET IMPACTS

1. Introduction of the Limited Clearing Members Category

The expansion of the Corporation's membership to buy-side participants will enhance market efficiency in several ways, benefitting both the current Clearing Members by contributing to a more efficient, stable and resilient system and the Corporation, by enhancing transparency, stability and resiliency.

Centrally cleared Fixed Income services may provide for additional balance sheet netting to the Fixed Income Clearing Members that are subject to IFRS standards through the incremental volume of transactions being novated, netted and settled through CDCC. The proposed initiative will therefore not only benefit the CCP by expanding its membership to include higher quality credit counterparties, but also will enable those entities not previously eligible for direct clearing to benefit from the CCP netting. The introduction of direct clearing access to buy-side participants will further provide CDCC with a clearer picture of the overall trade portfolios and associated risk by directly capturing the trade activity executed by the buy-side participants, thus enabling it to better manage the risks.

Furthermore, as the design of the LCMs category was developed in conjunction with the enhancement of the Default Management (i.e., bidding incentives framework, loss allocation methodology and introduction of new Recovery Powers), even taking into consideration the core principles, the LCM participation in auctions will enhance the likelihood of a successful Default Management Process. Indeed, the LCMs provide significant liquidity to the Canadian marketplace and are anticipated to be active participants in the auction process, thereby reducing the potential for market-wide disruption.

Impact on Margin and Clearing Fund Requirements

As a result of the introduction of the Limited Clearing Members activity, CDCC estimates that the LCMs could, on average, contribute up to \$1,100 million in Initial Margin, taking into consideration the Effective Ratio. Reciprocally, Clearing Members transacting with LCMs could on average contribute, for the same activity, up to \$600 million in Initial Margin, in addition to their current activities, taking into consideration the effect of netting. The amount of Initial Margin being a direct function of the activity of any member, such increases remain under the direct control of each Clearing Member.

CDCC also estimates that the Clearing Fund could increase by up to \$140 million. However, this increase will mainly be absorbed by Clearing Members transacting with the LCMs. Indeed, non-Fixed Income Clearing Members should not expect an increase in their Clearing Fund

contribution as the overall increase in the total Clearing Fund will be offset by a reduction of their respective weight in the Clearing Fund.

From a market perspective, the introduction of CCP collateral requirement on otherwise OTC bilateral Fixed Income Transactions will reduce leverage in the system and contribute to enhanced resiliency and reduced systemic risk.

Funding Liquidity Impact

As part of its analysis of the impact of the introduction of Limited Clearing Members, CDCC has reviewed the potential impact on its own liquidity needs. The liquidity of the cleared repo market may be impacted, from time to time, by the temporarily lack of financial resources necessary to support the delivery versus payment (DVP) settlement mechanism. While this situation, referred to as congestion, can occur at different stages in the course of a day at CDCC, it is primarily caused by the lack of timely funding of the Clearing Members' accounts to facilitate their DVP Settlement. In such cases, in order to facilitate the settlement of the Fixed Income Transactions, CDCC temporarily relies on its own liquidity lines to substitute the Net Buyer's obligation. According to its preliminary analysis, based on simulated LCMs trading behaviour, the introduction of LCMs to CDCC Fixed Income clearing service is expected to have minimal impact on the overall congestion level and is not anticipated to require a resizing of its liquidity facilities.

2. Ancillary Changes Affecting Margin

(i) New Variation Margin Process for Fixed Income Transactions

The introduction of the new Variation Margin Process for Fixed Income Transactions will contribute to market efficiency by the daily exchanges of securities. The daily transfer of securities to the Clearing Member which has a net gain (a negative Net Variation Margin Requirement) and the option to re-hypothecate and re-use such securities will foster effective collateral management while reducing the liquidity pressure and enhancing capital efficiency for all Fixed Income Clearing Members that currently have to set aside cash to honor the Repo Rate Payment component of the Variation Margin. The Corporation thus considers that the proposed amendments benefit market efficiency.

The Variation Margin process change does not impact the overall amount collected in Initial and Variation Margins by a Clearing Member. However, as a result of the introduction of new LCM activities in the CCPs, CDCC anticipates an overall increase of the amount of Variation Margin exchanged by \$283 million. The payment of Variation Margins already occurs bilaterally under certain conditions and, as such, does not represent an entirely new cost for the Clearing Members.

(ii) Concentration Margin on Fixed Income Transactions on RRBs

Following the deployment of the new RRB liquidation thresholds, the Concentration Margin on Fixed Income Transactions on RRBs is expected to be null.

However, the broader Concentration Margin on all Fixed Income Transactions is expected to be impacted by the integration of LCM transactions. Based on Q1 2016 data, the average amount of the Concentration Margin was \$77 million. Following the integration of the anticipated LCM Fixed Income Transactions, the average amount of the Concentration Margin will reach \$106 million. This represents an increase of \$29 million which will be divided as follows: \$11 million for the Clearing Members, excluding LCMs, and \$18 million for the LCMs. As for Initial Margin, any Concentration Margin impact on a Clearing Member solely results from the voluntary directional increase of such Clearing Member activity, and thus remains under its control. Clearing Members may mitigate such impact by diversifying their transactions.

(iii) New Additional Margin for Variation Margin Delivery Risk for Fixed Income Transactions

The average amount of the Additional Margin for VM Delivery Risk is estimated to vary between \$6.5 million and \$74.5 million for all Fixed Income Clearing Members.

(iv) Amendment to Margin for Intra-day Variation Margin Risk for Fixed Income Transactions

Currently, fluctuation of Variation Margin on Fixed Income Transactions are collateralized on an intra-day basis. As a result of the proposed change, which will result in Variation Margin being exchanged daily, the inclusion of intra-day Variation Margin movement to the Additional Margin for Intra-day Variation Margin Risk should generally not increase the overall margin requirement of a Clearing Member. In fact, the Additional Margin for Intra-day Variation Margin Risk will now only occur if it exceeds a certain threshold.

Based on Q1 2016 data, the average amount required in Additional Margin for Intra-day Variation Margin Risk (covering Futures activity only) was \$30 million. Following the integration of the anticipated LCM Fixed Income Transactions, the average amount of the Additional Margin for Intra-day Variation Margin Risk may approximate \$79 million. This represents an increase of \$49 million which will be distributed as follow: \$32 million for the Clearing Member, excluding LCMs, and \$17 million for the LCMs.

(v) Amendment to Collateral Policy

The amendment to the collateral policy will allow all Clearing Members to post additional Quebec and Ontario provincial bonds and Treasury bills to meet their Margin requirements. The amended list of eligible collateral thus offers more flexibility to the Clearing Members.

With the aim of protecting market participants from counterparty risk, the modification of the current limits and the introduction of new ones will strengthen CDCC's role in protecting the integrity and stability of the financial markets.

(vi) Additional Margin for Mismatched Settlement Risk for Fixed Income Transactions

The Additional Margin for Mismatched Settlement Risk methodology will remain unchanged and will be applied to all Fixed-Income Clearing Members.

Based on Q1 2016 data, the average amount of the Additional Margin for Mismatched Settlement Risk was \$95 million. Following the integration of the anticipated LCM Fixed Income Transactions, the average amount of the Additional Margin for Mismatched Settlement Risk will reach \$164 million. This represents an increase of \$69 million, which will be distributed equally between Clearing Members, including LCMs. As is the case for the Initial Margin, the amount of Additional Margin for Mismatched Settlement Risk is a direct consequence of the Clearing Member's activity and thus remains under its control.

3. Introduction of an optional third party structure of Initial Margin (Approved Custodian)

The introduction of an optional third party structure for Initial Margin (Approved Custodian) is expected to contribute to market efficiency by enabling those Clearing Members accustomed to resorting to their custodian for the holding of Initial Margin to rely on this structure, and therefore limiting the changes to their processes.

4. Enhancement to the Default Management Process

The proposed amendments constitute enhancements to the Default Management Process and are expected to contribute to market efficiency in the event of the suspension of a Clearing Member by ensuring an efficient auction process supported by appropriate incentives. The increased likelihood of a successful Default Management Process, thereby enabling the Corporation to promptly return to a matched book and limit the financial losses incurred by the Corporation, will contribute by limiting impact on the Clearing Members.

CDCC believes that these amendments have been appropriately calibrated to take into account the interests of its Clearing Members and to support the stability of the broader financial system.

5. Enhancement to the Recovery Process

The proposed amendments, consistent with the Regulatory Recovery Guidance, ensure that each Clearing Member, in the unlikely event of the Corporation entering into Recovery Process, will be subject to transparent Recovery Powers and that such Clearing Member's risk exposure is measurable, manageable and controllable. The Corporation believes that these amendments have been appropriately calibrated to take into account the interests of its Clearing Members and to support the stability of the broader financial system.

VIII. PROCESS

The proposed amendments are to be submitted for approval to the CDCC Board of Directors. After Board approval has been obtained, the proposed amendments, including this analysis, will be transmitted to the Autorité des marchés financiers in accordance with the self-certification process, and to the Ontario Securities Commission in accordance with the "Rule Change Requiring Approval in Ontario" process. The proposed amendments and analysis will also be submitted for approval to the Bank of Canada in accordance with the Regulatory Oversight Agreement.

IX. EFFECTIVE DATE

Subject to a 60-day period for public comments and regulatory approval, the proposed rule amendments will take effect immediately thereafter.

X. ATTACHED DOCUMENTS

- Appendix 1: Rules (Blackline and Clean)
- Appendix 2: Operations Manual (Blackline and Clean)
- Appendix 3: Default Manual (Blackline and Clean)
- Appendix 4: Risk Manual (Blackline and Clean)

APPENDIX 1



~~CANADIAN DERIVATIVES CLEARING CORPORATION~~

CDCC

PROPOSED RULES

~~VERSION OF JULY 11,~~ 30 August 2017

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

“Acceptable Instrument Types” or **“Acceptable OTCI”** – means Over-The-Counter Instruments which are determined by the Corporation as acceptable for clearing with ~~the Corporation.~~ ~~“Acceptable Underlying Interests”~~ ~~— means an Underlying Interest which is determined by the Corporation as acceptable for clearing by~~ the Corporation.

“Acceptable Marketplace” – means a bilateral or multilateral marketplace, other than an Exchange, where buyers and sellers conclude transactions in Acceptable Instrument Types including bilateral trades between two Fixed Income Clearing Members and which meets any of the following requirements (i) in the case of a marketplace which is an alternative trading system (“ATS”), it has qualified as such and complies with the applicable requirements of National Instrument 21-101 – Marketplace Operations (“21-101”) and National ~~Instru~~~~C-22~~~~ment~~Instrument 23-101 – Trading Rules (“23-101”) as determined by the Corporation, and (ii) in the case of an inter-dealer bond broker (“IDBB”), it has qualified as such and complies with applicable IROC Rules including IROC Rule 2800 and applicable requirements of 21-101 and 23-101 as determined by the Corporation, and (iii) in the case of bilateral trades between Fixed Income Clearing Members involving an SRO Clearing Member, the SRO Clearing Member complies with applicable requirements of 21-101 and 23-101 as determined by the Corporation.

“Acceptable Security” – means a Security determined by the Corporation as acceptable for purposes of clearing Fixed Income Transactions and Futures for which the deliverable security is a fixed income security.

“Acceptable Treasury Bills” – means a short-term debt instrument, having a maturity of less than one year, issued by the Government of Canada and sold at a discount.

“Acceptable Underlying Interest” – means an Underlying Interest which is determined by the Corporation as acceptable for clearing by the Corporation.

“**Acceptance Criteria**” – means the criteria established by the Corporation for acceptance or rejection of an OTCI in accordance with the provisions of Section D-104.

“**Account Control Agreement**” – means an account control agreement in form acceptable to the Corporation entered into between the Corporation, a Clearing Member and an Approved Custodian.

“**Additional Deposit**” – means the additional amount required of the Clearing Member in addition to the Clearing Fund deposit pursuant to Section A-606.

“**Affiliate**” – means an Entity that controls, is controlled by, or is under common control with the Clearing Member. Control is defined as (a) ownership, control, or holding with power to vote 20 percent or more of a class of voting securities of the Entity or Clearing Member; or (b) consolidation of the Entity or Clearing Member for financial reporting purposes.

“**Afternoon Net DVP Settlement Requirement**” – has the meaning attributed thereto in Section D-601.

“**Afternoon Netting Cycle Timeframe**” – has the meaning attributed thereto in Section D-601.

“**American Option**” (or “American Style Option”) – means an Option which can be exercised at any time from issuance until its Expiration Date.

“**Amounts Due**” – has the meaning attributed thereto in Subsection A-409(10).

“**Application for Membership**” – means the Application for Membership which, when completed by a Clearing Member candidate and accepted by the Corporation, forms part of the Membership Agreement together with the Rules which are incorporated by reference therein and form a part thereof, as such Application for Membership may from time to time be amended, changed, supplemented or replaced in whole or in part.

“**Approved Custodian**” – means an Approved Securities Intermediary approved by the Corporation to act in such capacity pursuant to Section A-224.

“**Approved Depository**” – means ~~a financial institution~~ an Approved Securities Intermediary approved by the Corporation to act in such capacity ~~in accordance with the criteria set forth in Subsection A-212(8)~~ pursuant to Section A-223.

“**Approved Processes**” – means any CDCC function for processing Transactions for clearing by the Corporation. CDCC may make available more than one Approved Process in respect of any clearing service.

“**Approved Securities Intermediary**” – means a financial institution approved by the Corporation in accordance with the criteria set forth in Section A-222 and, as applicable, Sections A-223 and A-224.

“**Assigned Position**” – means the position of the Clearing Member in any account for which such Clearing Member is the assigned Clearing Member in such account.

“**At-the-Money Option**” – means a call Option or a put Option with an Exercise Price that is equal to the Market Price of the Underlying Interest.

“**Authorized Representative**” – means a person for whom the Clearing Member has filed evidence of authority pursuant to Section A-202.

“**Bank Clearing Member**” – means a Clearing Member that is a bank to which the Bank Act (Canada), as amended from time to time, applies.

“**Base Deposit**” – means the minimum Clearing Fund deposit required of each Clearing Member pursuant to Section A-603.

“**Base Initial Margin**” – means a component of the Margin deposit required of each Clearing Member calculated in accordance with the Risk Manual.

“**Board**” – means the Board of Directors of the Corporation.

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

“**By-laws**” – means the By-laws of the Corporation as the same may be amended from time to time.

“**Calculation Agent**” – means the Corporation when calculating certain close-out amounts as provided in Subsection A-409(9).

“**Call Underlying Interest Deposit**” – means the deposit by an Approved Depository acting on behalf of a Clearing Member or a client thereof of the Underlying Interest of a call Option with the Corporation through a Central Securities Depository.

“**Canada Mortgage Bonds (CMB)**” – means bullet maturity bonds that are fixed rate with a semi-annual coupon issued by Canada Housing Trust and guaranteed by Canada Mortgage and Housing Corporation.

“**Capital Adequacy Return (CAR)**” – means the documents specified from time to time by the Office of the Superintendent of Financial Institutions in its guidelines relating to capital adequacy requirements applicable to banks.

“**Cash**” – means money in the lawful currency of Canada.

“**Cash Settlement Amount**” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(6).

~~“**Cash Settlement Amount Calculation Request**” – has the meaning attributed thereto Subsection A-409(6).~~

~~“**Cash Settlement Amount Calculation Request Date**” – has the meaning attributed thereto Subsection A-409(6).~~

“**Cash Settlement Payment Default**” – has the meaning attributed thereto in Subsection A-409(6).

“**Cash Settlement Payment Request**” – has the meaning attributed thereto in ~~Subsection A-409(6)~~.

~~“**Cash Settlement Amount Calculation Request**” – has the meaning attributed thereto Subsection A-409(6). “**Cash Settlement Amount Calculation Request Date**” – has the meaning attributed thereto Subsection A-409(6).~~

“**CDCC Daylight Credit Facility**” – means the daylight credit facility of the Corporation, the amount of which is subject to change from time to time, with prior notice to Clearing Members.

“**CDCC Materials**” – means any material, data and information developed, created or compiled by the Corporation and provided by the Corporation to the Clearing Members in any form, and including the software, trade-marks, logos, domain names, documentation (including the Rules), Approved Processes, technical information, systems (including the clearing systems and electronic transmission systems), hardware and networks, that comprises the CDCS provided by the Corporation to the Clearing Members.

“**CDCS**” – means “Canadian Derivatives Clearing Service” and refers to the clearing and settlement system operated by CDCC, which is governed by the Rules.

“**CDS**” – means CDS Clearing and Depository Services Inc., acting as Central Securities Depository in Canada or acting in any other capacity, or any successor thereof.

“**CDS Funds Account**” – means a funds account established by a CDS participant under the CDS Participants Rules.

“CDS Securities Account” – means a securities account established by a CDS participant under the CDS Participants Rules.

“CDS Participants Rules” – mean the rules and procedures established by CDS that may from time to time be amended, changed, supplemented or replaced in whole or in part.

“CDSX” – means the clearing and settlement system comprising the Depository Service and the Settlement Service (each, as defined in the CDS Participants Rules) of CDS.

“Central Securities Depository” – means any central securities depository acceptable to the Corporation, including CDS.

“Class Group” – means all Options and Futures relating to the same Underlying Interest.

“Class of Futures” – means all Futures covering the same Underlying Interest.

“Class of Options” – means all Options of the same style within the same maturity category on the same Underlying Interest.

“Clearing Fund” – means the fund established pursuant to Rule A-6 Clearing Fund Deposits.

“Clearing Member” – means an applicant who has been admitted to membership in the Corporation.

“Client” – means those customers of a Clearing Member who are not Market Makers or trading on behalf of a broker.

“Client Account” – means the account or accounts required to be established for Transactions of the Clearing Members' Clients pursuant to Sections B-102, B-103, C-102, C-103, D-102 and D-103.

“Clients Settlement Account” – means the account established by Section A-403.

“Close of Business” – means the time at which the Business Day ends, as specified in the ~~CDCC~~ Operations Manual. The time may, at the sole discretion of the Corporation, be modified to address shortened trading days on Exchanges.

“Closing Buy Transaction” – means an Exchange Transaction the result of which is to reduce or eliminate a Short Position in the Series of Futures involved in such transaction.

“**Closing Purchase Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Short Position in the Series of Options involved in such transaction.

“**Closing Sell Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Long Position in the Series of Futures involved in such transaction.

“**Closing Writing Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Long Position in the Series of Options involved in such transaction.

“**Commodity**” – means any agricultural product, forest product, product of the sea, mineral, metal, hydrocarbon fuel, natural gas, electric power, currency or precious stone or other gem, and any goods, article, service, right or interest, or class thereof, whether in the original or processed state.

“**Competent Authority**” – has the meaning attributed thereto in Subsection A-409(3).

“**Confirmation Transmission**” – means the electronic transmission made by a Clearing Member to the Corporation confirming that the Expiry Report detailed in Section B-307 is accepted.

“**Consolidated Activity Report**” – means a daily report listing all Options, Futures and OTCI transactions.

“**Consolidated Affiliate**” – means, with respect to a Clearing Member, an Entity the financial results of which are consolidated with those of such Clearing Member for financial reporting purposes.

“**Contract Specifications**” – means the specifications prescribed by the relevant Exchange with respect to a particular Option or Future.

“**Corporation**” or “**CDCC**” – means Canadian Derivatives Clearing Corporation.

“**CORRA Rate**” – has the meaning attributed ~~there~~thereto in Section D-601.

“**Corresponding CDCC Delivery Requirement**” – has the meaning attributed thereto in Subsection A-~~804~~804(4).

“**Coupon Income**” – has the meaning attributed thereto in Section D-601.

“**Crown**” – means any of (i) the “Federal Crown”, which means Her Majesty the Queen in right of Canada, (ii) the “BC Crown”, which means Her Majesty the Queen in right of British Columbia, (iii) the “Alberta Crown”, which means Her Majesty the Queen in right of Alberta, (iv) the “Saskatchewan

Crown”, which means Her Majesty the Queen in right of Saskatchewan, (v) the “Manitoba Crown”, which means Her Majesty the Queen in right of Manitoba, (vi) the “Ontario Crown”, which means Her Majesty the Queen in right of Ontario, (vii) the “Quebec Crown”, which means Her Majesty the Queen in right of Quebec, (viii) the “NB Crown”, which means Her Majesty the Queen in right of New Brunswick, (ix) the “NS Crown”, which means Her Majesty in right of Nova Scotia, (x) the “PEI Crown”, which means Her Majesty the Queen in right of Prince Edward Island and (xi) the “Newfoundland Crown”, which means Her Majesty in right of Newfoundland and Labrador.

“CSA” – means the Canadian Securities Administrators.

“Current Rating” – means, at any particular time with respect to an Entity which has applied for membership as a Limited Clearing Member or which has been admitted as a Limited Clearing Member, as applicable, (i) a rating issued within the last 12 months by a Designated Rating Organization for such Entity, (ii) if the Entity is not the subject of a Current Rating issued by a Designated Rating Organization, a rating issued by a Designated Rating Organization within the last 12 months for the Long-term Obligation of such Entity, or (iii) if neither such Entity itself nor the Long-term Obligation of such Entity is the subject of a Current Rating issued by a Designated Rating Organization, a rating issued by a Designated Rating Organization within the last 12 months for the Long-term Obligation of such Entity’s Consolidated Affiliate or Plan Sponsor.

“CUSIP/ISIN” – are acronyms standing for Committee on Uniform Security Identification Procedures and International Securities Identification Number respectively, herein used to refer to a security identifier assigned by CDS to any ~~Aacceptable Security~~security.

“Daily Settlement Summary Report” – means the report designated as such by the Corporation as described in the Operations Manual.

“Debt Securities” – has the meaning attributed thereto in Subsection A-707(2).

“Default Auction” – has the meaning attributed thereto in Section A-609.

“Default Management Period” – ~~has means~~ the ~~meaning attributed thereto~~period described in Section A-411.

“Default Management Period End Date” – ~~has means~~ the ~~meaning attributed thereto~~date described in Section A-~~411~~411.

“Default Manual” – means any manual designated as such by the Corporation, as amended from time to time.

“Default Value” – means the value determined by the Calculation Agent in accordance with Subsection A-409(6).

“Default Waterfall” – means the sum of the amounts listed under Subsections A-1002(1)(i)(A) to (B), inclusively and which are available to the Corporation.

“**Delivery Agent**” – means the party through which the Corporation will effect the transfer of the Underlying Interest between the buyer and seller.

“**Delivery Default**” – has the meaning attributed thereto in Subsection A-409(6).

“**Delivery Month**” – means the calendar month in which a Future may be satisfied by making or taking delivery.

“**Delivery Request**” – has the meaning attributed thereto in Subsection A-409(6).

“**Deposit**” – ~~means a payment, deposit or transfer, whether of cash, securities, certificates, property, Underlying Interests, Underlying Interest Equivalents or other property or rights.~~ has the meaning attributed thereto in Paragraph A-212(1)a.

“**Depository Agreement**” – means an agreement entered into between the Corporation and an Approved Depository.

“**Depository Receipt**” – means a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit.

“**Derivative Instrument**” – means a financial instrument, the value of which derives from the value of an Underlying Interest. Without limiting the foregoing, this Underlying Interest may be a commodity or a financial instrument such as a stock, a bond, a currency, a stock or economic index or any other asset.

“Designated Eligibility Rating” – has the meaning attributed thereto in Subsection A-1B04.

“Designated Maintenance Rating” – has the meaning attributed thereto in Section A-1B05.

“Designated Rating Organization” or “DRO” – means any of DBRS Limited, Fitch, Inc., Moody’s Canada Inc. or Standard & Poor’s Rating Services (Canada), or any other credit rating organization designated as a “designated rating organization” by the CSA under National Instrument 25-101 - Designated Rating Organizations, and includes any affiliate of a Designated Rating Organization that issues credit ratings in a foreign jurisdiction and that has been designated as a “DRO affiliate” under the terms of the CSA’s designation of such Designated Rating Organization.

“**Detailed Futures Consolidated Activity Report**” – means the report created by the Corporation on a daily basis reporting the aggregate position in Futures held by a Clearing Member, which also contains the Settlement of Gains and Losses for that Clearing Member for that day.

“**Early Termination Date**” – has the meaning attributed thereto in Subsection A-409(7).

“**Electronic Communication**” – means, in respect of the Corporation, any one or more of the following: the posting of a notice, report or other information on the Corporation’s website, the transmission of a notice, report or other information to a Clearing Member by means of electronic mail and the making available on the Corporation’s computer, in a form accessible to a Clearing Member, of a notice, report or other information.

“**Emergency**” – means a situation materially affecting the Corporation’s operations resulting from i) riot, war or hostilities between any nations, civil disturbance, acts of God, fire, accidents, strikes, earthquakes, labour disputes, lack of transportation facilities, inability to obtain materials, curtailment of or failure in obtaining sufficient power, gas or fuel, computer malfunction (whether mechanical or through faulty operation), malfunction, unavailability or restriction of the payment, computer or bank wire or transfer system and any other cause of inability that is beyond the reasonable control of the Corporation; ii) any action taken by Canada, a foreign government, a province, state or local government or body, authority, agency or corporation, and any Exchange, Central Securities Depository, Approved Custodian, Acceptable Marketplace, Market Centre and Delivery Agent ; iii) the bankruptcy or insolvency of any Clearing Member or the imposition of any injunction or other restraint by any government agency, court or arbitrator upon a Clearing Member which may affect the ability of that member to perform its obligations; iv) any circumstance in which a Clearing Member, a Central Securities Depository, an Approved Custodian or any other Entity has failed to perform contracts, is insolvent, or is in such financial or operational condition or is conducting business in such a manner that such Entity cannot be permitted to continue in business without jeopardizing the safety of assets, of any Clearing Member or the Corporation; or v) any other unusual, unforeseeable or adverse circumstance which is not within the control of the Corporation.

“**End of Day DVP Settlement Time**” – has the meaning attributed thereto in Section D-601.

“**Entity**” – shall include an individual, a legal person, a corporation, a partnership, a trust and an unincorporated organization or association.

“**Escalation Procedure**” – has the meaning attributed thereto in Section 11 of the Operations Manual.

“**European Option**” (or “European Style Option”) – means an Option which can be exercised only on its Expiration Date.

“**Event of Default**” – has the meaning attributed thereto in Subsection A-409(2).

“**Exchange**” – means an exchange whose trades are guaranteed and/or cleared by the Corporation.

“**Exchange Transaction**” – means a transaction through the facilities of an Exchange for:

- a) the purchase or writing of an Option or the reduction or elimination of a Long or Short Position in an Option; or
- b) the buying or selling of a Future or the reduction or elimination of a Long or Short Position in a Future.

“Exercise Notice” – means a notice to the Corporation in the form prescribed by the Corporation, notifying the Corporation of the intent of the Clearing Member executing such notice to exercise an Option.

“Exercised Position” – means the position of a Clearing Member in any account in respect of Options which have been exercised by such Clearing Member in such account.

“Exercise Price” – means the specified price per unit at which the Underlying Interest may be purchased (in the case of a call) or sold (in the case of a put) upon the exercise of an Option. (Sometimes referred to as the Strike Price).

“Exercise Settlement Amount” – means the amount which must be paid by the Corporation to the Clearing Member exercising a put Option or who has been assigned a call Option, against delivery of the Underlying Interest.

“Exercise Settlement Date” – means the date prescribed by the relevant Exchange within Contract Specifications of a particular Option.

“Expiration Date” – unless otherwise specified, means, in the case of monthly Options, the third Friday of the month and year in which the Option expires, or in the case of weekly Options, any Friday following the listing week which is a Business Day, but which is not an expiration day for any other Options already listed on the same underlying. If any such Friday is not a Business Day, then the Expiration Date will be the first preceding Business Day that is not an expiration day for any other Options already listed on the same underlying.

“Expiration Time” – means the time on the Expiration Date, as fixed by the Corporation, at which the Option expires. Unless subsequently changed by the Corporation, the Expiration Time shall be 10:45 p.m. on the Expiration Date.

“Expiry Response Screen” – means a computer display also known as the “Expiry Workspace” made available to Clearing Members in connection with Rule B-3.

“Failed Delivery” – has the meaning set out (i) in Subsection A-804(1) with respect to the delivery of an Acceptable Security, (ii) in Section B-407 with respect to the delivery of an Underlying Interest of an Option, (iii) in Section C-512 with respect to the delivery of an Underlying Interest of a Future other than

an Acceptable Security, or (iv) in Section D-304 with respect to the delivery of an Underlying Interest of an OTCI that is not a Fixed Income Transaction.

“**Failed Payment Against Delivery**” – has the meaning attributed thereto in Section A-806.

“**Failure to Pay**” – has the meaning attributed thereto in Subsection A-409(4).

“**Final Settlement Amount**” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(10).

“**Financial Asset**” – has the meaning assigned to this term by the QSTA.

“**Financial Institution Clearing Member**” – means a Clearing Member that is either

- a) a financial services cooperative regulated pursuant to an Act respecting financial services cooperatives (Québec), or
- b) a credit union central or a central cooperative credit society, which is incorporated and regulated under the laws of Canada or under the legislature of a province,

one of whose principal purposes is to provide liquidity support to local credit unions or financial services cooperatives.

“**Firm**” – means a Clearing Member acting for its own account.

“**Firm Account**” – means the account or accounts required to be established for Firm Transactions of the Clearing Members pursuant to Sections B-102, B-103, C-102, C-103, D-102 and D-103.

“**Fixed Income Clearing Member**” – has the meaning attributed thereto in Section D-601.

“**Fixed Income Transaction**” – has the meaning attributed thereto in Section D-601.

“**Forward Curve**” – means the summary representation of the price of a commodity on a forward basis obtained by amalgamating all Reference Prices by tenor as defined in Section D-201.

“**Forward Price**” – means the price extracted from the Forward Curve and used in the daily Mark-to-Market Valuation and margining processes as defined in Section D-202.

“**Future**” – means a contract:

- a) in the case of a Future settled by delivery of the Underlying Interest, to make or take delivery of a specified quantity and quality, grade or size of an Underlying Interest during a designated future month at a price agreed upon when the contract was entered into on an Exchange; or
- b) in the case of a Future settled in cash, to pay to or receive from the Corporation the difference between the final settlement price and the trade price pursuant to standardized terms and conditions set forth by the Exchange where the contract is concluded and which is cleared by the Corporation.

[“Future Tear-Up Amount” – has the meaning attributed thereto in Section A-1008.](#)

“Futures Underlying Interest Deposit” – means the deposit by an Approved Depository acting on behalf of a Clearing Member or a client thereof of the Underlying Interest of a Future with the Corporation through a Central Securities Depository.

“Futures Sub-Accounts Consolidated Activity Report” – means the report created by the Corporation on a daily basis reporting the aggregate position held by a Clearing Member in each of its sub-accounts, which also contains the Settlement of Gains and Losses for that day with respect to each sub-account.

“Good Deliverable Form” – Underlying Interests shall be deemed to be in good deliverable form for the purposes hereof only if the delivery of the Underlying Interests in such form would constitute good delivery under the Contract Specifications.

“Gross Delivery Requirement” – means the quantity of Acceptable Securities required to be physically delivered through a Central Securities Depository by or to a Clearing Member, expressed on a gross basis, in accordance with Subsection D-606(~~407~~).

“Gross Payment Against Delivery Requirement” – means the amount required to be paid against physical delivery through a Central Securities Depository by or to a Clearing Member, expressed on a gross basis, in accordance with Subsection D-606(~~407~~).

“Guaranteeing Delivery Agent” – means a Delivery Agent who bears the responsibility of guaranteeing the acquisition or delivery of the Underlying Interest in the event of a delivery failure.

“~~include~~Include”, “~~includes~~Includes” and “~~including~~Including” – where used in these Rules, means “include”, “includes” and “including”, in each case, without limitation.

“Insolvency Event” – has the meaning attributed thereto in Subsection A-409(3).

“Insolvency Proceedings” – has the meaning attributed thereto in Subsection A-409(3).

“In-the-Money-Option” – means a call Option with an Exercise Price that is less than the Market Price of the Underlying Interest or a put Option where the Exercise Price exceeds the Market Price of the Underlying Interest.

“Instrument” – means a bill, note or cheque within the meaning of the Bills of Exchange Act (Canada) or any other writing that evidences a right to the payment of money and is of a type that in the ordinary course of business is transferred by delivery with any necessary endorsement or assignment, but does not include a security.

“Intra-Day Margin Call” – means the requirement to deposit supplementary Margin, as determined by the Corporation in accordance with Section A-705, at any time the Corporation deems necessary, and notably at such times as are specified in Section 2 of the Operations Manual.

“Joint Regulatory Financial Questionnaire and Report” – means the documents required under the applicable rules of the Investment Industry Regulatory Organization of Canada.

“LCM RAD Net Gain” – has the meaning attributed thereto in Section A-1005.

“Limited Clearing Member” – means an applicant that has been admitted to membership by the Corporation as a “Limited Clearing Member” in accordance with Rule A-1B and which has also been admitted to membership of the Corporation as a Fixed Income Clearing Member.

“Liquidating Settlement Account” – means the account created following the default of a Clearing Member to recognize the value of all gains, losses, and expenses due to or from the Non-Conforming Member during the liquidation of positions and Margin Deposits, in accordance with Section A-402.

“Long Position” – means a Clearing Member’s interest as:

- a) the holder of one or more Options of a Series of Options; or
- b) the buyer of one or more Futures of a Series of Futures; or
- c) the buyer of an Over-The-Counter Instrument.

“Long-term Obligation” – means a senior unsecured debt the original maturity of which is greater than one year.

“Margin” – means any and all ~~the deposits~~ of the deposits made by or on behalf of a Clearing Member with the Corporation or another person (including a Central Securities Depository or any other type of Securities Intermediary, including an Approved Custodian, a financial institution or the Bank of Canada) required or made pursuant to Rule A-7 Margin Requirements.

“**Margin Deposit**” – means, collectively,

- a) any and all Securities, Cash, Instruments, cheques, Underlying ~~Interest~~Interests, Underlying Interest ~~Equivalent~~Equivalents, Long Positions and Short Positions;
- b) any and all of the deposits required or made pursuant to Rule A-6 Clearing Fund Deposits, Rule A-7 Margin Requirements, ~~and~~ Rule B-4 Delivery and Payment with Respect to Options Exercised, Rule C-5 Delivery of Underlying Interest of Futures and Rule D-3 Physical Delivery of Underlying Interest on Over-the-Counter Instruments, including Margins, Base Deposits, Additional Deposits, Variable Deposits, Put Escrow Receipts, Call Underlying Interest Deposits, and Futures Underlying Interest Deposits, and any other form of deposit accepted from time to time ~~are accepted~~ by the Corporation; and
- c) any and all Financial Assets transferred to the Corporation through the facilities of a Central Securities Depository or held by ~~any other type of~~an Approved Securities Intermediary;

deposited by or on behalf of a Clearing Member with the Corporation or another person (including a Central Securities Depository or any other type of Securities Intermediary, including an Approved Custodian, a financial institution or the Bank of Canada) for purpose of the performance of the obligations of the Clearing Member under the Rules.

“**Mark-to-Market Valuation**” – means the value determined by the Corporation representing the net asset value of a Transaction or account held by a Clearing Member, as defined in Section D-202.

“**Market Centre**” – means the local facility where the exchange of Underlying Interests occurs.

“**Market Maker**” – means an individual who has been approved by the Exchange on which he trades to trade for his own account or for the account of the Exchange member or non-member by which he is employed or for which he acts as agent in Options or Futures, and may include a futures trader, an options trader, a trader member, a market maker and a market specialist.

“**Market Maker Account**” – means the account or accounts required to be established for Exchange Transactions of the Clearing Member's Market Makers pursuant to Sections B-102, B-103, C-102 and ~~C-~~103.

“**Market Price**” – means the aggregate price of the Unit of Trading of the Underlying Interest as determined by the relevant or applicable Exchange or Exchanges ~~involved~~.

“**Matured Amounts**” – means any financial cash flows resulting from the expiration of an OTCI.

“**Maturity Date**” – means the date on which final obligations related to a Transaction are executed.

“**Minimum Threshold**” – means the quantity starting from which an OTCI can be cleared.

“**Morning Net ~~Payment Against Delivery Requirement~~ DVP Settlement Timeframe**” – has the meaning attributed thereto in Section D-601.

“**Morning Net ~~DVP Settlement Timeframe~~ Payment Against Delivery Requirement**” – has the meaning attributed thereto in Section D-601.

“**Morning Netting Cycle Timeframe**” – has the meaning attributed thereto in Section D-601.

“**Multi-Purpose Account**” – means a Market Maker Account and/or a Netted Client Account.

“**Net Daily Premium**” – when applied to any account of a Clearing Member for any Settlement Time, means the net amount payable to or by the Corporation at such Settlement Time in respect of all Exchange Transactions of the Clearing Member in Options in such account as a purchasing Clearing Member and a writing Clearing Member.

“**Net Daily Settlement**” – means the amount shown on the Daily Settlement Summary Report.

“**Net Delivery Requirement**” – with respect to Acceptable Securities, means the quantity thereof required to be physically delivered through a Central Securities Depository by or to a Clearing Member, expressed on a net basis, in accordance with Paragraph A-801(2)(d); and, with respect to any Underlying Interest of an OTCI that physically settles, other than Acceptable Securities, means the quantity of such Underlying Interest required to be physically delivered through a Delivery Agent by or to a Clearing Member, expressed on a net basis, in accordance with Section D-303.

“**Net Payment Against Delivery Requirement**” – means the amount required to be paid against physical delivery through a Central Securities Depository by or to a Clearing Member, expressed on a net basis, in accordance with Paragraph A-801(2)(c).

“**Netted Client Account**” – means a type of Client Account that requires specific documentation be signed between the Clearing Member and the Corporation, in which the Transactions of a sole Client are held on a net basis.

“**Netting Cut Off Time**” – means, with respect to a Business Day and a Clearing Member, a time specified in the Operations Manual on such Business Day for purposes of determining, in respect of such Clearing Member, all net payment and delivery obligations owing by or to such Clearing Member in accordance with these Rules on such Business Day.

“**Non-Conforming Member**” – has the meaning attributed thereto in Section A-1A04.

“**Non-delivered Assets**” – has the meaning attributed thereto in Subsection A-409(6).

“Non-Payment of the Cash Settlement Amount following a Delivery Default” – has the meaning attributed thereto in Subsection A-409(6).

“**Notional Quantity**” – means the size of the OTCI transaction expressed either outright, or in accordance with the number of contracts underlying the OTCI transaction.

“**Open Interest**” or “**Open Position**” – means the position of a buyer or a seller of an Option, of a Future or of an OTCI which has not expired.

“**Opening Buy Transaction**” – means an Exchange Transaction the result of which is to create or increase a Long Position in the Series of Futures involved in such transaction.

“**Opening Purchase Transaction**” – means an Exchange Transaction the result of which is to create or increase a Long Position in the Series of Options involved in such Exchange Transaction.

“**Opening Sell Transaction**” – means an Exchange Transaction the result of which is to create or increase a Short Position in the Series of Futures involved in such transaction.

“**Opening Writing Transaction**” – means an Exchange Transaction the result of which is to create or increase a Short Position in the Series of Options involved in such Exchange Transaction.

“**Operations Manual**” – means the manual designated as such by the Corporation and any schedule to the Operations Manual including the Risk Manual, as amended from time to time.

“**Option**” – means a contract which, unless otherwise specified, gives the buying Clearing Member the right to buy (a call) or sell (a put) at a specified quantity of an Underlying Interest at a fixed exercise price during a specified time period and which obligates the writing Clearing Member to sell (a call) or buy (a put) the Underlying Interest, pursuant to standardized terms and conditions set forth by the Exchange where the contract is concluded or to the terms determined by the Corporation as acceptable and which is cleared by the Corporation.

“**Option Price**” – means the price per Option Series, reported by the Exchange at the end of any Business Day.

“**Option Tear-Up Amount**” – has the meaning attributed thereto in Section A-1008.

“**Option Type**” – means a put Option or a call Option.

“Options Daily Transaction Report” – means a report created by the Corporation providing the net premium payable/receivable.

“OTCI Option Price” – means the price per Option Series determined by the Corporation in accordance with the methodology set out in the Risk Manual.

“Out-of-the-Money Option” – means a call Option with an Exercise Price that exceeds the Market Price of the Underlying Interest or a put Option where the Exercise Price is less than the Market Price of the Underlying Interest.

“Over-The-Counter Instrument” or **“OTCI”** – means any bilaterally negotiated transactions, including Fixed Income Transactions, as well as any transactions entered into on any Acceptable Marketplaces.

“Payment Default” – has the meaning attributed thereto in Subsection A-409(5).

“Payment Request” – has the meaning attributed thereto in Subsection A-409(5).

“Pending Payment Against Delivery Requirements” – has the meaning attributed thereto in Section D-601.

“Pending Delivery Requirements” – has the meaning attributed thereto in Section D-601.

“Plan Sponsor” – means an Entity that established and maintains a registered pension plan.

“Postponed Payment Obligation” – with respect to the Corporation, means the amount by which its Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against delivery of Acceptable Securities or its Gross Payment Against Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in favour of a Provider of Securities has been reduced as a result of the Provider of Securities’ failure to deliver Acceptable Securities on the Business Day they were due by the End of Day DVP Settlement Time and the payment by the Corporation of such reduction has been postponed until full delivery by the Provider of Securities in accordance with Subsection A-804(1); and with respect to a Clearing Member who is a Receiver of Securities, means the amount by which its Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against delivery of Acceptable Securities or its Gross Payment Against Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in favour of the Corporation has been reduced as a result of the Corporation’s failure to deliver Acceptable Securities on the Business Day they were due by the End of Day DVP Settlement Time and the payment by such Clearing Member of such reduction has been postponed until full delivery by the Corporation in accordance with Subsection A-804(2).

“President” – means the person appointed by the Board as chief executive officer and chief administration officer of the Corporation.

“Product Type” – means the attribute of an OTCI which describes the rights and obligations of the counterparties involved in the transaction insofar as cash flows are concerned.

“Provider of Securities” – means a Clearing Member who owes to the Corporation a Net ~~Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(3) and Paragraph A-801(2)(d) or a Gross~~ Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(~~403~~) or Paragraph A-801(2)(d) or a Gross Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(6), as the case may be.

“Put Escrow Receipt” – means a receipt, in a form that is acceptable to the Corporation, issued by an Approved Depository certifying that it holds Cash in the amount of the Exercise Price of a put Option on behalf of a Clearing Member or a client thereof, in trust for the Corporation.

“Qualified Amount” – means an amount which may be subject to the Reduced Amounts Distribution power, as defined under Section A-1005.

“QSTA” means the Act respecting the transfer of securities and the establishment of security entitlements (Quebec).

“RAD Net Gain” – has the meaning attributed thereto in Section A-1005.

“Receiver of Securities” – means a Clearing Member who is owed by the Corporation a Net Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(3) ~~and~~ or Paragraph A-801(2)(d) or a Gross Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(~~406~~), as the case may be.

“Recovery Event” – has the meaning attributed thereto in Section A-1002.

“Recovery Loss Cash Payment” – ~~has the meaning attributed thereto in~~ means the payment which may be required by the Corporation pursuant to Section A-1006.

“Recovery Loss” or “Recovery Losses” –has the meaning attributed thereto in Section A-1004.

“Recovery Power” – has the meaning attributed thereto in Section A-1001.

“Recovery Process” – has the meaning attributed thereto in Section A-1003.

“Reduced Amounts Distribution Period” – means the period during which the Corporation exercises the Reduced Amounts Distribution power, as defined under Section A-1005.

“Reduced Amounts Distribution” or “RAD” – means the Recovery Power defined under Section A-1005.

“Reference Crown” – means, with respect to an Entity that is a Crown Corporation, a mandatory of the Crown, an agency of the Crown or a public body of the Crown, the Crown which has established the Entity or under whose authority the Entity is acting.

“Reference Price” – means the price determined by the Corporation in accordance with Section D-201.

“Registry” – means any registry designated by the Corporation which, for the purposes of clearing Futures Contracts on Carbon Dioxide Equivalent (CO2e) Units with physical settlement, has been established in order to ensure the accurate accounting of holding, transfer, acquisition, surrender, cancellation and replacement of the Carbon Dioxide Equivalent (CO2e) Units.

“Regulatory Body” ~~With~~ with reference to a Financial Institution Clearing Member, means the Office of the Superintendent of Financial Institutions, association or other body, organization or agency, whether governmental, professional, self-regulatory or otherwise, having jurisdiction over that Clearing Member or over any part of the business carried on by it.

“Replacement Eligibility Metric” –has the meaning attributed thereto in Subsection A-1B04(g).

“Replacement Maintenance Metric” – has the meaning attributed thereto in Subsection A-1B04(g).

“Replacement Metric” – has the meaning attributed thereto in Subsection A-1B04(g).

“Retained Amount” – means an amount retained, collected, accounted for, or otherwise set aside by the Corporation in the exercise of its Reduced Amounts Distribution power, whether converted into cash or otherwise, as defined under Section A-1005.

“Risk Limits” – refers to the set of risk management limits imposed by the Corporation on Clearing Members’ clearing activities as updated from time to time by the Corporation.

“Risk Manual” – means the manual designated as such by the Corporation and any schedule to the Risk Manual including the Default Manual, as amended from time to time.

“Rolling Delivery Obligation” – with respect to a Clearing Member who is a Provider of Securities, ~~the~~ means the quantity of a given Acceptable Security that it has failed to deliver to the Corporation under an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities under Subsection A-801(4) or a Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time under Subsection D-606(~~106~~), as the case may be, on the Business Day it was due by the End of Day DVP Settlement Time, which is rolled into the calculation of the next Business Day’s Net Delivery Requirement (and the Net Delivery Requirement of each subsequent Business Day) of such Clearing Member, in accordance with, and until such time as set out under, Subsection A-804(1); and with respect to the Corporation and a Clearing Member who is a Receiver of Securities, means the quantity of a given Acceptable Security that the Corporation has failed to deliver to such Clearing Member under an

Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities under Subsection A-801(4) or a Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time under Subsection D-606(106), as the case may be, on the Business Day it was due by the End of Day DVP Settlement Time (as a direct consequence of a Provider of Securities' failure to deliver all or a part of its Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities or its Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in respect of such Acceptable Security on such Business Day) which is rolled into the calculation of the Corporation's next Business Day's Net Delivery Requirement (and the Net Delivery Requirement of each subsequent Business Day) in favour of such Clearing ~~Members~~Member, in accordance with, and until such time as set out under, Subsection A-804(2).

"Rules" or **"these Rules"** – means the Rules of the Corporation and the Operations Manual, as any such rules, and manual may from time to time be amended, changed, supplemented or replaced in whole or in part.

"SRO Clearing Member" – means a Clearing Member that is within the audit jurisdiction of the Investment Industry Regulatory Organization of Canada.

"Same Day Transaction" – has the meaning attributed thereto in Section D-601.

"Securities Intermediary" – has the meaning assigned to this term by the QSTA.

"Security" – means a document that is

- a) issued in bearer, order or registered form;
- b) of a type commonly dealt in upon securities exchanges or markets or commonly recognized in any area in which it is issued or dealt in as a medium for investment;
- c) one of a class or series or by its terms is divisible into a class or series of documents; and
- d) evidence of a share, participation or other interest in property or in an enterprise or is evidence of an obligation of the issuer;

and includes such a document, not evidenced by a certificate, the issue and any transfer of which are registered or recorded in records maintained for that purpose by or on behalf of the issuer.

"Series of Futures" – means all Futures of the same class covering the same quantity of an Underlying Interest and having the same delivery month.

“**Series of Options**” – means all Options of the same class, the same type, covering the same quantity of an Underlying Interest and having the same Exercise Price and Expiration Date.

“**Settlement Accounts**” – has the meaning attributed thereto in Section A-217.

[“Settlement Agent” – has the meaning attributed thereto in Section A-1A01.](#)

“**Settlement Amount**” – means the amount calculated in accordance with these Rules payable to the delivering Clearing Member upon delivery of or cash settlement for the Underlying Interest in respect of a Transaction.

“**Settlement of Gains and Losses**” – means the settlement with the Corporation of the gains and losses on Open Positions in Futures pursuant to Section C-302.

“**Settlement Price**” – means the official daily closing price of a Future, as determined in accordance with Section C-301.

“**Settlement Time**” – means, with respect to a particular Transaction and a particular Business Day, the time on such Business Day as established by the Corporation in the Operations Manual and if no Business Day is specified, the time on the next Business Day following the trade day, calculation date or Coupon Payment Date, as applicable, as established by the Corporation in the Operations Manual, by which time Settlement of Gains and Losses, premium payments, all Margin requirements and all other payments required in respect of such Business Day, trade day, calculation date or Coupon Payment Date must be submitted to the Corporation.

“**Short Position**” – means a Clearing Member’s obligation as:

- a) the writer of one or more Options of a Series of Options; or
- b) the seller of one or more Futures in a Series of Futures; or
- c) the seller of an Over-The-Counter Instrument.

“**Spread Position**” means:

- a) the situation in which there is carried in a Clearing Member's Client Account both an Option in the Short Position and an Option of the same Class of Options in the Long Position; or
- b) the situation in which there is carried in a Clearing Member’s Client Account both a Long Position and a Short Position in Futures.

“**Straddle Position**” – means an equal number of call and put Options covering the same Underlying Interest and having the same Exercise Price and Expiration Date.

“**Style of Options**” – means the classification of an Option as either an American Option or a European Option. (Parts A and B of these Rules shall apply to both Styles of Options unless a specific Style of Option is designated).

“**Submission Cut-Off Time**” – has the meaning attributed thereto in Section D-601.

“**Tear-Up Amount**” – has the meaning attributed thereto in Section A-1008.

“**Tear-Up Value**” – has the meaning attributed thereto in Section A-1008.

“**Tender Notice**” – means a notice to the Corporation in the form prescribed by the Corporation, notifying the Corporation of the intent of the Clearing Member executing such notice to deliver the Underlying Interest of the Future.

“**Termination Value**” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(10).

“**Trade Confirmation**” – means the official document issued to a Clearing Member which details the attributes of the OTCI transaction and which signals the acceptance of the transaction for clearing by the Corporation.

“**Trade Price**” – means the price agreed upon for the Future when the contract is entered into on an Exchange.

“**Transactions**” – means all Futures, Options and Over-The-Counter Instruments which are determined by the Corporation as acceptable for clearing.

“**Transaction Value**” – has the meaning attributed thereto in Subsection A-409(10).

“**Type of Options**” – means the classification of an Option as either a “put” or a “call”.

“**Uncovered Residual Risk**” or “**URR**” – means the amount of risk determined by the Corporation to be uncovered by the Base Initial Margin model set in accordance with the Risk Manual, resulting from an estimation of the loss that the Corporation would face in extreme but plausible market conditions done through rigorous stress tests. The URR represents the largest uncovered risk from a Clearing Member and its Affiliates (excluding Limited Clearing Members).

“**Underlying Interest**” – means an asset which underlies and determines the value of a Derivative Instrument or of an OTCI. The Underlying Interest may be a commodity or a financial instrument such as a stock, a bond, a currency, a stock or economic index or any other asset.

“**Underlying Interest Equivalent**” – means the Securities specified in Section A-~~708~~-[706](#).

“**Unit of Trading**” – in respect of any Series of Futures and Series of Options or any OTCI, means the number of units of the Underlying Interest designated by the Corporation and the Exchange on which the Derivative Instrument is traded (as applicable) as being the number of units subject to a single Future or Option contract.

“**Valued Securities**” – has the meaning attributed thereto in Subsection A-707(3).

“**Variable Deposit**” – means the Clearing Fund deposit which may be required in addition to a Base Deposit pursuant to Section A-603.

“**Voluntary Contract Tear-Up**” – means the Recovery Power defined under Section A-1008.

RULE A-1A MEMBERSHIP IN THE CORPORATION

SECTION A-1A01 – ELIGIBILITY FOR MEMBERSHIP

- a) In order to apply for membership and subject to Subsection A-1A01(b), an applicant must be:
- i) a member or approved participant in good standing with an exchange recognized in a Canadian province; or
 - ii) a bank or an authorized foreign bank to which the Bank Act (Canada), as amended from time to time, applies; or
 - iii) a Financial Institution that is either
 - a) a financial services cooperative regulated pursuant to an Act respecting financial services cooperatives (Québec), or
 - b) a credit union central or a central cooperative credit society, which is incorporated and regulated under the laws of Canada or under the legislature of a province,
- b) one of whose principal purposes is to provide liquidity support to local credit unions or financial services cooperatives.
- c) In order to apply for membership as a Limited Clearing Member, an applicant must meet the eligibility requirements set out in Section A-1B03 of the Rules.
- d) ~~b)~~ A Clearing Member that intends to submit Stock Options or Share Futures to the Corporation for clearing must be a full member participant in good standing with CDS.
- e) ~~e)~~ A Clearing Member that intends to submit bond Options and/or bond Futures to the Corporation for clearing, must be a full member participant in good standing with CDS.
- f) ~~d)~~ A Clearing Member that intends to submit physically settled OTCI transactions to the Corporation for clearing, must ensure that it and/or its Client is in good standing and

remains as such at all times with the appropriate Market Centres and/or Delivery Agents. Furthermore, and where appropriate, the Clearing Member and/or its Client need to ensure access to a transportation system for the physical transport of the Underlying Interest to the appropriate Market Centres and/or Delivery Agents.

- g) ~~e)~~—A Clearing Member that intends to submit Futures Contracts on Carbon Dioxide Equivalent (CO₂e) Units with physical settlement to the Corporation for clearing must ensure that at all times it and/or its client is and remains in good standing with the Registry as this term is defined in Section A-102 of the Rules.
- h) ~~f)~~—A Clearing Member that intends to submit Fixed Income Transactions to the Corporation for clearing must be a full member participant in good standing with CDS.
- i) The Corporation may in its sole discretion waive the requirements set forth in clauses ~~(b)~~, (c), (d) ~~or~~, (f) or (g) if the Clearing Member enters into and maintains an agency agreement with a securities intermediary that is a full member participant in good standing with CDS, ~~that meets certain requirements established by the Corporation, which agency agreement shall be~~ (a “**Settlement Agent**”) in form and substance satisfactory to the Corporation, pursuant to which such entity agrees to act as the Clearing Member’s agent for the purpose of fulfilling such Clearing Member’s obligations to the Corporation under these Rules and the Application for Membership. Where a Clearing Member acts through a Settlement Agent, the Corporation may, on an annual basis, send a written notice (“Notice”) to the Settlement Agent requiring the Settlement Agent to provide the Corporation with (i) its audited financial statements for the last fiscal year, along with accompanying notes related to the balance sheet; (ii) an independent auditors’ report on the suitability of the system of the Settlement Agent’s internal controls pertaining to its administration, information technology, trading, assignment, exercise, settlement, and margin and collateral; and (iii) the Settlement Agent’s current business continuity plan and disaster recovery plan. Where the Corporation requests the information listed at (i) to (iii) above, the Settlement Agent must provide the information or items requested by the Corporation within the time period specified in the Notice.

SECTION A-1A02 STANDARDS OF MEMBERSHIP

Every applicant to become a Clearing Member must meet such standards as may be adopted from time to time by the Board, including the following:

- a) the applicant must meet the minimum ~~capital~~ financial resilience requirements then in effect, in accordance with Section A-301 or, in the case of an applicant to become a Limited Clearing Member, the minimum financial resilience requirements for admission as a Limited Clearing Member then in effect, in accordance with Section A-1B04;
- b) the applicant must be engaged, or propose to engage, in the clearance of Options or Futures which are the subject of Exchange Transactions or in the clearance of Fixed Income Transactions or other OTCI transactions through the facilities of the Corporation;

- c) the applicant shall demonstrate to the Corporation that it maintains adequate operations facilities and staff and has sufficient and competent personnel for the expeditious and orderly transactions of business with the Corporation and other Clearing Members, and to meet the requirements of these Rules; and
- d) unless the applicable Entity is applying to become a Limited Clearing Member, the applicant has deposited with the Corporation its initial deposit with the Clearing Fund in the amount and at the time required by the Rules and has signed and delivered to the Corporation an agreement in such form as the Board shall require.

SECTION A-1A03 ADMISSION PROCEDURE

Applications for membership shall be in such form and contain such information as the Board shall from time to time prescribe. Officers of the Corporation shall review applications for membership and shall recommend approval or disapproval thereof to the Board. The Corporation may but is not obligated to examine the books and records of any applicant and such applicant's facilities which support the applicant's business, risk management, technology infrastructure, operations, corporate governance, assets and affairs, in each case relating to the applicant's contemplated clearing activities as a Clearing Member under these Rules, and take such evidence as it may deem necessary or employ such other means as it may deem desirable or appropriate to ascertain relevant facts bearing upon the applicant's qualifications. If the officers of the Corporation propose to recommend to the Board that an application for membership be disapproved, it shall first notify the applicant of its proposed recommendation and the grounds therefore, and shall afford the applicant an opportunity to be heard and to present evidence on its own behalf.

If the applicant fails to request a hearing or if, after a hearing, officers of the Corporation still propose to recommend disapproval, officers of the Corporation shall make their recommendation to the Board in writing, accompanied by a statement of the grounds therefore, and a copy thereof shall be furnished to the applicant on request.

The Board shall independently review any recommendation by officers of the Corporation, and if the applicant so requests, afford the applicant further opportunity to be heard and to present evidence. If the Board disapproves the application, written notice of its decision, accompanied by a statement of the grounds thereof, shall be provided to the applicant.

An applicant shall have the right to present such evidence as it may deem relevant to its application.

Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any applicant whose application has been disapproved to avail itself of any right of appeal which is provided to such applicant by applicable law.

SECTION A-1A04 NON-CONFORMING MEMBER

- 1) A Clearing Member who is or may become insolvent or unable to meet its obligations shall immediately notify the Corporation of its situation by telephone. Such notice shall be confirmed by the Clearing Member by notice in writing to the Corporation sent by facsimile transmission within the next business day.
- 2) A Clearing Member who, in the judgement of the Corporation or pursuant to notification to the Corporation under Subsection (1), is or may be insolvent or unable to meet its obligations, becomes a Non-Conforming Member.
- 3) A Limited Clearing Member who does not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05 shall automatically be determined by the Corporation to be a Non-Conforming Member.
- 4) ~~3)~~ Without limiting the application of this Rule, any one of the following events, whether actual or anticipated by the Corporation, constitutes a reasonable ground for the Corporation to determine in its judgement that a Clearing Member is a Non-Conforming Member:
 - a) breach of any term, eligibility, qualification, standard or condition of the Application for Membership or any other violation of these Rules;
 - b) breach of a rule of an Exchange, a Central Securities Depository, an applicable self-regulatory organization or regulatory agency, or of any other recognized, designated or foreign investment exchange or clearing agency which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - c) refusal of an application for membership, breach of the terms of membership or contractual agreement, or suspension, termination or expulsion from membership of an Exchange, a Central Securities Depository, an applicable self-regulatory organization, Market Centres and/or Delivery Agents, the Registry, or any other recognized, designated or foreign investment exchange or clearing agency;
 - d) refusal of a licence, breach of the terms of its licence or withdrawal or suspension of such licence by a regulatory agency which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - e) contemplated, threatened or actual action by a Crown, a regulatory agency, a court of justice or an administrative authority against or in respect of the Clearing Member under any provision or process of law or regulation which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - f) default in a payment, deposit, delivery or acceptance of delivery required or payable under the Application for Membership or these Rules;
 - g) an order, arrangement, proposal, distress or execution is presented, made or approved in any jurisdiction to or by a court of competent jurisdiction, a Crown or a regulatory agency, relating to the termination, bankruptcy, insolvency, or winding up of the Clearing Member or the appointment of an administrator, receiver manager, trustee, or person with similar power in connection with the Clearing Member;

- h) the determination on reasonable grounds by the Corporation that the Clearing Member is in such financial or operating condition that its continuation as a Clearing Member in good standing would jeopardize the interests of the Corporation or other Clearing Members;
- i) any of the conditions set out in paragraphs (a) to (h) applies to an Affiliate of a Clearing Member, having, in the reasonable judgement of the Corporation, a material impact on the financial condition of the Clearing Member; or
- j) such other event ~~as which in~~ the Board's or, if time does not permit action by the Board, the Corporation ~~in its sole discretion reasonably determines to constitute's~~, reasonable ~~grounds for such~~ determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation.

5) ~~4)~~ If a Clearing Member is late in making a payment at Settlement Time, the Corporation shall impose fines and may deem that Clearing Member a Non-Conforming Member, in accordance with Section 7 of the Operations Manual. In addition, the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.

6) Notwithstanding anything to the contrary contained in Subsection A-1A04(4), if (i) a Clearing Member is in default in relation to any payment, deposit, delivery or acceptance of delivery required or payable under these Rules, (ii) the Escalation Procedure is applicable in connection with such default, and (iii) such Clearing Member has duly notified the Corporation under the Escalation Procedure in accordance with Section 11 of the Operations Manual, the Corporation may, subject to complying with the Escalation Procedure and providing prior notification to the Bank of Canada, determine that such Clearing Member is a Non-Conforming Member.

7) ~~5)~~ Except where the Corporation has been notified under Subsection (1), the Corporation shall, in writing or by telephone, notify a Clearing Member that it has become a Non-Conforming Member. Before doing so, the Corporation will enter into consultations with the Bank of Canada with respect to a Clearing Member who may be affected by an order under subsection 39.13(1) of the Canada Deposit Insurance Corporation Act or the Affiliates of such Clearing Member. The Corporation may also, in its sole discretion, notify the Board, all Clearing Members, the Exchanges, the appropriate self-regulatory organization or regulatory agency ~~that of which~~ the Clearing Member is a member ~~of~~, the regulatory agency of the Corporation, and such other Entities as the Corporation may consider appropriate.

8) ~~6)~~ The Corporation can ~~revert~~ reinstate the status of a Non-Conforming ~~Clearing~~ Member to a Clearing Member in good standing if the Clearing Member resolves, to the satisfaction of the Corporation, the issue(s) which led to its Non-Conforming Member status.

SECTION A-1A05 SUSPENSION

1) The Board may suspend a Non-Conforming Member, taking into consideration whether the suspension may protect the integrity of the market.

- 2) Upon such suspension, the Corporation shall cease to act for the suspended Non-Conforming Member.
- 3) The suspension may be total or may be for any function with respect to a particular security or class of securities, with respect to a particular transaction or class of transactions, or with respect to securities or transactions generally. Any suspension may be limited to a particular location or office of the Non-Conforming Member.
- 4) The Board may lift the suspension of the Non-Conforming Member if the Corporation in its sole discretion determines that the Non-Conforming Member has corrected the situation which caused the Corporation to suspend the Non-Conforming Member in such a manner that it is unlikely to occur again.
- 5) A suspended Non-Conforming Member shall remain liable to the Corporation for all obligations, costs and expenses, including all Margin requirements, including calls whether occurring before or after suspension, and other requirements, arising out of or in connection with such Non-Conforming Member's positions, and shall cooperate fully with the Corporation in respect of all matters arising out of or relating to the settling of or dealing with such positions.

SECTION A-1A06 NOTICE OF SUSPENSION TO CLEARING MEMBERS

Upon the suspension of a Non-Conforming Member, the Corporation shall notify all Clearing Members, the Exchanges, and the suspended Non-Conforming Member's applicable self-regulatory organization or regulatory agency, the regulatory agency of the Corporation and such other Entities as the Corporation may consider appropriate. Such notice shall state, in general terms, how pending Exchange Transactions, Open Positions, tendered Exercise Notices or Tender Notices, Exercised Positions, Assigned Positions, and other pending matters will be affected, what steps are to be taken in connection therewith, and the right of the suspended Non-Conforming Member to appeal the suspension before the Board.

SECTION A-1A07 APPEAL OF SUSPENSION

A Non-Conforming Member suspended pursuant to Section A-1A05 shall receive from the Corporation a written statement of the grounds for its suspension, and shall have the right to appeal its suspension within ten business days from the effective date of the suspension.

Where a suspended Non-Conforming Member appeals its suspension, the Board shall give the appellant the opportunity to be heard as promptly as possible, and in no event more than 14 days after the filing of the notice of appeal.

The appellant shall be notified of the time, place and date of the hearing not less than three business days in advance of such date. At the hearing, the appellant shall be afforded an opportunity to be heard and to

present evidence on its own behalf and may, if it so desires, be represented by counsel. As promptly as possible after the hearing the Board shall, by the vote of a majority of its members, affirm or reverse the suspension, and then instruct the Secretary of the Corporation to notify the appellant in writing of the decision. If the decision shall have been to affirm the suspension, the appellant shall be given a written statement of the grounds thereof.

The filing of an appeal of a suspension shall not impair the validity or stay the effect of the suspension appealed from. The reversal of a suspension shall not invalidate any acts of the Corporation taken prior to such reversal pursuant to such suspension and the rights of any person which may arise out of any such acts shall not be affected by the reversal of such suspension.

Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any Clearing Member the suspension of which has been affirmed by the Board to avail itself of any right of appeal which is provided to such Clearing Member by applicable law.

SECTION A-1A08 TERMINATION OF MEMBERSHIP

- 1) The Board shall, at its next meeting following the calendar month in which the Non-Conforming Member is suspended, or if an appeal is heard pursuant to Section A-1A07, following the calendar month in which the Board has affirmed the decision to suspend, lift the suspension or terminate the membership in the Corporation of a suspended Non-Conforming Member.
- 2) A Non-Conforming Member shall be given the opportunity to be heard by the Board before its membership is terminated.
- 3) Fifteen business days before the meeting of the Board at which the termination of a suspended Non-Conforming Member is to be considered, the Corporation shall give to the suspended Non-Conforming Member notice in writing of the meeting and a summary of the reasons for the proposed termination.
- 4) A committee of the Board shall not exercise the powers of the Board under this Rule A-1A, and the Board and the suspended Non-Conforming Member may mutually agree on a variation of such notification and meeting date.
- 5) The suspended Non-Conforming Member shall cease to be a Clearing Member as of the date and hour specified in the written decision of the Board.
- 6) The Corporation shall notify the regulatory bodies which have jurisdiction over the Corporation when a meeting of the Board is called to authorize the termination of the membership of a suspended Non-Conforming Member.

- 7) The Corporation shall promptly notify other Clearing Members, the Exchanges, the suspended Non-Conforming Member's applicable self-regulatory organization or regulatory agency, the regulatory agency of the Corporation and such other Entities as the Corporation may consider appropriate, that the Board has terminated the membership of a suspended Non-Conforming Member, indicating the effective date of the termination.

SECTION A-1A09 VOLUNTARY WITHDRAWAL

- 1) A Clearing Member may, at any time, notify the Corporation that it wishes to withdraw ~~its Membership as a Clearing Member of the Corporation~~, by giving a minimum of 30 days' prior written notice. The Clearing Member shall cease to be a Clearing Member ~~at~~ on the later of (a) the date of expiry of ~~such~~ the notice period or (b) the time date, as determined by the Corporation ~~at, on~~ which ~~all of~~ the Clearing Member's has satisfied all of its obligations ~~have been satisfied toward the Corporation~~ and any applicable requirements for withdrawal ~~have been met~~, including ~~obligations related to the winding down~~ the closing of all the Clearing Member's ~~activities. The withdrawal of any~~ Open Positions and the performance of any obligation arising in connection with the closing of such Open Positions. Withdrawal of a Clearing Member which has given provided a prior notice of withdrawal ~~but whose withdrawal has not been completed at the commencement of to the Corporation, in the event that~~ a Default Management Period ~~shall be stayed for the duration is~~ initiated before the effective date of withdrawal, shall not occur until the end of the Default Management Period and such Clearing Member shall cease to be a Clearing Member at the time at which date, as determined by the Corporation ~~determines that all, on which~~ the Clearing Member's ~~obligation have been~~ has satisfied all of its obligations toward the Corporation.
- 2) The Corporation shall ~~give notice to~~ notify all Clearing Members ~~that the Clearing Member has given notice of its intention to withdraw its Membership upon receipt of a notice of withdrawal pursuant to Section A-1A09(1).~~
- 3) ~~If the~~ Upon receipt of a notice of withdrawal ~~notice is given by~~ pursuant to Section A-1A09(1) from a Non-Conforming ~~Clearing~~ Member, the Corporation shall promptly notify the Board, ~~the other~~ all Clearing Members, the Exchanges, ~~such Clearing Member's applicable~~ the self-regulatory organization or agency, having jurisdiction over the activities of such Non-Conforming Member and any regulatory agency having ~~oversight~~ jurisdiction over the activities of the Corporation and ~~such any~~ other ~~Entities as~~ entity or organization that the Corporation may consider appropriate, that it has received a notice of ~~the Clearing Member's~~ withdrawal from ~~membership in the Corporation~~ such Non-Conforming Member.

SECTION A-1A10 TRANSFER/SURVIVAL OF OBLIGATIONS

- 1) A Clearing Member may not allocate or transfer any rights or obligations under any Transaction confirmed in its name except as otherwise expressly provided in these Rules or with the prior consent of the Corporation, in its sole discretion.

- 2) The liabilities and obligations of a Clearing Member to the Corporation and to other Clearing Members, and of the Corporation and other Clearing Members to the Clearing Member, arising from its membership shall survive the suspension, termination or withdrawal of the Clearing Member's membership as though the former Clearing Member were still a Clearing Member.
- 3) Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any suspended or terminated Non-Conforming Member to avail itself of any right of appeal which is provided by applicable law.

SECTION A-1A11 REINSTATEMENT OF MEMBERSHIP

- 1) A Clearing Member which has withdrawn as a Clearing Member or had its membership terminated may at any time be considered for reinstatement by the Board provided that the Clearing Member, if it is then eligible for membership, re-applies to become a Clearing Member, pays any entrance or reinstatement fee determined by the Board, meets the standards and qualifications for membership, demonstrates to the satisfaction of the Board that it has discharged all of its liabilities and indebtedness to the Corporation and the other Clearing Members, and the application for membership is accepted by the Board.
- 2) The Board may, in its sole discretion and on terms and conditions determined by the Board, approve or reject the new application for membership from a terminated or withdrawn Clearing Member. A committee of the Board shall ~~not~~ have no authority to exercise the powers of the Board under this Rule [A-1A](#).

RULE A-1B LIMITED CLEARING MEMBERS MEMBERSHIP

SECTION A-1B01 LIMITED CLEARING MEMBERS CORE PRINCIPLES

1) No Clearing Fund Contribution

Subject to applicable law, a Limited Clearing Member shall not be required to make a deposit or contribution to the Clearing Fund or to provide any other type of collateral or Margin Deposit to the Corporation which could be realized upon, applied or used by the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

2) No Obligation Resulting From the Default of Another Clearing Member

Subject to applicable law and Section A-1005, Limited Clearing Members shall not have any obligation to the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

3) No Reduction of Corporation's Obligations

Subject to applicable law and Section A-1005, the Corporation shall not have the right to reduce or terminate any of its obligations to any Limited Clearing Member in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

4) For further clarity, no Limited Clearing Member will be subject to any Recovery Power which may be available to the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation or in connection with a Recovery Process, other than the exercise of the Corporation's Reduced Amounts Distribution power pursuant to Section A-1005. This shall not preclude a Limited Clearing Member to voluntarily participate in any (i) auction held by the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation or (ii) Recovery Power in accordance with the Rules.

5) Specific Margin Requirements

6) A Limited Clearing Member shall be required to deposit Margin in accordance with Rule A-1B08 and the Operations Manual.

SECTION A-1B02 DEFINITIONS

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-1B03 LIMITED CLEARING MEMBERS ELIGIBILITY FOR MEMBERSHIP

In order to apply for membership as a Limited Clearing Member, an applicant must intend to submit Fixed Income Transactions to the Corporation for clearing and its Application for Membership must specify that it wishes to be admitted as a Limited Clearing Member on the basis that it is one of the following:

- a) a Crown, a public body of a Crown, an agency of the Crown, a mandatary of the Crown or a Crown corporation other than the Bank of Canada;
- b) the Bank of Canada;
- c) a federally or provincially regulated pension plan board, pension fund or compensation fund, the majority of whose assets under management are used to fund obligations under one or more pension plans serving the retirement needs of employees in the broader public sector, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable, or in relation to which bankruptcy and insolvency laws do not apply and a winding-up of such entity is subject to an administrator's fiduciary and statutory obligations; or
- d) a Crown, a public body of a Crown, a Crown corporation or an agency or mandatary of the Crown, the majority of whose assets under management are assets used to fund obligations under one or more pension plans and, if applicable to such entity, government funds, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable.

SECTION A-1B04 LIMITED CLEARING MEMBERS STANDARDS OF MEMBERSHIP

Every applicant to become a Limited Clearing Member other than the Bank of Canada must meet such standards as may be adopted from time to time by the Board, including, at the time of its application, the following:

- a) the applicant must have a Current Rating issued by at least two Designated Rating Organizations that is at or above (each a “**Designated Eligibility Rating**”):

- i) in the case of an applicant specifying that it wishes to be admitted as a Limited Clearing Member on the basis of the membership requirements prescribed by Subsection A-1B03(a) above, both the rating of the applicant's Reference Crown and the ratings set forth in Option A below; or
- ii) in the case of an applicant specifying that it wishes to be admitted as a Limited Clearing Member on the basis of the membership requirements prescribed by Subsections A-1B03(c) or (d) above, the ratings set forth in Option B below:

<u>Designated Rating Organization</u>	<u>Option A</u>	<u>Option B</u>
<u>DBRS Limited</u>	<u>A Low</u>	<u>AA</u>
<u>Fitch Inc.</u>	<u>A-</u>	<u>AA</u>
<u>Moody's Canada Inc.</u>	<u>A3</u>	<u>Aa2</u>
<u>Standard & Poor's Rating Services (Canada)</u>	<u>A-</u>	<u>AA</u>

- b) there must be no announcement by the Designated Rating Organizations referred to in Subsection (a) above or their respective DRO affiliates that the Limited Clearing Member's Current Rating may be downgraded to a rating that would not at a minimum be equal to the applicable Designated Eligibility Rating;
- c) the applicant must propose to engage in the clearance of Fixed Income Transactions through the facilities of the Corporation;
- d) the applicant must demonstrate to the satisfaction of the Corporation that:
 - i) it is sufficiently active in the Canadian repurchase transactions market and the Canadian bond cash buy or sell trading market;
 - ii) it has been self-executing in the Canadian repurchase transactions market for a continuous period of a minimum of three years prior to applying for membership with the Corporation;
 - iii) it is currently party to master repurchase agreements in a standard form acceptable to the Corporation under which it has agreed to enter into repurchase transactions in the Canadian market with a minimum of three other Clearing Members that are actively clearing Fixed Income Transactions through the facilities of the Corporation;
 - iv) it has adequate operations facilities including adequate technical functionality to clear Fixed Income Transactions with the Corporation, and has sufficient and competent personnel for the expeditious or orderly transactions of business with the Corporation and other Fixed Income Clearing Members and to meet the requirements of the Rules;

- v) it has the capacity, power and authority to execute and deliver the Application for Membership for Limited Clearing Members and perform its obligations to the Corporation under these Rules; and
- vi) it has the capacity, power and authority to grant in favour of the Corporation a first ranking pledge, lien, security interest and hypothec on collateral to secure the performance of all of its obligations to the Corporation pursuant to these Rules.
- e) if required by the Corporation, the applicant must arrange for the delivery by its counsel to the Corporation of a netting and insolvency opinion, in form and substance acceptable to the Corporation, with respect to the applicant's proposed Fixed Income Transactions;
- f) the applicant must demonstrate sound corporate governance practices, an effective corporate structure, prudent portfolio and risk management practices and procedures, a risk profile and other elements and factors, which render, in the opinion of the Corporation, the applicant suitable as a Fixed Income Clearing Member such that accepting the applicant would not cause undue risk to the Corporation or other Fixed Income Clearing Members or to the soundness of the Corporation's Fixed Income Transactions clearing system; and
- g) The Corporation may in its sole discretion waive the requirements set forth in Subsections (a) and (b) above under the condition that the Limited Clearing Member enters into an agreement with the Corporation that establishes, as determined by the Corporation in its sole discretion and agreed in writing by the Corporation and such Limited Clearing Member at the time that such Entity's Application for Membership is submitted to the Corporation, (i) any financial resilience metric acceptable to the Corporation (a "Replacement Metric"), (ii) the minimum level of the Replacement Metric required by the Corporation in order to admit such Entity as a Limited Clearing Member, pursuant to Subsection A-1B04 (a "Replacement Eligibility Metric") and (iii) the minimum level of the Replacement Metric which must be maintained by such Limited Clearing Member pursuant to Section A-1B05 (a "Replacement Maintenance Metric"), which agreement shall be in form and substance satisfactory to the Corporation.

SECTION A-1B05 ONGOING FINANCIAL RESILIENCE REQUIREMENTS

Except with respect to the Bank of Canada, a Limited Clearing Member must:

- 1) subject to subsection (2) below, maintain a Current Rating issued by at least one Designated Rating Organization that is at or above the ratings set forth below (a "**Designated Maintenance Rating**"):
 - a) in the case of a Limited Clearing Member admitted on the basis of the membership requirements prescribed by Subsection A-1B03(a) above, the ratings set forth in Option A below; or
 - b) in the case of a Limited Clearing Member admitted on the basis of the membership requirements prescribed by Subsections A-1B03(c) or (d) above, the ratings set forth in Option B below:

<u>Designated Rating Organization</u>	<u>Option A</u>	<u>Option B</u>
<u>DBRS Limited</u>	<u>BBB</u>	<u>A</u>
<u>Fitch Inc.</u>	<u>BBB</u>	<u>A</u>
<u>Moody's Canada Inc.</u>	<u>Baa2</u>	<u>A2</u>
<u>Standard & Poor's Rating Services (Canada)</u>	<u>BBB</u>	<u>A</u>

in each case, provided there has been no announcement by the Designated Rating Organization or its DRO affiliate that the Current Rating may be downgraded to a rating that would not at a minimum be equal to the Designated Maintenance Rating; or

- 2) in the case of a Limited Clearing Member in respect of which a Replacement Metric has been established pursuant to Subsection A-1B04(g), maintain its Replacement Metric to the level that was deemed acceptable by the Corporation as Replacement Maintenance Metric at the time of Application for Membership.

SECTION A-1B06 DUE DILIGENCE

In addition to the powers of the Corporation provided in Sections A-304 and A-305, the Corporation has the authority to inspect at least annually the financial condition (including its books and records), business, risk management, technology infrastructure, operations, corporate governance, assets and affairs of Limited Clearing Members and may require any responsible representative of the Limited Clearing Member to answer any questions deemed reasonably necessary by the Corporation to assess the Limited Clearing Member's ongoing compliance with the Rules.

SECTION A-1B07 LIMITED CLEARING MEMBERS ONGOING MONITORING

- 1) If the Corporation determines as a result of any early warning notice under Section A-303, any filing under Section A-304 or A-305 or any general or special examination under Section A-306 or Section A-1B06, or from any other information given to or obtained by it, including from the Limited Clearing Member, in accordance with the Rules, that a Limited Clearing Member does not maintain a Current Rating issued by a minimum of two different DROs that is at or above the applicable Designated Eligibility Rating or, if applicable, does not maintain its Replacement Metric at or above the applicable Replacement Eligibility Metric, the Corporation may take any or all of the following actions:
 - a) review the reports issued by a DRO in respect of the Limited Clearing Member, its Consolidated Affiliate or Plan Sponsor;
 - b) engage discussion with the Limited Clearing Member to determine any remedial actions to be taken by the Limited Clearing Member, and, where appropriate, require the Limited Clearing Member to provide a plan, including estimated timelines to address the situation;
 - c) generally monitor the implementation of the plan provided under Subsection A-1B07(c) where applicable;

- d) determine and notify, or recommend to the Board, as appropriate, any action, necessary or advisable for the protection of the Corporation, Clearing Members or the public; and
- e) immediately take any action pursuant to Section A-1B06.

SECTION A-1B08 LIMITED CLEARING MEMBER MARGIN REQUIREMENTS

- 1) Prior to the Settlement Time on every Business Day, every Limited Clearing Member shall be obligated to deposit Margin determined by the Corporation in accordance with Rule A-7 Margin Requirements and the methodology set out in the Risk Manual.
- 2) In respect of all Transactions to which a Limited Clearing Member is a party, a multiplier (the "Effective Ratio"), as established and reviewed on a periodic basis pursuant to the methodology set out in the Risk Manual, shall be applied to the Base Initial Margin required to be deposited by such Limited Clearing Member pursuant to Rule A-7 and calculated in accordance with the methodology set forth in the Risk Manual.

RULE A-2 MISCELLANEOUS REQUIREMENTS

SECTION A-201 OFFICES

Every Clearing Member shall maintain an office at a location approved by the Corporation. A representative of the Clearing Member authorized in the name of the Clearing Member to sign all instruments and take all action necessary for conducting business with the Corporation shall be present at such office on every Business Day between such hours as may be specified from time to time by the Corporation. Such representative shall be subject to the approval of the Corporation and shall be authorized to act on behalf of the Clearing Member by a written power of attorney in the case of a partnership or by a resolution of the board of directors in the case of a corporation. Such power of attorney or resolution, as the case may be, shall be in a form approved by the Corporation.

SECTION A-202 EVIDENCE OF AUTHORITY

- 1) Every Clearing Member shall file with the Corporation a certified list of the signatures of the representatives ("Authorized Representatives") of such Clearing Member (including partners and officers) who are authorized to sign certificates, cheques, agreements, receipts, orders and other papers necessary for conducting business with the Corporation, together with an executed copy of the powers of attorney, resolutions or other instruments giving such authority.
- 2) Any Clearing Member who has given a person a power of attorney or other authorization to transact business with the Corporation shall, immediately upon the withdrawal, retirement, resignation or discharge of such person or the revocation of his power to act, give written notice of such fact to the Corporation.

3) Where:

- a) ~~where~~ a document is presented by a Clearing Member to the Corporation which bears an authorization stamp of a Clearing Member in the form approved by the Corporation; or,
- b) ~~where~~ data is transferred electronically from a Clearing Member to the Corporation,

the Corporation shall be entitled to assume the authenticity of the authorization stamp and the authority of the person presenting the document or initiating the electronic transfer to do so on behalf of the Clearing Member.

4) The Corporation shall be entitled to rely and act upon any instruction given hereunder. The Corporation shall be under no obligation to ensure the genuineness or validity of any signature purporting to be that of an authorized signatory of the Clearing Member, of any stamp purporting to be an authorized stamp, or of the authority of any person initiating any electronic data transfer. The Corporation shall have no responsibility in the event that any such signature, stamp or data is forged, unauthorized or otherwise invalid or ineffective.

SECTION A-203 RECEIPT OF DOCUMENTS

- 1) A box or other facility at an office of the Corporation (or of a designated agent of the Corporation) will be assigned to each Clearing Member for the distribution of forms, papers, documents, notices, statements and such other items as the Corporation deems appropriate. An item deposited in a Clearing Member's box shall be deemed received by such Clearing Member when deposited.
- 2) Every Clearing Member shall be responsible for sending an Authorized Representative at an office of the Corporation for receipt of cheques, drafts and all items placed in the box of the Clearing Member at such intervals as may be necessary for the Clearing Member to perform all obligations and duties required by these Rules.

SECTION A-204 DOCUMENTS AND OTHER ITEMS SUBMITTED TO THE CORPORATION

All reports, documents, papers, statements, notices, cheques, drafts, certificates of deposit and other items required by the Rules to be submitted to the Corporation shall, except as may otherwise be specifically prescribed by the Rules, be delivered to the designated office of the Corporation or its agent at such times, on such forms and in such manner as the Corporation shall prescribe. Each item delivered to the Corporation shall clearly indicate the identity of the Clearing Member making such submission.

INTERPRETATION AND POLICIES

01. Every Clearing Member shall be required to use an authorization stamp, in a form approved by the Corporation, in lieu of manual signatures, on such reports, documents, papers, statements, notices, and other items as the Corporation shall from time to time prescribe.
02. The Corporation shall provide each Clearing Member with two authorization stamps at no charge. Any additional authorization stamps requested by a Clearing Member will be charged by the Corporation to such Clearing Member based upon the Corporation's costs. In lieu of an authorization stamp provided by the Corporation, a Clearing Member may use a member-selected authorization stamp, provided that the stamp meets such requirements as the Corporation may from time to time impose with respect to format and content and the Clearing Member files with the Corporation such documentation as the Corporation may require authenticating the member-selected authorization stamp.
03. Each Clearing Member shall be bound by all such reports, documents, papers, statements, notices and other items as the Corporation shall prescribe pursuant to Paragraph 01. above, bearing the Clearing Member's authorization stamp.

SECTION A-205 RECORDS

- 1) Every Clearing Member shall keep up to date records showing, with respect to each Transaction:
 - a) the names of the parties to the Transaction;
 - b) the trade date;
 - c) the name of the client;
 - d) if in respect of a Future, the Class and Series of Futures, the Underlying Interest, the number of contracts, the contract price, the delivery month and year, whether the transaction was a buy or sell transaction and whether it was an opening or closing transaction;
 - e) if in respect of an Option, the Class and Series of Options, the Underlying Interest, the number of contracts, the premium, the Exercise Price, the expiry month, whether the transaction was a purchasing or a writing transaction and whether it was an opening or a closing transaction;
 - f) if in respect of any OTCI the trade details as specified in the Trade Confirmation; and
 - g) such other information as may from time to time be required by law, regulation, an Exchange or the Corporation.

- 2) Every Clearing Member shall retain and keep readily accessible to the Corporation in a form acceptable to the Corporation, all records required by these Rules, including without limitation, the records referred to in Subsection A-205(1), for at least seven (7) years from the end of the calendar year to which such records relate in such form as the Corporation may authorize. The Corporation shall be entitled to inspect or take temporary possession of any such records at any time upon demand. All reports shall be available to the Corporation no later than 8:00 a.m. on the Business Day immediately following the report date. A Clearing Member must file any information requested by the Corporation within the time period specified in such demand.

SECTION A-206 NOTICES AND REPORTS BY THE CORPORATION

~~1)~~

1) ~~a)~~ Unless otherwise specifically provided for in any other Rule, the Corporation may give notice to a Clearing Member in such manner as the Corporation deems appropriate in the circumstances of the notice being given, including by telephone, by hand delivery, by fax and by Electronic Communication.

2) ~~b)~~ Each Clearing Member shall by notice in writing signed by a Clearing Member's Authorized Representative provide to the Corporation the names of at least two individuals and their positions for the purposes of telephone communications. The Corporation shall attempt to contact such individuals (or any other persons at the Clearing Member holding such positions) (the "CDCC Contacts") in connection with all telephone communications during business hours. If the CDCC Contacts are not available, the Corporation shall be entitled, during business hours, to provide telephone communications to any person answering the telephones at the Clearing Member. All telephone communications by the Corporation will be logged, electronically or manually, by the Corporation in one or more files ("Notice Files") kept for that purpose, recording the time and

subject matter of the call, the individual at the Corporation who made the call and the individual at the Clearing Member who received the call. The Notice File, absent manifest error, shall be deemed to be correct.

- 3) ~~e)~~ Telephone communications given in accordance with Paragraph A-206(~~1~~)(~~b2~~) or in accordance with Subsection A-206(~~6~~2) shall constitute full and proper notice notwithstanding the absence of any written or electronic confirmation of same.
- 4) ~~d)~~ For the purposes of this Section A-206, “business hours” shall mean from 8:00 a.m. to the Close of Business on any Business Day.
- 5) ~~2)~~ The Corporation may from time to time prescribe the form of reports to be given by the Corporation to Clearing Members. These reports may be sent by hand delivery, fax or Electronic Communication.
- 6) ~~3)~~ Each Clearing Member shall maintain a computer system at the Clearing Member’s designated office capable of obtaining, displaying and receiving Electronic Communications from the Corporation. Each Clearing Member shall have an obligation to review promptly each report, notice, instruction, data or other information made available by the Corporation to such Clearing Member through Electronic Communication. Each Clearing Member shall be responsible for advising the Corporation by telephone (confirmed in writing), fax or hand delivered notice on the Business Day on which a report is deemed to have been received or the Expiration Date of any item requiring change for any reason and the failure to report any such required change by such time shall constitute a waiver of the Clearing Member’s right to have such item changed.
- 7) ~~4)~~ Upon the Corporation delivering or making available a notice or report in accordance with this Section A-206, the Corporation’s obligation to furnish, issue or deliver such notice or report shall have been fulfilled.
- 8) ~~5)~~ Subject to Subsection A-206(~~6~~2):

 - a) a notice given by telephone shall be deemed to have been received by a Clearing Member as of and to be effective from the time of the telephone call to an individual in accordance with Paragraph A-206(~~1~~)(~~b2~~) or Subsection A-206(~~6~~2), as the case may be, as recorded in the relevant Notice File, unless the notice or another Rule specifically provides otherwise;
 - b) a notice given or report sent by fax shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received as of and, unless otherwise stated, to be effective from and after the time of the fax on the day it is sent, unless the notice or another Rule specifically provides otherwise;
 - c) a notice or report given by Electronic Communication shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received on and to be effective as of the day it is sent, unless the notice or another Rule specifically provides otherwise; and
 - d) a notice given by mail shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received and to be effective on the fifth day after mailing and a notice given or report sent by hand delivery shall be addressed to one or more of the CDCC

Contacts and shall be deemed to have been received and to be effective on the earlier of when it actually is received by the Clearing Member and the next Business Day immediately following the date it was sent.

- 9) ~~6~~ Where a notice is given or a report is sent by any means out of business hours or on a day that is not a Business Day, the notice or the report, as the case may be, shall be deemed to have been received on the earlier of
- a) the time the Corporation confirms it has actually been communicated to a responsible individual with the Clearing Member; and
 - b) the beginning of the next following Business Day.

For greater certainty, under Paragraph A-206(~~6~~9)(b), where a notice is given or report is received prior to 9:00 a.m. on a Business Day, it shall be deemed to have been received not later than 9:15 a.m. on that Business Day. The Corporation shall maintain a list of emergency contact telephone and/or fax numbers of not less than three responsible individuals employed by each Clearing Member with whom the Corporation can communicate out of ordinary business hours if the Corporation determines such communication is necessary or advisable. It shall be the responsibility of each Clearing Member to ensure that the individuals so selected can be readily contacted outside of ordinary business hours, and that the contact numbers for them are kept current.

SECTION A-207 PAYMENT OF FEES AND CHARGES

- 1) The Corporation may levy such fees and charges related to such services provided to Clearing Members as it deems appropriate. All or any part of the proceeds from such levy may be applied to such purposes as the Corporation shall determine from time to time.
- 2) Fees and charges owing by a Clearing Member to the Corporation shall be due and payable within 30 days following the date of the invoice.

SECTION A-208 FORCE MAJEURE OR EMERGENCY

On the happening of a *force majeure* or an Emergency, the Corporation is entitled to take such action as it deems necessary and appropriate or require any Clearing Member to take such action as the Corporation may direct in respect of the same. In taking such action, the Corporation reserves the right, with regards to the settlement of a Transaction, to make a cash settlement in lieu of the delivery of the Underlying Interest.

SECTION A-209 TIME

All times herein are Eastern Time prevailing in Montreal and Toronto at the time of the event.

SECTION A-210 DISTRIBUTION OF INFORMATION, CONFIDENTIALITY AND USE OF CDCC MATERIALS

1) Clearing Member Information

- a) The Corporation may provide, on a confidential basis, any information regarding a Clearing Member to the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory authority having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate, when, in the opinion of the Corporation, such information is relevant to the preservation of the integrity of the securities industry and derivative markets or the provision of such information is in the public interest.
- b) The Corporation may also receive, on a confidential basis, any information regarding a Clearing Member from the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate. Where in the opinion of the Corporation such information is relevant, the Corporation shall be entitled to rely upon such information for the purposes, among others, of Rule A-3, ~~Capital~~ Financial Resilience Requirements.
- c) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to provide any information regarding the Clearing Member to the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate provided that such other persons have an obligation to maintain the confidentiality of such information.
- d) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to receive any information regarding the Clearing Member from the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate.
- e) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to release any information regarding the Clearing Member that is in a statistical summary or other format, provided the information does not specifically identify a particular Clearing Member.
- f) The Clearing Member, by virtue of its membership in the Corporation, is deemed to have released the Corporation and each of its directors, officers and employees from any and all liability whatsoever which may arise by virtue of information being furnished to the

Corporation or any organization considered appropriate, for such purposes, by the Corporation.

2) Corporation Confidential Information

- a) A Clearing Member will not disclose any Confidential Information to any person and will not copy, reproduce or store in a retrieval system or data base any Confidential Information except for such copies and storage as may be required by the Clearing Member for its own internal use when employing CDCS.
- b) The Confidential Information will remain the exclusive property of the Corporation or the relevant third party.
- c) A Clearing Member will take reasonable security measures and use reasonable care to protect the secrecy of, and to avoid the disclosure to or use by third parties of, Confidential Information.
- d) Upon ceasing to be a Clearing Member or at any time upon the request of the Corporation, the Clearing Member will delete any Confidential Information from all retrieval systems and data bases or destroy same as directed by the Corporation and provide the Corporation with an officer's certificate attesting to such deletion or destruction.

For the purposes of this Subsection A-210(2), "Confidential Information" means all information relating to the Corporation, including all CDCC Material and any other information relating to CDCS such as trading data or procedures furnished by or on behalf of the Corporation to a Clearing Member, regardless of the manner in which it is furnished (whether oral or in writing or in any other form or media), but does not include:

- a) the Rules;
- b) information that is already published or otherwise is or becomes readily available to the public, other than by a breach of the Rules;
- c) information that is rightfully received by the Clearing Member from a third party not in breach of any obligation of confidentiality to the Corporation;
- d) information that is proven to be known by the Clearing Member on a non-confidential basis prior to disclosure by the Corporation; or
- e) information that is proven to be developed by the Clearing Member independent of any disclosure by the Corporation.

3) Use of CDCC Materials

- a) The Corporation grants each Clearing Member a limited, non-exclusive, revocable and non-transferable license to use CDCC Materials only for uses directly related to the Clearing Member's use of CDCS. The Clearing Member will not use CDCC Materials or any information obtained or derived from CDCC Materials except in accordance with this license. The Clearing Member acknowledges and agrees that all ownership right in the CDCC Materials belongs to the Corporation or its suppliers.
- b) If a Clearing Member (with CDCC's permission) discloses CDCC Materials or any information obtained or derived from CDCC Materials to a client (including to any of its Affiliates) receiving services from a Clearing Member, the Corporation may require the

Clearing Member to obtain an undertaking from such client to comply with Section A-210 in its use of CDCC Materials or any information obtained or derived from CDCC Materials.

- c) Except as provided in Paragraphs (a) and (b) of this Subsection A-210(3), a Clearing Member will not: (i) copy or modify the CDCC Materials; (ii) sell, sublicense or otherwise transfer the CDCC Materials to any third party; (iii) reverse engineer or create derivative works based on the CDCC Materials; or (iv) use, disclose or communicate CDCC Materials or any information obtained or derived from CDCC Materials to or for the benefit of any third party or any Affiliate of the Clearing Member by any means whatsoever whether as a back-office service provider, outsourcer, or wholesaler to any third party or Affiliate of the Clearing Member or for the benefit of any joint venture or partnership to which the Clearing Member is a party.

SECTION A-211 NOTICE OF PROPOSED AMENDMENTS TO RULES

As required by law, the Corporation shall provide all Clearing Members with the text of any proposed rule change and a statement of its purpose and effect on Clearing Members. This Section A-211 shall not require the Corporation to provide Clearing Members with any proposed rule change in the cases where notice is not required by law including (i) the Corporation is of the opinion that an emergency requires the rule change without public consultation, (ii) the change is in respect of a new derivative, (iii) where the impact of a change on a Clearing Member is minor, (iv) the change pertains to a routine operational process or an administrative practice, (v) the change is intended for purposes of harmonization or compliance with an existing rule or with legislation, or (vi) the change corrects an error of form, a clerical error, a mistake in calculation or makes stylistic changes. The non-receipt by any Clearing Member of proposed rule changes under this Section A-211 shall not affect the validity, force or effect of any action taken by the Corporation pursuant thereto.

SECTION A-212 DEPOSITS AND WITHDRAWALS

1) General

- a) From time to time, each Clearing Member will be required to make payments, deposits or transfers of Cash, Securities, certificates, property, Underlying Interests, Underlying Interest Equivalents or other interests or rights (a "Deposit") to the Corporation under these Rules, to assure the performance of the obligations of such Clearing Member or to fulfil such Clearing Member's obligations to the Corporation hereunder.
- b) Each ~~payment, deposit or transfer, whether of Cash, Securities, certificates, property, Underlying Interests, Underlying Interest Equivalents or other interests or rights (a "Deposit")~~ Deposit shall be deemed to have been made at the time that (i) the Deposit has been delivered to and accepted by the Corporation, (ii) where the Corporation has the authority or under these Rules is entitled to transfer or apply any monies, securities or position from any Clearing Member's account, whether such account is held at the Corporation or elsewhere, at the time such transfer or application is effected by the Corporation, or (iii) a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit has been accepted by the Corporation.

- c) At the time of any Deposit hereunder, the Clearing Member shall indicate on the appropriate form filed with the Corporation the details and purpose of the Deposit.
- 2) Put Escrow Receipts, Call Underlying Interest Deposits or Futures Underlying Interest Deposits will be accepted only if the Approved Depository has agreed in writing in the form prescribed by the Corporation, that:
 - a) the Deposit has been received by such Approved Depository and is in Good Deliverable Form;
 - b) the Deposit shall be immediately delivered to the order of the Corporation in accordance with the terms and conditions of a Depository Agreement made between such Approved Depository and the Corporation (i) with respect to a Put Escrow Receipt, on demand at any time during the period the Corporation holds the Put Escrow Receipt, and (ii) with respect to a Call Underlying Interest Deposit or Futures Underlying Interest Deposit, by being pledged to the Corporation through a Central Securities Depository during the life of the relevant call Option or Future;
 - c) the Deposit shall remain (i) with respect to a Put Escrow Receipt, on deposit with the Approved Depository in trust for the Corporation until the Put Escrow Receipt is returned to the Approved Depository, or the Deposit is delivered to the order of the Corporation on demand in accordance with the relevant Put Escrow Receipt and the terms of the Depository Agreement; and (ii) with respect to a Call Underlying Interest Deposit or Futures Underlying Interest Deposit, on deposit with the Corporation through a Central Securities Depository until the Call Underlying Interest Deposit or Futures Underlying Interest Deposit is returned to the Approved Depository, or the Deposit is seized by the Corporation in accordance with the terms of the Depository Agreement; and
 - d) the Corporation shall have the right to hold the Put Escrow Receipt, Call Underlying Interest Deposit or Futures Underlying Interest Deposit until the Corporation is satisfied, following the filing of a withdrawal request pursuant to this Section, that all Margin required has been deposited with the Corporation.
- 3) The Clearing Member shall deliver the Deposit to the Corporation (together with such covering forms as the Corporation may require), between the hours specified by the Corporation. Clearing Members shall ensure that at all times the Deposits are not held by them but by the Corporation or an Approved Depository.
- 4) A Deposit may be withdrawn by a Clearing Member between the hours specified by the Corporation; provided, however, that the Corporation may continue to hold a Deposit:
 - a) following the Expiration Date of the relevant Options until all obligations of the Clearing Member arising from the assignment of Exercise Notices have been performed; or
 - b) following the acceptance of a Tender Notice until all obligations of the Clearing Member arising from the delivery of or payment for the Underlying Interest have been performed.

A Clearing Member seeking to withdraw a Deposit shall submit a duly completed withdrawal request in the form prescribed by the Corporation and must comply with the applicable notice requirements as set out in the Operations Manual.

5) Put Escrow Receipts, Call Underlying Interest Deposits and Futures Underlying Interest Deposits shall be deemed Underlying Interest Equivalents in accordance with Section A-~~708-706~~.

6) Deposits

- a) At the time of the delivery of a Deposit, the Clearing Member shall indicate on the appropriate form filed with the Corporation whether the Deposit is a 'bulk deposit' or a 'specific deposit'.
- b) A bulk deposit may be made in respect of any number of unspecified Option Short Positions or unspecified Futures Short Positions held in the account of the Clearing Member for which the Deposit is made.
- c) A specific deposit may be made only of Underlying Interest or Underlying Interest Equivalent held for the account of a named depositor in respect of a specified put or call Option Short Position or specified Futures Short Position held by the Clearing Member for such depositor. The Clearing Member shall maintain a record of each specific deposit, identifying the depositor, the account in which the Underlying Interest or Underlying Interest Equivalent is held and the specified positions for which the specific deposit has been made.
- d) No Underlying Interest or Underlying Interest Equivalent held for the account of a Client may be deposited hereunder in respect of a position in any account other than a Client Account. No Underlying Interest or Underlying Interest Equivalent held for any Market Maker may be deposited hereunder in respect of a position in any account other than such Market Maker Account.
- e) The Deposit hereunder by a Clearing Member of any Underlying Interest or Underlying Interest Equivalent held for the account of any Client may be made only to the extent permitted by applicable law, regulations and policies of the Corporation and shall constitute the certification of the Clearing Member to the Corporation that such Deposit does not contravene any provision of applicable law, regulations or policies of the Corporation.
- f) The Clearing Member shall not deposit hereunder more Underlying Interest or Underlying Interest Equivalent held for a Client Account than is fair and reasonable in light of the indebtedness of the Client to such Clearing Member and the Client's positions with the Clearing Member.
- g) The Corporation shall not use any Underlying Interest or Underlying Interest Equivalent in bulk deposit in a Client Account or a Market Maker Account, or the proceeds therefrom, to satisfy any obligation of the Clearing Member to the Corporation other than an obligation arising out of such Client Account or Market Maker Account.

7) Depository Receipts

- a) A Clearing Member may file a Depository Receipt issued by an Approved Depository (in the form approved by the Corporation) which certifies that the Underlying Interest or Underlying Interest Equivalent described therein is held by such Approved Depository in trust for the Corporation (in the case of a Put Escrow Receipt) or is pledged to the Corporation through a Central Securities Depository (in the case of a Call Underlying Interest Deposit or Futures Underlying Interest Deposit) on the instructions of a named depositor.

- b) In the event any Short Position for which a Depository Receipt has been deposited is closed out by a Closing Purchase Transaction or by a Closing Buy Transaction, as the case may be, the Clearing Member making such Deposit may promptly request the withdrawal of the Depository Receipt evidencing such Deposit.
- c) If a Clearing Member requests the withdrawal of a Depository Receipt issued in respect of a put or call Option or a Future while it is still outstanding, it may do so subject to satisfying the Margin requirement with respect thereof. When such Margin is deposited, the Corporation will release and return the Depository Receipt previously filed in respect of such put or call Option or Future, as the case may be.

8) ~~Approved Depositories~~

~~Clearing Members acknowledge and agree that the Corporation will accept that Deposits be made through an Approved Depository in accordance with these Rules on the basis that the Approved Depository meets the following criteria:~~

- ~~a) It is (i) a trust company to which the Trust and Loan Companies Act (Canada) applies or subject to the Loan and Trust Corporations Act (Ontario) or An Act Respecting Trust Companies and Savings Companies (Quebec) or equivalent legislation of other provinces of Canada, or (ii) such other institution as the Board may, in its sole discretion, approve from time to time;~~
- ~~b) It has a minimum capital of \$25,000,000, for which current audited financial statements are available;~~
- ~~c) It enters into a Depository Agreement with the Corporation in acceptable form;~~
- ~~d) It enters into an agreement with the depositor (either a Clearing Member or a client of a Clearing Member) wishing to make Deposits in the form of Cash to be held in trust for the Corporation and certified by Put Escrow Receipts, and/or Call Underlying Interest Deposits and/or Futures Underlying Interest Deposits to be pledged to the Corporation through a Central Securities Depository pursuant to Section A 708, which agreement shall clearly set forth the conditions under which the Approved Depository will handle such Deposits, issue Depository Receipts and honour the Corporation's demands for release in respect of Put Escrow Receipts, consistent with the terms of the Depository Agreement;~~
- ~~e) It holds each Deposit that is the object of a Put Escrow Receipt as custodian for the account of the depositor in trust for the Corporation with the express authority from the depositor to act in such capacity in respect of a specific put Option;~~
- ~~f) It holds each Deposit that is the object of a Put Escrow Receipt free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or in any third party's favour;~~

- ~~g) It is duly authorized by the depositor to release a Deposit that is the object of a Put Escrow Receipt in favour of the Corporation in accordance with the terms of the Depository Agreement;~~
- ~~h) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific ~~a~~ call Option;~~
- ~~i) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set off), charge, security interest, lien or claim of any sort in its own or any third party's favour;~~
- ~~j) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific Future; and~~
- ~~k) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set off), charge, security interest, lien or claim of any sort in its own or any third party's favour.~~

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.

SECTION A-214 ELECTRONIC INTERFACES

As many functions previously conducted by the movement of paper between the Corporation and Clearing Members are now, or will in the future be, executed by electronic transfers of data to and from the Corporation, the words “access”, “deliver”, “furnish”, “instruct”, “issue”, “make available”, “notify”, “receive”, “submit” and “tender” shall include, where appropriate, the movement of information by electronic means between the Corporation and a Clearing Member.

SECTION A-215 LIABILITY

- 1) Notwithstanding anything to the contrary in the Rules, all obligations of the Corporation described in the Rules are solely to its Clearing Member. For greater certainty, the Rules are not to be interpreted or construed to imply that the Corporation has any obligation to any Entity other than its Clearing Members. Without limiting the generality of the foregoing, the Corporation is also not liable for obligations of a non-Clearing Member, or of a Clearing Member to a non-Clearing Member, of a Clearing Member to another Clearing Member who is acting for it as an agent, or obligations to a Client by a Clearing Member, nor shall the Corporation become liable to make deliveries to or accept deliveries from any such Entity.
- 2) Notwithstanding the fact that a Clearing Member may not be a member of an Exchange on which Options or Futures trade, such Clearing Member shall nonetheless be subject to the position limits, exercise limits and any risk limits established by such Exchange.
- 3) CDCS provides to Clearing Members, among other things, electronic data transmission services in connection with the acceptance and/or clearance of Transactions including, but not limited to, clearing and settlement, margining, holding of deposits and the preservation or communication of data in or through any computer or electronic data transmission system.
- 4) The Corporation shall not be required to perform any obligation under the Rules or make available CDCS nor shall it be held liable for any failure or delay in the performance of its obligations to any Clearing Member due to the unavailability of CDCS, if, as a result of *force majeure* or Emergency, it becomes impossible or impracticable to perform such obligation or make available CDCS, and where the Corporation could not, after using reasonable efforts (which would not require the Corporation to incur a loss other than immaterial, incidental expenses), overcome such impossibility or impracticability.
- 5) The Corporation shall not be liable to a Clearing Member for any direct or indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or other liability or claim suffered or incurred by or made against a Clearing Member as a result of the use by the Clearing Member of CDCS or any failure of CDCS or any act or omission of the Corporation, its directors, officers or employees, or members of any standing or ad hoc committee formed by the Corporation, regardless of whether such act or omission constitutes negligence. By making use of CDCS, Clearing Members expressly agree to accept any and all such loss, damage, cost, expense, or other liability or claim arising from the use of CDCS.
- 6) The Corporation shall not be liable to a Clearing Member for any indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or any other liability or claim suffered or incurred by or made against a Clearing Member as a result of the failure by the Corporation to pay a Settlement Amount owing in respect of a transaction, regardless of whether such failure constitutes negligence.
- 7) In the event any legal proceeding is brought by any person against the Corporation seeking to impose liability on the Corporation as a direct or indirect result of the use by a Clearing Member of CDCS, the Clearing Member shall reimburse the Corporation for:

- a) all expenses and legal fees incurred by the Corporation in connection with the proceeding;
 - b) any award pronounced against the Corporation in any judgment in the event it is found to be liable; and
 - c) any payment made by the Corporation, with the consent of the Clearing Member, in settlement of any such proceeding.
- 8) The exemption from liability of the Corporation set out in this Section A-215 shall not extend to, nor limit liability for damages caused through an intentional or gross fault as defined in Article 1474 of the Civil Code of Québec.

SECTION A-216 AUDITED STATEMENTS OF THE CORPORATION

After they have been presented to the Board, the Corporation shall furnish at its expense to each Clearing Member one copy of:

- a) the balance sheet forming part of its audited financial statements for such fiscal year, with accompanying notes related to the balance sheet;
- b) the report of the Corporation's independent auditor thereon; [and](#)
- c) the report of the Corporation's independent auditors on the suitability of the system of internal controls of the Corporation with the objectives of internal control stated by the Corporation pertaining to its:
 - i) administration;
 - ii) information technology;
 - iii) trading/assignment/exercise; and
 - iv) margin and collateral.

SECTION A-217 CORPORATION AS AGENT RE SETTLEMENT ACCOUNTS

Each Clearing Member will establish a separate Canadian dollar bank account, and if a Clearing Member clears Options, Futures, or Options and Futures, a separate United States of America dollar Bank account, for settling Transactions in this currency (the "Settlement Accounts"). Each Clearing Member hereby appoints the Corporation to act as its agent, and the Corporation hereby accepts such appointment upon the terms and conditions hereof, solely for the purpose of effecting, on behalf of such Clearing Member, electronic payment instructions from the Settlement Accounts for the purpose of paying all amounts owing by the Clearing Member to CDCC. Nothing herein shall abrogate a Clearing Member's obligations hereunder to maintain sufficient funds in the Settlement Accounts for the purposes of ensuring complete and timely settlement of the Clearing Member's obligations hereunder.

SECTION A-218 WAIVER OF IMMUNITY

Each Clearing Member irrevocably waives, with respect to itself and all of its revenues and assets, and each Limited Clearing Member, with respect to any pension plan or fund or compensation fund in respect of which it is acting and all revenues and assets of such pension plan or fund or compensation fund, all immunity on the grounds of sovereignty or other similar grounds from suit, jurisdiction of any court, relief by way of injunction, order for specific performance or for recovery of property, attachment of its assets (whether before or after judgment) and execution or enforcement of any judgment to which it or its revenues or assets might otherwise be entitled in any proceedings in the courts of any jurisdiction and irrevocably agrees that it will not claim any such immunity in any proceedings.

SECTION A-219 PARAMOUNTCY

In the event of any conflict between the Operations Manual (including any Schedule to the Operations Manual) and these Rules (without reference to the Operations Manual), the terms and conditions of the Rules (without reference to the Operations Manual) will govern to the extent of such inconsistency.

SECTION A-220 GOVERNING LAW

The Rules shall be governed by and construed in accordance with the laws of the province of Quebec and the federal laws of Canada applicable therein. Each Clearing Member, by virtue of its membership in the Corporation, attorns to the jurisdiction of the courts of Quebec.

The term “pledge” (and any correlative term) in the Rules and any Application for Membership includes a security interest and hypothec and any provision whereby a pledge is or shall be granted includes the grant of a security interest and hypothec.

SECTION A-221 CONTACT INFORMATION

Each Clearing Member shall, upon admission as a Clearing Member and, promptly following any change in such information, communicate to the Corporation the names and full contact information for its Clearing Member Level 1, Clearing Member Level 2 and Clearing Member Level 3 contacts, as set forth in the Operations Manual.

SECTION A-222 APPROVED SECURITIES INTERMEDIARY

- 1) An Approved Securities Intermediary is a financial institution that meets the following criteria:
 - a) It is (i) a trust company to which the Trust and Loan Companies Act (Canada) applies or subject to the Loan and Trust Corporations Act (Ontario) or an Act Respecting Trust Companies and Savings Companies (Quebec) or equivalent legislation of other provinces of Canada, or (ii) such other institution as the Board may, in its sole discretion, approve from time to time;
 - b) It has a minimum capital of \$25,000,000, for which current audited financial statements are available;

- c) It is a full member participant in good standing with CDS;
 - d) It is not subject to bankruptcy, insolvency, winding-up or restructuring proceedings and no administration, receiver manager, trustee or person with similar power has been appointed in connection with the entity; and
 - e) It is party to an agreement with a Clearing Member pursuant to which (a) the Corporation may, on an annual basis, require the Corporation's auditor to make any general or special examination of the financial affairs of the Approved Securities Intermediary or to report upon the whole or any aspect of the business or affairs thereof; (b) the Corporation's auditor, for the purpose of this special examination shall be entitled to request from the Approved Securities Intermediary, or its auditors, any information or items which the auditors believe to be relevant to any transactions directly or indirectly related to the business of the Corporation and no person, Approved Securities Intermediary, or Clearing Member shall withhold, conceal, destroy or refuse to give any such information or items reasonably required by the Corporation's auditors for the purpose of this examination, and (c) an Approved Securities Intermediary must provide any information or items requested by the Corporation's auditor within the time period specified on the request.
- 2) In the event that Margin Deposits are made through an Approved Securities Intermediary in accordance with these Rules, the Corporation shall not be liable for any direct or indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or other liability or claim suffered or incurred by or made against a Clearing Member as a result of the use by the Clearing Member of an Approved Securities Intermediary or any failure of an Approved Securities Intermediary. By making use of an Approved Securities Intermediary, Clearing Members expressly agree to accept any and all such loss, damage, cost, expense, or other liability or claim arising from the use of an Approved Securities Intermediary.

SECTION A-223 APPROVED DEPOSITORY

- 1) The Corporation may accept that Deposits be made through an Approved Depository in accordance with these Rules on the basis that the Approved Depository is an Approved Securities Intermediary that meets the following additional criteria:
- a) It enters into a Depository Agreement with the Corporation in form acceptable to the Corporation;
 - b) It enters into an agreement with the depositor (either a Clearing Member or a client of a Clearing Member) wishing to make Deposits in the form of Cash to be held in trust for the Corporation and certified by Put Escrow Receipts, and/or Call Underlying Interest Deposits and/or Futures Underlying Interest Deposits to be pledged to the Corporation through a Central Securities Depository pursuant to Section A-706, which agreement shall clearly set forth the conditions under which the Approved Depository will handle such Deposits, issue Depository Receipts and honour the Corporation's demands for release in respect of Put Escrow Receipts, consistent with the terms of the Depository Agreement;
 - c) It holds each Deposit that is the object of a Put Escrow Receipt as custodian for the account of the depositor in trust for the Corporation with the express authority from the depositor to act in such capacity in respect of a specific put Option;

- d) It holds each Deposit that is the object of a Put Escrow Receipt free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or in any third party's favour;
- e) It is duly authorized by the depositor to release a Deposit that is the object of a Put Escrow Receipt in favour of the Corporation in accordance with the terms of the Depository Agreement;
- f) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific call Option;
- g) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour;
- h) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific Future; and
- i) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour.

SECTION A-224 APPROVED CUSTODIAN

- 1) The Corporation may accept that a Clearing Member satisfies the Margin requirements pursuant to Rule A-7 Margin Requirements by depositing all Margin required to be deposited through an Approved Custodian in accordance with these Rules on the basis that the Approved Custodian is an Approved Securities Intermediary that meets the following additional criteria:
 - a) It enters into an Account Control Agreement with the Clearing Member and the Corporation in form acceptable to the Corporation, which agreement shall clearly set forth the conditions under which the Approved Custodian shall hold the securities pledged by the Clearing Member to the Corporation, subject to the control (within the meaning of the *Securities Transfer Act, 2006* (Ontario) as in effect from time to time (the "STA")) of the Corporation, and comply with the Corporation's instructions, including notice of exclusive control, consistent with the terms of the Account Control Agreement and the Rules; and
 - b) It accepts that the Corporation shall have control within the meaning of the STA over each deposit made by the Clearing Member into the account subject to the Account Control Agreement free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour.

~~**RULE A-3 CAPITAL REQUIREMENTS**~~ Notwithstanding anything to the contrary contained in the Rules or in the Account Control Agreement between the Corporation and a Clearing Member, the Corporation shall not deliver a notice of exclusive control (as defined in the applicable Account Control Agreement) or entitlement order (within the meaning of the STA) to an Approved Custodian pursuant to the terms of such Account Control Agreement (other than an entitlement order given jointly by the Corporation and the Clearing Member for the withdrawal by such Clearing Member of collateral other than income contained in the account subject to the Account Control Agreement) , unless such Clearing Member is suspended in accordance with Section A-1A05; and, in connection with a notice of exclusive control that has been delivered in connection with an Account Control Agreement, if the Clearing Member is no longer suspended, the Corporation shall promptly deliver notice rescinding such notice of exclusive control to the Approved Custodian in accordance with the Account Control Agreement.

RULE A-3 FINANCIAL RESILIENCE REQUIREMENTS

SECTION A-301 MINIMUM CAPITAL REQUIREMENTS

- 1) This Section A-301 is not applicable to Limited Clearing Members.
- 2) ~~1)~~ Unless a specific temporary exception is made by the Corporation in the case of a particular Clearing Member due to unusual circumstances, a Clearing Member shall not at any time permit its minimum capital to be less than:
 - a) the minimum capital adequacy requirement adopted from time to time by the Investment Industry Regulatory Organization of Canada, for an SRO Clearing Member; ~~or~~
 - b) the minimum capital adequacy requirement adopted from time to time by the Office of the Superintendent of Financial Institutions, for a Bank Clearing Member; or
 - c) the minimum capital adequacy requirement adopted from time to time by the Regulatory Body having jurisdiction over the Clearing Member, and that is judged by the Corporation to be comparable to such capital adequacy requirement applicable to a Bank Clearing Member, for a Financial Institution Clearing Member.
- 3) ~~2)~~ Every Clearing Member shall file with the Corporation, on request, a report covering the computation of the capital requirements.
- 4) ~~3)~~ A Fixed Income Clearing Member, in spite of Subsection A-301(~~1~~2), must also meet the following criteria:
 - a) if it submits only Firm Fixed Income Transactions,
 - i) have minimum capital of \$50,000,000 and be a primary dealer for government securities auctions for the Bank of Canada; or
 - ii) have minimum capital of \$100,000,000.
 - b) if it submits both Firm Fixed Income Transactions and Client Fixed Income Transactions, have minimum capital of \$200,000,000.
 - c) for the purpose of this Subsection A-301(~~3~~4), “capital” means the Clearing Member’s shareholder’s equity as reflected in its most recent financial statement filed with the Investment Industry Regulatory Organization of Canada or with Office of the Superintendent of Financial Institutions or the Regulatory Body having jurisdiction over the Clearing Member, as the case may be, in accordance with Section A-305, which financial statement is updated on a monthly basis or quarterly basis, as applicable. The Corporation may also, in its sole discretion, take into consideration other forms of capital as a substitute for shareholder’s equity, including the subordinated debt of the Clearing Member or an irrevocable parent company guarantee covering the Clearing Member satisfactory to the Corporation.

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- d) for the purpose of this Subsection A-301(~~3~~4), “Firm Fixed Income Transactions” shall mean all Fixed Income Transactions submitted by a Clearing Member for its own account and for the account of any of its Affiliates, and “Client Fixed Income Transactions” shall mean all Fixed Income Transactions submitted by a Clearing Member for the account of any of its Clients, other than any of its Affiliates.

SECTION A-302 ~~MINIMUM CAPITAL~~ FINANCIAL RESILIENCE

No Transaction shall be cleared by the Corporation for any Clearing Member to which Section A-301 applies from the time the Corporation acquires actual knowledge that such Clearing Member does not meet the minimum capital adequacy requirements prescribed in Section A-301.

No Transaction shall be cleared by the Corporation for any Limited Clearing Member from the time the Corporation acquires actual knowledge that such Limited Clearing Member does not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05.

SECTION A-303 EARLY WARNING

- 1) A Clearing Member to which Section A-301 applies shall notify the Corporation immediately if such a Clearing Member has any indication or suspicion that it may not meet the minimum capital adequacy requirements prescribed in Section A-301 or that any calculation of its capital requirement, as determined from time to time by the Corporation, reflects a capital deficiency or early warning situation as provided in this Section A-303.
- 2) A Limited Clearing Member shall notify the Corporation immediately if such a Clearing Member has any indication or suspicion that it may not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05.
- 3) An SRO Clearing Member shall advise the Corporation immediately if such Clearing Member enters any early warning level (as defined from time to time by the Investment Industry Regulatory Organization of Canada).
- 4) A Bank Clearing Member shall advise the Corporation immediately if such Clearing Member fails to meet the minimum capital adequacy requirements that may be set from time to time by the Office of the Superintendent of Financial Institutions.
- 5) A Financial Institution Clearing Member shall advise the Corporation immediately if such Clearing Member fails to meet the minimum capital adequacy requirements that may be set from time to time by the Regulatory Body having jurisdiction over such Clearing Member.
- 6) A Limited Clearing Member shall advise the Corporation immediately if such Limited Clearing Member fails to maintain its Designated Eligibility Rating or Designated Maintenance Rating; or its Replacement Eligibility Metric or Replacement Maintenance Metric, as applicable.

SECTION A-304 AUDITS

- 1) The Corporation has the authority to inspect the books and records of Clearing Members and may require any Clearing Member and any ~~specific director, officer, employee or auditor thereof~~ responsible representative of such Clearing Member to appear personally before the Corporation and produce its books and records and answer questions deemed reasonably necessary by the Corporation regarding any actual or alleged violation of the Rules.
- 2) Unless otherwise agreed to by the Corporation, the audit of the financial statements of a Clearing Member will take place on the fiscal year-end of such Clearing Member.
- 3) The audit of the financial statements of a Clearing Member shall be conducted in accordance with generally accepted auditing standards and shall include a review of the accounting system, the internal accounting control and procedures for safeguarding securities. It shall include all audit procedures necessary under the circumstances to support the opinions which must be expressed to meet all legal and regulatory requirements applicable to such Clearing Member.
- 4) Clearing Members shall cause their auditors to also comment on any material inadequacies found to exist in the accounting system, the internal accounting control or in the procedures for safeguarding securities and shall indicate any corrective action the Clearing Member has taken or which it proposes to implement and shall provide copies of these comments to the Corporation.

SECTION A-305 FILING PROCEDURES

- 1) Each SRO Clearing Member shall deliver to the Corporation one copy of Parts I and II of the Joint Regulatory Financial Questionnaire and Report, together with the certificate of partners or directors, as required by the self-regulatory body of which such SRO Clearing Member is a member, in the form prescribed by such self-regulatory body ~~at the same time~~ promptly after such documents are provided to the self-regulatory body.
- 2) Each Bank Clearing Member shall deliver to the Corporation one copy of the Capital Adequacy Return, as required by the Office of Superintendent of Financial Institutions, in the form prescribed by the Office of Superintendent of Financial Institutions and at the same time such documents are provided to the Office of Superintendent of Financial Institutions, and one copy of its annual financial statements, in the form prescribed by the Office of Superintendent of Financial Institutions and ~~at the same time~~ promptly after such documents are provided to the Office of Superintendent of Financial Institutions.
- 3) Each Financial Institution Clearing Member shall deliver to the Corporation one copy of such report as required and in the form prescribed by the Regulatory Body having jurisdiction over such Clearing Member demonstrating the Clearing Member's compliance with the capital adequacy requirement applicable to it and one copy of its annual financial statements, in the form prescribed by the Regulatory Body and ~~at the same time~~ promptly after such documents are provided to the Regulatory Body.

- 4) Each Limited Clearing Member shall deliver to the Corporation one copy of the annual audited financial statements prescribed by the governmental agency or the pension regulator having jurisdiction promptly after such documents are provided to such agency or regulator. In the case of a Limited Clearing Member which is a pension plan board, it shall additionally deliver to the Corporation one copy of the annual information return prescribed by its pension regulator promptly after such return is provided to its pension regulator.

SECTION A-306 SPECIAL EXAMINATIONS

- 1) The Corporation may at any time require the Corporation's auditor to make any general or special examination of the financial affairs of any Clearing Member or to report upon the whole or any aspect of the business or affairs thereof.
- 2) The Corporation's auditor for the purpose of this special examination shall be entitled to request from the Clearing Member, or its auditors, any information or items which the auditors believe to be relevant to any transactions directly or indirectly related to the business of the Corporation and no person or Clearing Member shall withhold, conceal, destroy or refuse to give any such information or items reasonably required by the Corporation's auditors for the purpose of this examination. A Clearing Member must provide any information or items requested within a reasonable time following a reasonable request by the Corporation's auditor ~~within the time period specified in the request.~~

SECTION A-307 BOARD ACTION RELATING TO ~~CAPITAL~~ FINANCIAL RESILIENCE DEFICIENCY CONCERNS

- 1) If the Board determines as a result of any early warning notice under Section A-303, filing under Section A-304 or A-305, general or special examination under Section A-306, or from any other information given to or obtained by it, including from an appropriate self-regulatory organization or regulatory agency, that a Clearing Member to which Section A-301 applies does not have minimum capital satisfying the requirements referred to in Section A-~~301~~ or 301, that a Limited Clearing Member does not meet the ongoing financial resilience requirements prescribed in Section A-1B05, or that a Clearing Member otherwise is in or is believed by the Board in its sole discretion to be in, such financial condition that the Board in its sole discretion deems it is undesirable in the public interest or in the interest of the Corporation that the Corporation continue to accept and/or clear such Clearing Member's Transactions, the Board pursuant to Rule A-1A may at any time suspend such Clearing Member concerned for such period and on such terms and conditions as the Board may determine and notice thereof shall be issued promptly to other Clearing Members in accordance with Section A-1A06.
- 2) The Board may as an alternative determine that it is in the interest of the public or in the interest of the Corporation that the Corporation continue to accept and/or clear such Clearing Member's Transactions but that the Corporation's auditors should regulate and generally supervise the operations of the Clearing Member, as they relate to its activities or performance as a Clearing

Member, for such period and in such manner as the Corporation may direct. Notice thereof shall be issued promptly to other Clearing Members.

- 3) Any examination, report or supervision required by the Corporation pursuant to this Rule A-3 shall be conducted at the expense of the Clearing Member involved.

RULE A-4 ENFORCEMENT

~~SECTION A-401 ACTION AGAINST A NON-CONFORMING OR SUSPENDED MEMBER~~

SECTION A-401 ACTION AGAINST A NON-CONFORMING OR SUSPENDED MEMBER

- 1) The actions contemplated by the Rules in respect of a Non-Conforming Member or ~~Suspended~~suspended Clearing Member may be taken in any sequence the Corporation deems appropriate.
- 2) In addition to a measure made available to the Corporation under the Rules and the Application for Membership to remedy a specific or general default of a Clearing Member, where a Clearing Member is a Non-Conforming Member, 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;
 - b) increasing the Margin Requirements for such Clearing Member or requiring additional Margin Deposits;
 - c) requiring such Clearing Member to reduce or close out (or closing out on behalf of such Clearing Member) existing Transactions in such Clearing Member's accounts with the Corporation and, upon such close out, converting all amounts into Canadian currency and calculating one net amount (taking into account the Corporation's rights with respect to the Margin Deposit of such Clearing Member) owing to such Clearing Member by the Corporation or by such Clearing Member to the Corporation;
 - d) transferring, whether by way of transfer, by way of assignment, by way of termination, close-out and re-establishment or otherwise, any Client Account maintained by such Clearing Member with the Corporation, any position maintained in such account and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member;
 - e) sanctioning, reprimanding, fining or imposing a penalty on the Clearing Member;
 - f) preventing or restricting the Clearing Member's right to withdraw any excess in Margin Deposits pursuant to Section A-607 or Section A-704; and
 - g) suspending the Non-Conforming Member.
- 3) Upon the suspension of the Clearing Member and in addition to a measure made available to the Corporation under Subsection A-401 (~~4~~2) or other provisions under the Rules, 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) applying the Margin Deposit (including, without limitation, Margin and Clearing Fund) of the suspended Clearing Member against the obligations of such Member to the Corporation, subject to Subsection A-402(3) and, for such purpose, selling, transferring, using or otherwise dealing or disposing of or terminating under an Account Control Agreement authorizations to deal with, any property deposited as Margin Deposit at any time, without prior notice to the Clearing Member;
 - b) transferring, terminating, closing out or liquidating any or all of the Clearing Member Transactions or Open Positions, and upon such close out, converting all amounts into Canadian currency and calculating one net amount (taking into account the Corporation's rights with respect to the Margin Deposit of such Clearing Member) owing to such Clearing Member by the Corporation or by such Clearing Member to the Corporation.
- 4) Before exercising any actions contemplated under this Section, ~~A-401~~, however, the Corporation will enter into consultations with the Bank of Canada and specify the actions it considers exercising with respect to the Non-Conforming ~~or Suspended~~ Member or suspended Clearing Member who may be affected by an order under subsection 39.13(1) of the Canada Deposit Insurance Corporation Act or the Affiliates of such Clearing Member.

SECTION A-402 CREATION OF LIQUIDATING SETTLEMENT ACCOUNT

- 1) Upon the suspension of a Clearing Member, the Corporation may convert to cash all Margin Deposits with the Corporation by such Clearing Member in all accounts (including Securities held in bulk deposit but excluding Securities held in specific deposit) including all of such Clearing Member's contributions to Clearing Funds. For purposes of making any such conversion to cash of Margin Deposits, the Corporation may sell, transfer, use or otherwise deal or dispose of any property deposited as Margin Deposit at any time, without prior notice to such Clearing Member. These and all other funds of the suspended Clearing Member subject to the control of the Corporation shall be placed by the Corporation in a special account, to be known as the Liquidating Settlement Account, for the purposes hereinafter specified.
- 2) Notwithstanding the provisions of Subsection A-402(1), if the Corporation shall determine in its sole discretion, taking into account the size and nature of a suspended Clearing Member's Margin Deposits, the market condition prevailing at the time, the potential market effects of liquidating transactions that might be directed by the Corporation, and such other circumstances that the Corporation deems relevant, that the conversion to cash of some or all of the suspended Clearing Member's Margin Deposits would not be in the best interest of the Corporation, other Clearing Members or the general public, such deposits need not be converted to cash, provided that any determination made pursuant to this Subsection shall be reported to the Board within 24 hours.
- 3) Notwithstanding the provisions of Subsection A-402(1) and Subsection A-402(2), 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; provided, however, that if the Clearing Member does not identify its Deposits with respect to each of its accounts, the Corporation shall use Margin Deposits without distinction as securing all the obligations of the Clearing Member in respect of all its accounts.

SECTION A-403 PENDING TRANSACTIONS

- 1) Transactions submitted by a Clearing Member after it has been suspended shall be accepted or rejected by the Corporation in accordance with the regulations, rules and policies of the Exchange or Acceptable Marketplace on which they took place, and in the event that an Exchange Transaction is rejected, it shall be closed by the Clearing Member thereto in accordance with the Rules or in accordance with the regulations, rules and policies of the Exchange or Acceptable Marketplace on which the transaction was effected.
- 2) With respect to Open Positions and accepted Transactions:
 - a) monies payable to the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-to-Market Valuation in the Client Account shall be deposited by the Corporation in a Clients Settlement Account for remittance to the suspended Clearing Member or its representative for distribution to the persons entitled thereto in accordance with applicable law;
 - b) monies payable to the suspended Clearing Member in Settlement of Gains and Losses in the respective Market Maker Accounts shall be held in such accounts pending the closing of all Open Positions and transactions in such accounts for application in accordance with the applicable Market Maker Account agreement;
 - c) monies payable to the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-To-Market Valuation in the Firm Account shall be credited by the Corporation to the Liquidating Settlement Account;
 - d) monies owed to the Corporation in Settlement of Gains and Losses and/or Mark-To-Market Valuation in any account shall be withdrawn by the Corporation from the Liquidating Settlement Account;
 - e) monies owed to the Corporation in Settlement Amounts for settlements not yet paid, will remain in the Liquidating Settlement Account in the form of Margin Deposits until the next available Settlement Time consistent with the Transaction from which the Settlement Amounts were derived;
 - f) monies payable to the suspended Clearing Member in Settlement Amounts for settlements not yet paid, will remain in the Liquidating Settlement Account in the form of Margin Deposits until the next available Settlement Time consistent with the Transaction from which the Settlement Amounts were derived.

SECTION A-404 OPEN POSITIONS

- 1) Open Positions of a suspended Clearing Member, may, in the Corporation's sole discretion, be closed by the Corporation at such price as the Corporation deems reasonable, transferred to

another Clearing Member in accordance with the auction process set forth in the Operations Manual, or maintained by the Corporation. Amounts payable to the Corporation in Settlement of Gains and Losses and/or Mark-to-Market Valuation, as a result of closing transactions effected by the Corporation shall be withdrawn from the suspended Clearing Member's Liquidating Settlement Account; provided, however, that amounts payable to the Corporation in Settlement of Gains and Losses in a Market Maker Account shall first be withdrawn from the funds available in such account and only the amount of any deficit therein shall be withdrawn from the Liquidating Settlement Account. Amounts receivable by the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-to-Market Valuation as a result of a closing transaction effected by the Corporation or the transfer of an Open Position shall be credited to the suspended Clearing Member's Liquidating Settlement Account. Clients affected by any closing or transfer of an Open Position shall be notified as promptly as possible.

- 2) With respect to Options:
 - a) Open Long Positions in the Client Account of a suspended Clearing Member shall be maintained by the Corporation. The Corporation shall promptly use its best efforts to identify each Client having a Long Position in such account, to transfer each such Client's Long Position to another Clearing Member, and to notify each such Client of such transfer; in the event that notwithstanding the best efforts of the Corporation any Long Position in a Client Account of a suspended Clearing Member cannot promptly be transferred to another Clearing Member, such Long Position may be closed by the Corporation in the most orderly manner practicable and the proceeds shall be deposited in a Clients Settlement Account;
 - b) Open Long Positions in any Market Maker Account of a suspended Clearing Member shall be closed by the Corporation in the most orderly manner practicable and the proceeds of such closing transactions shall be held in such account pending the closing out of all Open Positions and transactions for application in accordance with the applicable Market Maker Account ~~Agreement~~[agreement](#);
 - c) Open Long Positions in a suspended Clearing Member's Firm Account shall be closed by the Corporation in the most orderly manner practicable, and the proceeds of such closing transactions shall be credited by the Corporation to the suspended Clearing Member's Liquidating Settlement Account; and
 - d) Open Short Positions in any account of a suspended Clearing Member may, in the Corporation's sole discretion, be closed by the Corporation at such price as the Corporation deems reasonable, transferred to another Clearing Member, or maintained by the Corporation. Amounts payable to the suspended Clearing Member in settlement of Closing Purchase Transactions effected by the Corporation shall be withdrawn from the suspended Clearing Member's Liquidating Settlement Account; provided, however, that amounts payable to the suspended Clearing Member in settlement of Closing Purchase Transactions in a Market Maker Account shall first be withdrawn from the funds available in such account and only the amount of any deficit therein shall be withdrawn from the Liquidating Settlement Account. Clients affected by any closing or transfer of a Short Position, if known to the Corporation, shall be notified as promptly as possible.
- 3) If the Corporation elects or is required pursuant to this Section A-404 to close both Long Positions and Short Positions in the same series of Options or Futures or Fixed Income Transactions with respect to the same Acceptable Security or OTCI options carried by a suspended Clearing Member, the Corporation may, close such positions through closing transactions on an Exchange (in the case of Options and Futures only) or offset such positions against each other, reducing the

Open, Long and Short Positions of the Clearing Member in such series by the same number of Option contracts or Futures contracts or reducing the open position of the Clearing Member in Fixed Income Transactions with respect to the same Acceptable Security or in OTCI options. If the Corporation closes positions in any series of Options or Futures or Fixed Income Transactions with respect to the same Acceptable Security or OTCI options by offset pursuant to the foregoing sentence, the Corporation shall notify the suspended Clearing Member or its representative thereof, and such positions shall be deemed to have been closed at a price equal to the closing Market Price as determined by the Exchange involved for such series on the date when the positions were offset in the case of Options or Futures or at a price determined by the Corporation in the case of Fixed Income Transactions with respect to the same Acceptable Security or OTCI options.

- 4) Notwithstanding the provisions of Subsection A-404(3), if the Corporation, through an officer or designated representative, shall determine in its sole discretion, taking into account the size and nature of a suspended Clearing Member's positions, the market conditions prevailing at the time, the potential market effects of liquidating Transactions that might be directed by the Corporation, and such other circumstances as the Corporation deems relevant, that the closing out of some or all of the suspended Clearing Member's Transactions would not be in the best interests of the Corporation, other Clearing Members or the general public, such positions need not be closed out, provided that any determination made pursuant to this Subsection shall be reported to the Board within 24 hours.

- 5) If the Corporation, through an officer or its other designated representative shall:
 - a) determine that the Corporation is unable, for any reason, to close out in a prompt and orderly fashion, any Transactions or to convert to cash any Margin Deposits of a suspended Clearing Member, or
 - b) elect pursuant to Subsection A-404(4) not to close out any such Transactions or pursuant to Subsection A-402(2) not to convert to cash any such Margin Deposits, the Corporation may authorize the execution from time to time for the account of the Corporation, solely for the purpose of reducing the risk to the Corporation resulting from the continued maintenance of such positions or the continued holding of such Margin Deposits, of hedging transactions, including, without limitation, the purchase or sale of Underlying Interests or interests deemed similar thereto or Transactions on any such Underlying Interests or similar interests. The Corporation may delegate to specified officers or agents of the Corporation the authority to determine, within such guidelines, if any, as the Corporation may prescribe, the nature and timing of such hedging transactions. Any authorizing of hedging transactions shall be reported to the Board within 24 hours, and any such transactions that are executed shall be reported to the Board on a daily basis. Hedging transactions effected for the account of the Corporation pursuant to this Paragraph shall be closed out or exercised promptly as the positions to which they relate are eliminated, whether by expiration, transfer, close out or assignment. Any cost or expenses, including losses sustained by the Corporation in connection with Transactions effected for its account pursuant to this Paragraph shall be charged to the Liquidating Settlement Account of the suspended Clearing Member, and any gains realized on such Transaction shall be credited to such Liquidating Settlement Account; provided, however, that costs, expenses and gains related to the hedging of positions in a Market Maker Account or a Client Account shall be charged or credited, as the case may be, to that account, and only the excess, if any, of such costs and expenses over the funds available in that account shall be charged to the Liquidating Settlement Account. Reasonable allocations of costs, expenses and gains among accounts made by the Corporation for the purpose of implementing the proviso to the preceding sentence shall be

binding on the Clearing Member and any persons claiming through the Clearing Member and the respective successors and assigns.

SECTION A-405 EXERCISED OPTIONS AND TENDER NOTICES

Unless the Corporation stipulates otherwise in a particular case, exercised Options to which a suspended Clearing Member is a party or Futures which have been the subject of Tender Notice to which a suspended Clearing Member is a party shall be closed through the procedures set forth in Sections B-404, B-405, C-510 and C-511, respectively, except that the Corporation may decide not to buy-in or sell-out, as the case may be, in the event that the Corporation is informed that the Underlying Interest is in transit or transfer. All losses and gains on such buy-ins and sell-outs shall be paid from or credited to, as the case may be, the Liquidating Settlement Account of the suspended Clearing Member; provided, however, that all losses on such buy-ins and sell-outs in a Market Maker Account shall first be paid from such account to the extent there are funds available in such account and only the amount of any deficit therein shall be paid from the Liquidating Settlement Account.

SECTION A-406 AMOUNTS PAYABLE TO THE CORPORATION

The Corporation shall be entitled promptly to recover from a suspended Clearing Member, any amount payable to the Corporation in accordance with these Rules, including all costs and expenses, including legal expenses, incurred by the Corporation, from such Clearing Member's Liquidating Settlement Account with the Corporation upon completion of the liquidation of such Clearing Member's positions in accordance with this Rule A-4.

SECTION A-407 MEMBER CLAIMS

All claims upon the Liquidating Settlement Account of a suspended Clearing Member by other Clearing Members resulting from losses incurred when closing pending transactions, or closing Open Positions or in the delivery of Underlying Interests or buying in or selling out exercised Options in accordance with this Rule A-4 shall be filed with the Corporation in the form prescribed. Such claims shall be paid as follows:

- 1) Claims for losses incurred when closing pending transactions with a suspended Clearing Member that are rejected for clearance shall be subordinate to all other claims upon the Liquidating Settlement Account. The Corporation shall pay such claims, to the extent funds are available, from the Liquidating Settlement Account of the suspended Clearing Member only after payment of all other applicable claims, and such claims shall not constitute a claim upon the Clearing Fund contributions of other Clearing Members; and
- 2) Claims for losses incurred on buy-ins and sell-outs, and the closing of Open Positions, shall be senior to all other claims upon the Liquidating Settlement Account. If a buy-in, sell-out or closing transaction does not occur by the close of the first full Business Day immediately following the issuance of the notice of suspension, the claim thereon shall be limited to the amount that would have been recoverable if, in the case of a buy-in or sell-out, the buy-in had been made at the highest price or the sell-out at the lowest price at which the Underlying Interest traded in the market in which it trades, on the first full Business Day or, in the case of the closing of Open Positions, if the positions had been closed by the close of the first full Business Day.

SECTION A-408 NO WAIVERS

No failure by the Corporation to exercise, nor any delay on its part in exercising, any of its rights (in whole or in part) under these Rules shall operate as a waiver of the Corporation's rights or remedies upon that or any subsequent occasion, nor shall any single or partial exercise of any right or remedy prevent any further exercise thereon or any other right or remedy.

SECTION A-409 CLEARING MEMBER CLOSE-OUT RIGHTS

- 1) The provisions of this Section A-409 apply to all Transactions. In the event of any inconsistency between the provisions of this Section A-409 and the other provisions of the Rules, the provisions of this Section A-409 will prevail.
- 2) The occurrence of either of the following events in respect of CDCC will constitute an event of default (an "Event of Default"):
 - a) an Insolvency Event within the meaning of Paragraph A-409(3)(a); and
 - b) a Failure to Pay within the meaning of Subsection A-409(4).
- 3)
 - a) An "Insolvency Event" occurs if:
 - i) CDCC commences an Insolvency Proceeding with respect to it or an Insolvency Proceeding is commenced with respect to CDCC; provided, however, that an "Insolvency Event" will not occur if a Clearing Member institutes any action as a result of a Failure to Pay by CDCC which results in the commencement of an Insolvency Proceeding;
 - ii) any regulatory or governmental authority having jurisdiction over CDCC in Canada (a "Competent Authority") institutes any action which results in the commencement of an Insolvency Proceeding; or
 - iii) a Competent Authority takes any action under any derivatives, securities, payment or clearing or similar law of Canada (or any province or territory thereof) which prevents CDCC from performing when due its payment or delivery obligations to Clearing Members under the Rules.
 - b) Each Clearing Member agrees to not institute any action as a result of a Failure to Pay by CDCC which may result in the commencement of an Insolvency Proceeding with respect to CDCC.
 - c) "Insolvency Proceedings" means proceedings for the purpose of liquidating, restructuring or reorganizing the assets and liabilities of CDCC under the Bankruptcy and Insolvency Act (Canada) ("BIA"), under the Companies' Creditors Arrangement Act (Canada) ("CCAA"),

under a court-supervised interim receivership under the BIA, or under a court-supervised receivership in accordance with rules of the common law or other laws of general application relative to the powers of the courts.

- d) For the purposes of the Rules, Insolvency Proceedings shall be deemed to commence at the following times:
- i) bankruptcy proceedings under the BIA commence on the day that (A) CDCC files an assignment in bankruptcy; (B) a bankruptcy order is made in respect of CDCC; or (C) in connection with proposal proceedings, CDCC is deemed to have made an assignment in bankruptcy, including (x) if CDCC gives notice of intention to file a proposal but no cash flow statement as required by the BIA or no proposal is filed within the applicable time period allowed following the notice of intention to file a proposal, which is the date that the applicable time period expires, (y) if a filed proposal is rejected by creditors, which is the date that the creditors refuse the proposal, or (z) if an approved proposal is later annulled by the court, which is the date of the annulment order;
 - ii) proposal proceedings under the BIA commence on the day the notice of intention to file a proposal is made or, if no notice is made, on the day the proposal is filed;
 - iii) proceedings under the CCAA commence on the day that a court makes an order under the CCAA with respect to the affairs of CDCC; and
 - iv) court-supervised receivership proceedings commence on the day that the court makes an order placing the assets of CDCC under the control of its interim receiver, receiver or receiver-manager.

A “Failure to Pay” means:

- a) a Payment Default within the meaning of Subsection A-409(5); or
- b) a Non-Payment of the Cash Settlement Amount following a Delivery Default within the meaning of Subsection A-409(6).

4) A “Payment Default” occurs if:

- a) CDCC fails to make when due any payment (including a payment under Subsection A-804(5) but excluding a payment of a Cash Settlement Amount following a Delivery Default under Subsection A-409(6)) in respect of a payment claim of a Clearing Member against CDCC under a Transaction;
- b) such Clearing Member notifies CDCC in writing of such failure (a “Payment Request”);
- c) CDCC’s failure to make such payment to such Clearing Member continues for a period of more than 30 days after the date of the Payment Request; and
- d) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.

5)

- a) A “Non-Payment of the Cash Settlement Amount following a Delivery Default” occurs if a Delivery Default occurs within the meaning of paragraph A-409(6)(b) and a Cash Settlement Payment Default also occurs within the meaning of paragraph A-409(6)(c).
- b) A “Delivery Default” occurs if:
 - i) CDCC fails to perform, when due, any delivery obligation to a Clearing Member arising from any Transaction other than a Failed Delivery pursuant to Subsection A-804(2);
 - ii) such Clearing Member has requested CDCC in writing to fulfill such delivery obligation (a “Delivery Request”);
 - iii) after the expiry of a period of not less than 30 days following the date of the Delivery Request, if CDCC’s failure to perform is continuing, the affected Clearing Member requests in writing a cash settlement amount determination of the unsatisfied delivery obligation from the Calculation Agent (a “Cash Settlement Amount Calculation Request”); and
 - iv) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.

From the date of a Cash Settlement Amount Calculation Request (a “Cash Settlement Amount Calculation Request Date”), CDCC will no longer be obliged to make any delivery under the relevant Transaction. This obligation will be replaced by an obligation of CDCC to pay the Clearing Member the Cash Settlement Amount.

- c) A “Cash Settlement Payment Default” occurs if:

- i) after the expiry of a period of not less than five Business Days following the Cash Settlement Amount Calculation Request Date, the Clearing Member which made such request has requested CDCC in writing to pay the Cash Settlement Amount (a “Cash Settlement Payment Request”);
 - ii) after the expiry of a period ending on a Business Day which is not less than two days after the date of the Cash Settlement Payment Request, CDCC fails to pay such Clearing Member the Cash Settlement Amount; and
 - iii) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.
- d) Upon the Cash Settlement Amount Calculation Request Date, the Calculation Agent will calculate the cash settlement amount (“Cash Settlement Amount”) within five Business Days of the Cash Settlement Amount Calculation Request as follows:
- i) the Default Value of the assets which are the subject of the Delivery Default (the “Non-delivered Assets”) will be determined by the Calculation Agent;
 - ii) the Default Value of Non-delivered Assets will be set-off against the amount of the corresponding payment obligation of the Clearing Member under the relevant Transaction, such that the Cash Settlement Amount shall be equal to any such net amount which is owed by CDCC or the Clearing Member, whichever has the claim valued at the lowest amount; and
 - iii) “Default Value” means with respect to any Non-delivered Assets, the value of such assets determined by the Calculation Agent using the following method:

The basis of the calculation will be the price for the Non-delivered Assets on the Business Day prior to the Cash Settlement Amount Calculation Request Date. To determine such price, the Calculation Agent will use the average of three quoted prices from Clearing Members other than the affected Clearing Member which participate in the relevant market and which shall quote a market price of the Non-delivered Assets as of the Business Day preceding the Cash Settlement Amount Calculation Request Date. The average of the quoted prices will be the Default Value of the Non-delivered Assets. If less than three quotations are provided as requested or the resulting price does not accurately reflect the value of the Non-delivered Assets because the relevant market is not operating normally, the Calculation Agent will determine the Default Value for the Non-delivered Assets acting in good faith and by using commercially reasonable procedures expected to produce a commercially reasonable result.

- e) When the Calculation Agent determines a Cash Settlement Amount for Non-delivered Assets, it will be entitled to terminate, on a pro rata basis, Transactions with the affected Clearing Member from which CDCC has a claim to receive assets of the same kind up to the same quantity of assets to offset the original Transaction in respect of which CDCC would otherwise be required to pay a Cash Settlement Amount to the affected Clearing Member. With respect to any such terminated Transaction, the affected Clearing Member shall not be required to perform its obligation to deliver the relevant assets to CDCC and the Calculation Agent will determine the Cash Settlement Amount by offsetting the corresponding payment obligation of CDCC under any such terminated Transaction against the corresponding payment obligation of the affected Clearing Member under the original Transaction and

such net amount shall be owed by CDCC or the Clearing Member, whichever has the claim valued at the lowest amount.

- 6) If at any time an Event of Default has occurred and is then continuing, the affected Clearing Member, in the case of an Event of Default which stems from a Failure to Pay, or any Clearing Member, in the case of an Event of Default which stems from an Insolvency Event, may by giving no less than two and not more than five Business Days' written notice to CDCC, designate an early termination date ("Early Termination Date") in respect of all Transactions to which such Clearing Member is a party.
- 7) Upon the effective designation of an Early Termination Date pursuant to Subsection A-409(7), neither CDCC nor the relevant Clearing Member will be obliged to make any further payment or delivery under the applicable Transactions which would have become due thereafter. These obligations will be replaced by an obligation of either CDCC or the relevant Clearing Member, as applicable, to pay a Final Settlement Amount for all Transactions entered into in respect of Client Accounts, a Final Settlement Amount for all Transactions entered into in respect of Market Maker Accounts and a Final Settlement Amount for all Transactions entered into in respect of Firm Accounts, all in accordance with Subsection A-409(10).
- 8) The Calculation Agent is CDCC which will be responsible for calculating any Cash Settlement Amount under Subsection A-409(6) and any Final Settlement Amount under Subsection A-409(10).
- 9) Upon the effective designation of an Early Termination Date pursuant to Subsection A-409(7), the Calculation Agent will as soon as practicable calculate the final settlement amount as follows:
 - a) "Final Settlement Amount" means the amount determined by the Calculation Agent to be equal to, as of the Early Termination Date, (a) the sum of all Transaction Values which are positive for CDCC and the Amounts Due owed to CDCC less (b) the absolute value of the sum of the amounts of all Transaction Values which are negative for CDCC and the Amounts Due owed by CDCC. When determining the Final Settlement Amount, the Calculation Agent shall act in good faith and by using commercially reasonable procedures expected to produce a commercially reasonable result. The Calculation Agent will calculate a Final Settlement Amount for all Transactions entered into in respect of Client Accounts, a Final Settlement Amount for all Transactions entered into in respect of Market Maker Accounts and a Final Settlement Amount for all Transactions entered into in respect of Firm Accounts. The Final Settlement Amount in respect of Client Accounts and that in respect of Firm Accounts will not be netted or set-off.
 - b) "Transaction Value" means, with respect to any Transaction or group of Transactions, an amount equal to the loss incurred (expressed as a positive number) or gain realized (expressed as a negative number) by CDCC as a result of the designation of the Early Termination Date in respect of such Transaction(s), determined by calculating the arithmetic mean of the quotations for replacement or hedge transactions on the Quotation Date obtained by the Calculation Agent from not less than two leading market participants, including Clearing Members other than the affected Clearing Member. Each such quotation shall be expressed as the amount which the market participant would pay or receive on the Quotation Date if such market participant were to assume, as from the Quotation Date, the rights and obligations of CDCC (or their economic equivalent) under the relevant

Transaction(s). The resulting amount shall be expressed as a positive number if it would be payable to the market participant, and shall otherwise be expressed as a negative number.

- c) "Quotation Date" means the Early Termination Date.
 - d) "Amounts Due" owed by a party means the sum of (i) any amounts that were required to be paid by such party or would have been required to be paid by such party but for the designation of the Early Termination Date under any Transaction on or prior to the Early Termination Date, but not paid, (ii) the Termination Value, as of the agreed delivery date, of each asset that was required to be delivered by such party on or prior to the Early Termination Date under any Transaction, but not delivered (in either case regardless of whether or not the party was entitled to withhold such payment or delivery), and (iii) interest calculated daily based on the applicable CORRA Rate (provided, however, that for any day which is not a Business Day, the CORRA Rate applicable on the immediately preceding Business Day shall be used for such purpose) on the amounts specified in (i) and (ii) from (and including) the due date of the relevant payment or delivery to (but excluding) the Early Termination Date.
 - e) "Termination Value" means, in respect of any assets on any given date, an amount equal to the market price (including fees and expenses) which such party would have reasonably incurred in purchasing assets of the same kind and quantity in the market on such date; provided, however, that if a market price for such assets cannot be determined, an amount which the Calculation Agent determines in good faith to be the total losses and costs (or gains, as applicable) in connection with such assets.
- 10) The Final Settlement Amount in respect of Client Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount. The Final Settlement Amount in respect of Market Maker Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount. The Final Settlement Amount in respect of Firm Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount.
- 11) The Calculation Agent will notify the affected Clearing Member in writing as soon as practicable of the Final Settlement Amount calculated by it and provide a statement setting forth in reasonable detail the basis on which the Final Settlement Amount was determined. The Final Settlement Amount is payable by CDCC or the Clearing Member, as applicable, immediately upon receipt of such notice.
- ~~12)~~ The affected Clearing Member may set off its obligation (if any) to pay the Final Settlement Amount against any actual or contingent claims ("Counterclaims") which it has against CDCC arising from CDCC's obligations to that Clearing Member under any other contractual arrangement, as applicable. For the purpose of calculating the value of the Counterclaims, the Clearing Member shall (i) to the extent that they are contingent or unascertained, take into account for such calculation their potential amount, if ascertainable, or otherwise a reasonable estimate

thereof, (ii) to the extent that they are claims other than for the payment of money, determine their value in money and convert them into a money claim and (iii) to the extent that they are not yet due and payable, determine their present value (also having regard to interest claims).

13)

- a) A Clearing Member's close-out rights under this Section A-409 supersede its right to voluntarily withdraw as a Clearing Member set out in Section A-1A09. For greater certainty, an affected Clearing Member cannot exercise its right to withdraw from its membership if an Event of Default has occurred or any circumstance or event has occurred which, with the giving of notice or the lapse of time or both, would constitute an Event of Default.
- b) A Failure to Pay will be deemed not to have occurred if the Failure to Pay occurs as a result of a circumstance within the meaning of clause i) of the definition of an Emergency in Section A-102 or which is otherwise a force majeure.

SECTION A-410 – ELIGIBLE FINANCIAL CONTRACTS

- 1) CDCC and each Clearing Member acknowledge that:
 - a) the payment and delivery obligations of a Clearing Member and of CDCC arising from a Transaction constitute an eligible financial contract between CDCC and the Clearing Member;
 - b) each of the Membership Agreement and the Rules constitute master agreements in respect of such eligible financial contracts and accordingly are also eligible financial contracts between CDCC and each Clearing Members; and
 - c) the provisions of the Membership Agreement and the Rules which are of the type described in section 11.1 of the Derivatives Act (Québec) constitute an instrument contemplated by such section 11.1 and are considered to have been reiterated immediately after the coming into effect on November 30, 2011 of said section, and CDCC and each Clearing Member therefore benefit from the provisions of sections 11.1 and 11.2 of the Derivatives Act (Québec).
- 2) The Rules and the Membership Agreement shall be interpreted so as to ensure that CDCC or a Clearing Member, as the case may be, is accorded the rights and powers of a party to an eligible financial contract pursuant to the *Bankruptcy and Insolvency Act* (Canada), the *Companies' Creditors Arrangement Act* (Canada), the *Winding-Up and Restructuring Act* (Canada), the *Canada Deposit Insurance Corporation Act* or any similar legislation.
- 3) With respect to the *Payment Clearing and Settlement Act* (Canada), the provisions of the Membership Agreement and the Rules constitute (i) settlement rules of a designated clearing and settlement system within the meaning of section 8 of that Act, effective as of CDCC's designation under subsection 4 (1) of that Act; (ii) a netting agreement between two or more financial institutions within the meaning of section 13 of that Act; and (iii) a netting agreement between a securities and derivatives clearing house and a clearing member within the meaning of section 13.1 of that Act.

SECTION A- 411 -DEFAULT MANAGEMENT PERIOD

1) A Default Management Period means the period:

- a) ~~(i)~~ commencing on the day that the Corporation declares the suspension of a Clearing Member, and
- b) ~~(ii)~~ concluding on the Default Management Period End Date:

provided however, that if the Corporation declares the suspension of a Clearing Member when a Default Management Period is ongoing due to the prior suspension of another Clearing Member, multiple Clearing Members' suspensions will be processed in a single Default Management Period.

2) The Default Management Period End Date shall occur on the Business Day following the declaration by the Corporation that:

- a) ~~(i)~~ the obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension(s) of Non-Conforming Member(s) are known, or can reasonably be determined, and have been satisfied or otherwise settled; or
- b) ~~(ii)~~ any of the actions, rights or remedies available to the Corporation with respect to the suspension of any Clearing Member that were deemed necessary by the Corporation have been taken; and
- c) ~~(iii)~~ the Default Management Period with respect to the suspended Clearing Member(s) has been completed.

RULE A-5 DISCIPLINARY PROCEEDINGS

SECTION A-501 SANCTIONS

- 1) The Corporation may in addition to or in lieu of other measures, impose a fine or a penalty, not to exceed \$250,000, on, and assess any reasonable costs, including legal fees, incurred by the Corporation against any Non-Conforming Member for any violation of any provision of the Application for Membership, or for any neglect or refusal by such Non-Conforming Member to comply with any applicable order or direction of the Corporation, or for any error, delay or other conduct embarrassing to the operations of the Corporation or for failure to provide adequate personnel or facilities for its transactions with the Corporation.
- 2) The Corporation shall be entitled to recover from any Non-Conforming Member the amount of any fines or penalties or sanctions assessed against it, plus the Corporation's reasonable costs and expenses, including legal expenses, incurred in connection with the matter giving rise to the fine or penalty or sanction.

SECTION A-502 PROCEDURES

- 1) Except as provided for in Subsection A-502(4) and in Section 7 of the Operations Manual with respect to late payments, the nature and quantum of any fine or penalty or sanction shall be determined and imposed by the Board. Before any sanction and/or fine and/or penalty is imposed by the Board, the Corporation shall furnish the Non-Conforming Member with a concise written statement of the charges. The written statement of charges shall contain any provision of the Application for Membership which is alleged to have been violated; the facts alleged and intended to be relied upon by the Corporation and the penalty or remedy recommended by the Corporation for each violation.
- 2) In the event that a Non-Conforming Member commits a breach contemplated under any provision of the Application for Membership, that Non-Conforming Member is subject to the penalties provided for in respect of such provisions. Said penalties shall not be imposed against such Non-Conforming Member until a hearing is held pursuant to Subsection A-502(3).
- 3) The Non-Conforming Member shall have 10 days after the delivery of a statement under Subsection 502(1) to file a written answer thereto. The answer shall admit or deny each allegation contained in the statement of charges and may also contain any defence which the Non-Conforming Member wishes to submit. The Board shall schedule a hearing as soon as reasonably practicable. The Non-Conforming Member shall be given not less than 10 days' advance notice of the place and time of such hearing. The notice of hearing shall contain a statement of the date, time and place of the hearing; a reference to the authority under which the hearing is being held; and the facts alleged and intended to be relied upon by the Corporation and

the conclusions drawn by the Corporation based on the alleged facts. At the hearing, the Non-Conforming Member shall be afforded the opportunity to be heard and may be represented by counsel. A Non-Conforming Member shall be deemed to have waived its right to contest the imposition of any sanctions and/or fines and/or penalties if it fails to file a defence and shall be deemed to have accepted any allegations and/or fines and/or penalties contained in the statement of charges which are not denied. As soon as practicable after the conclusion of the hearing, the Board shall furnish the Non-Conforming Member with a written statement of its decision, which shall be final, conclusive and binding on the Non-Conforming Member.

- 4) Any action required to be taken under this Rule A-5 by the Board may be delegated to a committee (the "Disciplinary Committee"), which shall consist of not less than three directors and may include such officers as the Board may delegate. In the event an action is taken by the Disciplinary Committee, the Board shall be advised and such action may be reviewed by the Board, either upon its own motion made at or before its next regular meeting or upon a motion filed by any person directly affected within seven days after the Disciplinary Committee has rendered its final decision. The Board may, in its sole discretion, afford the Non-Conforming Member a further opportunity to be heard or to present evidence as stipulated in the By-laws of the Corporation, ~~a. A~~ majority of the members of the ~~Discipline~~Disciplinary Committee shall be Resident Canadians.
- 5) Any time limit set forth in this Section may be extended by the Board, the Disciplinary Committee, or by any officer acting pursuant to authorization of the Board.
- 6) Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any Non-Conforming Member, who has been the subject of disciplinary action pursuant hereto to avail ~~himself~~itself of any right of appeal which is provided to such Non-Conforming Member by applicable law.

SECTION A-503 DISCIPLINE BY EXCHANGES

Nothing in this Rule A-5 shall affect the right of any Exchange to discipline its members pursuant to the provisions of the by-laws, rules, directions or orders of such Exchange for a violation of the by-laws, rules, orders or directions of such Exchange, or of its application for membership.

RULE A-6 CLEARING FUND DEPOSITS

SECTION A-601 CLEARING FUND MAINTENANCE AND PURPOSE

- 1) The Corporation shall establish a Clearing Fund relating to all Transactions cleared by the Corporation. Each Clearing Member except Limited Clearing Members, admitted to clear Transactions at the Corporation shall maintain a deposit in the Clearing Fund of the amounts from time to time required by the Rules. The Clearing Fund shall be used for the purposes set out in Section A-609 and Subsection A-701(2).

- 2) The Clearing Fund Base Deposits are as follows:
 - a) Options Clearing Base Deposit - \$25,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.

 - b) Futures Clearing Base Deposit - \$75,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.

 - c) OTCI Clearing Base Deposit(other than Fixed Income Transactions) - \$100,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.

 - d) Fixed Income Transactions Clearing Base Deposit - \$1,000,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.

3) [This Rule A-6 is not applicable to Limited Clearing Members.](#)

SECTION A-602 AMOUNT OF CLEARING FUNDS

The Clearing Fund is constituted of the aggregate amount of the Clearing Fund deposits required by each Clearing ~~Members~~Member at the close of each calendar month as Base Deposit and Variable Deposit. The amount required to be deposited by each Clearing Member to the Clearing Fund shall be calculated

according to Section A-603. Unless otherwise specified, the Clearing Fund shall not include any deposit made in excess of the amount of the Clearing Fund deposits required by each Clearing Member.

SECTION A-603 AMOUNT OF DEPOSIT

- 1) The required deposit of each Clearing Member to the Clearing Fund shall be an amount equal to the total of:
 - a) an Options Clearing Base Deposit, if the Clearing Member has been accepted to clear Options;
 - b) a Futures Clearing Base Deposit, if the Clearing Member has been accepted to clear Futures;
 - c) an OTCI Clearing Base Deposit, if the Clearing Member has been accepted to clear OTCI transactions other than Fixed Income Transactions;
 - d) a Fixed Income Transactions Clearing Base Deposit, if the Clearing Member has been accepted to clear Fixed Income Transactions; and
 - e) a Variable Deposit equal to the amount by which (i) the Clearing Member's contribution, in accordance with the methodology set out in the Risk Manual, to the Corporation's Uncovered Residual Risk exceeds (ii) such Clearing Member's Base Deposits.

- 2) Within a calendar month, if the Corporation determines that an increase to the Variable Deposit is necessary to protect its financial integrity, the Corporation will notify with a Clearing Fund statement the concerned Clearing Member(s), which shall increase in the determined amount and approved form its contribution to the Clearing Fund no later than 2:00 p.m. on the following Business Day.

SECTION A-604 CHANGES IN REQUIREMENT

The amount of Base and Variable Deposits required to be made by Clearing Members may be modified from time to time by the Corporation ~~as a result of an amendment to the Rules~~. If the deposit to the Clearing Fund required to be made by a Clearing Member is thereby increased, the increase shall not become effective until the Clearing Member is given 3 Business Days prior written notice of such ~~amendment~~modification. Unless a Clearing Member notifies the Corporation in writing that it wishes to withdraw its membership and closes out or transfers all of its aggregate positions in the relevant instrument before the effective date of such amendment, such Clearing Member shall be liable to make the increased deposit.

SECTION A-605 CLEARING FUND STATEMENT

On the first Business Day of each calendar month, the Corporation shall issue to each Clearing Member 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 required of such Clearing Member. Any surplus over and above the amount required or any deficit to be satisfied will also be shown. A Clearing Fund statement will also

be issued intra-monthly if an increase to the Variable Deposit is necessary. The concerned Clearing Member will have until no later than 2:00 p.m. on the next Business Day to remediate any deficit.

SECTION A-606 ADDITIONAL CLEARING FUND DEPOSIT

Whenever a Clearing Member's Clearing Fund statement shows a deficit, such Clearing Member shall satisfy the deficit by a deposit in a form approved by the Corporation no later than 2:00 p.m. on the Business Day following the issuance of the Clearing Fund statement.

SECTION A-607 WITHDRAWALS

In the event that the Clearing Fund statement of a Clearing Member shows a surplus, the Clearing Member may request the withdrawal of such surplus by submitting a withdrawal request in the form and time prescribed by the Corporation.

SECTION A-608 FORM OF DEPOSITS

- 1) In addition to Base Deposits made pursuant to the requirements of Subsection A-601(2), Variable Deposits to the Clearing Fund shall also be in the form of Cash and/or in Acceptable Treasury Bills valued at a discounted rate, as determined by the Corporation from time to time in accordance with the methodology set out in the Risk Manual, of their market value; if no market value is generally available for such Acceptable Treasury Bills, they shall be valued at an amount determined by the Corporation. Substitutions may be made with the prior approval of the Corporation. Deposits in Cash shall be transferred by irrevocable funds transfer to the Corporation and may, from time to time, be partially or wholly invested by the Corporation for its account. To the extent not so invested, they shall be deposited to the credit of the Corporation in such financial institutions as the Board may select. Deposits in Cash shall not be used by the Corporation as working capital but any interest or gain received or accrued on the investment of such funds shall belong to the Corporation.
- 2) Any Clearing Fund deposit shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Cash and/or Acceptable Treasury Bills. All interest or gain received or accrued on any Acceptable Treasury Bills, prior to any sale, negotiation or pledge thereof, shall belong to the depositing Clearing Member.

SECTION A-609 APPLICATION OF CLEARING FUND

- 1) The Corporation shall apply a suspended Clearing Member's Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund deposits), as well as the Clearing Fund deposits required of all other Clearing Members in accordance with Subsection A-609(2), as set out in Subsection A-701(2) and in accordance with the methodology set out in the Default Manual.
- 2) If the amount of the obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension of a Clearing Member exceeds the total amount of the suspended Clearing Member's Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund), and if such Clearing Member fails to pay the Corporation the amount of the deficiency on demand, the Corporation shall apply its own capital resources specifically set aside for such purpose up to the maximum amount set out in the Default Manual for a single Default Management Period, and if the amount of the deficiency exceeds such amount, the remaining deficiency shall be paid out of the Clearing Fund and charged ~~to each Clearing Member's Clearing Fund deposit~~ based on the bidding behaviour of each Clearing Member in good standing in the course of the auction conducted in the course of the Default Management Period ("Default Auction") but, subject to and in accordance with the methodology set out in the Default Manual. In the event no Default Auction is conducted in the course of the Default Management Period, any deficiency shall be charged to the Clearing Members other than the suspended Clearing Member(s), pro rata, based on the quotient obtained by dividing the amount of such Clearing Member's Clearing Fund deposit required at the beginning of the Default Management

Period by the aggregate amount of Clearing Fund deposits required at the beginning of the Default Management Period by all Clearing Members other than the suspended Clearing Member(s). Notwithstanding any such charges made against the Clearing Fund deposits of each of the Clearing Members, the suspended Clearing Member which failed to pay the deficiency shall remain liable to the Corporation for the full amount of such deficiency until its repayment.

- 3) Whenever any such charges are made against Clearing Members' deposits to the Clearing Fund, the Corporation shall promptly notify each Clearing Member of the amount of the charge and the reasons therefor. For the purposes of this Section A-609, the amount of any claim of the Corporation for deficiencies against a Clearing Member shall be determined without reference to the possibility of any subsequent recovery in respect thereof, through insolvency proceedings or otherwise, but the net amount of any such recovery shall be applied in accordance with Section A-612.
- 4) Without limiting the rights of the parties under Section A-607 and Subsections A-609(1) and (2), at the sole discretion of the Corporation, all property deposited with the Corporation as a Clearing Fund deposit by any and all Clearing Members may be pledged, repledged, hypothecated, rehypothecated or transferred by the Corporation as security for, or in connection with, the Corporation's own obligations to any person incurred in order (a) 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 a Clearing Member as being a Non-Conforming Member, or (b) to fund a payment obligation of the Corporation which arises pursuant to a Failed Delivery under Subsection A-804(1) by any Clearing Member, and any such security or transfer will be effective without the holder or recipient thereof being required to make any enquiry as to whether the applicable obligations have been incurred for the purposes set out in this Subsection A-609(4) or whether the funds so obtained are being used for such purposes. Without limiting the rights of the Corporation under Subsection A-701(2), at the sole discretion of the Corporation, in the case of the situation described in (a) above, the Corporation shall pledge the Non-Conforming Member's Margin Deposits (including, without limitation, Margin and Clearing Fund), in accordance with Subsection A-701(5), before pledging the Clearing Fund deposits of other Clearing Members. In the case of the situation described in (b) above, the Corporation shall pledge the Clearing Fund deposits of the Provider of Securities responsible for the Failed Delivery before pledging the Clearing Fund deposits of other Clearing Members. The Corporation shall be deemed to continue to hold all property deposited with the Corporation as Clearing Fund deposits, regardless of whether the Corporation has exercised its rights under this Subsection A-609(4).
- 5) Without limiting the rights of the Corporation under ~~section~~Subsections A-609(1) and A-609(4), during a single Default Management Period, the Corporation shall not, with respect to each Clearing Member that has not been suspended, apply more than 200 % of the Clearing Fund deposit required by such Clearing Member as of the date of the commencement of the Default Management Period to satisfy or otherwise settle any obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension(s) of Clearing Member(s).

SECTION A-610 MAKING GOOD ON CHARGES TO CLEARING FUND

Whenever an amount is paid out of the Clearing Fund deposits of the Clearing Members that have not been suspended, in accordance with Subsection A-609(2), such Clearing Members shall be liable to make

good the deficiency if any in their deposits resulting from such payment no later than 2:00 p.m. on the Business Day following the date that the amount is paid out unless the Corporation issues a notice specifying a later date. Notwithstanding the foregoing, Clearing Members will not be liable to make good during a single Default Management Period more than an additional 200% of the amount of their Clearing Fund deposits required at the beginning of the Default Management Period as prescribed by the Rules.

SECTION ~~AA-611 DEPOSIT-REFUND~~ DEPOSIT REFUND

- 1) Whenever a Clearing Member ceases to be a Clearing Member in accordance with Section A-1A09, the amount of its Clearing Fund deposit shall be returned, subject to the time limit specified in Subsection A-611(2). All outstanding amounts chargeable against a Clearing Member's deposit in connection with its activities while a Clearing Member, shall be deducted from the amount to be returned.
- 2) Thirty days after a Clearing Member has ceased to be a member of the Corporation in accordance with Section A-1A09, the Corporation shall authorize such former member to withdraw its Clearing Fund deposit.

SECTION A-612 RECOVERY OF LOSS

- 1) Subject to Section A-1013, if an amount charged against the deposits of Clearing Members in the Clearing Fund is subsequently recovered by the Corporation from the Clearing Member whose failure to pay led to the amount being charged, in whole or in part, the net amount of such recovery shall be paid or credited to the Clearing Members against whose deposit the loss was charged in proportion to the amount charged against their respective deposits, whether or not they remain Clearing Members.
- 2) Any Clearing Member that has had an amount charged against its deposit under ~~Section~~ Subsection A-609(2), shall have the right to claim from the Clearing Member whose failure to pay a deficiency led to the amount being charged and the Clearing Member shall be obliged to reimburse such other Clearing Member the amount so charged against the Clearing Member's deposit to the extent that such amount has not been recovered by the Corporation pursuant to Subsection A-612(1).

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 ~~with the Corporation~~, 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-~~708~~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 ~~Deposits~~ deposited by ~~or on behalf of such~~the Clearing Member ~~with the Corporation~~ (and not returned by the Corporation to ~~such~~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 ~~a~~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 ~~Clearing~~ 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 ~~Clearing~~ 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 ~~the execution to be executed~~ and ~~delivery of 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-~~709~~707(1), the Corporation shall not grant a pledge over ~~or~~, 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 ~~as security for, or in connection with, the Corporation's own obligations to any person.~~
- 4) 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 ~~with the Corporation~~ as Margin Deposit (including, without limitation, Margin and Clearing Fund) by a Clearing Member which has been ~~designated as a Non-Conforming Member~~ 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 ~~Non-Conforming~~suspended Clearing Member. In such circumstances, the Corporation shall grant a pledge over or transfer such ~~Non-Conforming~~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 ~~Deposit deposited with the Corporation~~Deposits regardless of whether the Corporation has exercised its rights under this Subsection ~~A-~~701(5).

- 5) 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 ~~Deposits~~ 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 ~~REPORT~~

- 1) Each Business Day, the Corporation shall ~~issue~~make available to each Clearing Member for each account maintained by the Clearing Member with the Corporation ~~a report ("Daily Margin Activity Report")~~the reports which shall show the amount of Margin required to be deposited ~~with the Corporation~~ 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 ~~such report~~the information reflected in the reports issued.
- 2) If for any reason ~~the Daily Margin Activity Report~~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 ~~with the Corporation~~, 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, ~~as shown by a report ("Deposits/Withdrawals Report") for such day~~, 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 ~~one~~the time of the Intra-Day Margin ~~Call in the morning (the “Morning Intra-Day Margin Call”) and another one in the afternoon (the “Afternoon Intra-Day Margin Call”).~~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, ~~or changes in the financial position of the Clearing Member or~~ in order to protect the Corporation, Clearing Members or the public.
- 3) ~~2)~~ Subject to Subsection A-704(2), if a Clearing Member has excess Margin ~~on deposit with the Corporation,~~ 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-706 ~~MARGIN CALCULATIONS~~

~~The Corporation uses SPAN® for its risk-based Margin system which analyzes Options and Futures positions in each account of each Clearing Member. The system projects a liquidating value for each such account and collects sufficient Margin to cover the Corporation’s projected costs in the event that such a liquidation should be required. Offsetting positions are considered and, where determined prudent, the Corporation may reduce its Margin requirements.~~

~~The Corporation uses a proprietary margining system for the purposes of margining any OTCI transactions presented to the Corporation for clearing. The components of margin for all OTCI transactions are as follows:~~

- a) ~~Outstanding settlement amounts not yet paid;~~

- ~~b) Mark to Market Valuation from current Open Positions within each account; and~~
- ~~e) A worst case liquidating value for each account.~~

~~Margin off-sets are considered in the margining process and where determined prudent, the Corporation may reduce the Margin requirements for specific accounts.~~

~~The Corporation provides Clearing Members with information on the calculation of Margins on request.~~

~~SECTION A-707 MARGIN ON OPTIONS SPREAD POSITIONS CARRIED IN CLIENT ACCOUNTS~~

- ~~1) Where a Clearing Member maintains an Options Spread Position in its Client Account, the Clearing Member may inform the Corporation of this fact with a view to reducing the Margin required on the positions held in that account by filing a report (“Options Spread Position Report”) with the Corporation.~~
- ~~2) Each Clearing Member shall maintain a record of each Spread Position held for in its Client Account identifying the client, the Client Account in which the Spread Position is held, and the specified Long Positions and Short Positions making up the Spread Position.~~
- ~~3) Prior to the time established by the Corporation, on every Business Day, each Clearing Member shall inform the Corporation, in the form prescribed, of the quantity and composition of any additions to or deletions from the Spread Positions carried for individual clients.~~
- ~~4) No Clearing Member shall inform the Corporation of a Spread Position or permit a Spread Position to remain recorded by the Corporation unless the Clearing Member is simultaneously carrying in the relevant Client Account Long and Short Positions for an equal number of Options of the same Class of Options and the Margin required to be deposited by such client in respect of such positions has been reduced accordingly. The filing by a Clearing Member of an Options Spread Position Report shall constitute the certification by the Clearing Member to the Corporation that such filing is authorized, is in accordance with the foregoing and is in compliance with all applicable laws and regulations.~~
- ~~5) If a Client Account with the Corporation has Spread Positions for a Series of Options in respect of which the Corporation has been notified and the total Long Position in such Series of Options is reduced by the filing of an Exercise Notice or the execution of a closing transaction in such account, such reduction shall also be applied by the Corporation against the Spread Position in such account. If the Clearing Member wishes such reduction to be applied in a different manner,~~

~~it shall so instruct the Corporation by filing an appropriate spread instruction.~~ **SECTION A-708**
UNDERLYING INTEREST AND UNDERLYING INTEREST EQUIVALENT

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 or Underlying Interest Equivalent as herein defined.

1) For CALL **OPTIONS** the Underlying Interest or Underlying Interest Equivalent shall mean:

a) Equity Options –

b) ~~i)~~ the underlying Security or any Security exchangeable or convertible without restriction, other than the payment of Cash, into the underlying Security shall be acceptable, provided that neither the Security nor the right to exchange or convert lapses throughout the life of the Option. Where the payment of money is a condition of conversion such Cash shall be deposited with the Corporation at the same time as the convertible Security. This provision applies to warrants, rights, and convertible Securities.

c) ~~ii)~~ a Call Underlying Interest Deposit issued by an Approved Depository in favour of the Corporation.

d) ~~b)~~ Bond Options – Government of Canada Bonds (excluding Canada Savings Bonds) which:

i) are the underlying bond; or

ii) have been determined by the Corporation as acceptable on the basis that they:

- have higher coupon rates;

- have an aggregate face value at maturity of at least \$1,000,000,000;

- trade at a premium of \$5 greater than the underlying bond; and

- mature no sooner than 2 years prior to the underlying bond.

e) ~~e)~~ Silver Options – silver certificates issued by organizations acceptable to the Corporation.

f) ~~e)~~ Cash Settlement Options =

g) ~~i)~~ Government Securities as specified in Section A-~~709~~707 equal in value to the aggregate current value (which for the purposes of this Section A-706 have the meaning attributed thereto in Section B-1001 as the context requires) of the Option at the close of trading on the Business Day prior to the deposit.

h) ~~ii)~~ If the value of the government Securities deposited for each contract falls below the value of the aggregate current value on any Business Day the Corporation may call for an additional deposit or Margin.

i) ~~e)~~ Options on short term money-market instruments expiring in one year or less ~~u~~.

The Underlying Interest or any other instrument acceptable to the Corporation.

j) ~~f)~~ Futures Options – Government of Canada Bonds (excluding Canada Savings Bonds) which:

i) are the underlying bond; or

ii) have been determined by the Corporation as acceptable.

k) ~~g)~~ Gold Options – gold certificates issued by organizations acceptable to the Corporation.

2) For **PUT OPTIONS** Underlying Interest and Underlying Interest Equivalent shall mean:

a) Cash deposited at the Corporation in the amount of the relevant Exercise Price ~~u~~;

b) a Put Escrow Receipt issued by an Approved Depository in favour of the Corporation.

3) For **FUTURES** Underlying Interest and Underlying Interest Equivalent shall mean:

a) any Underlying Interest which would be considered to be in Good Deliverable Form on the corresponding Futures contracts ~~u~~;

b) a Futures Underlying Interest Deposit issued by an Approved Depository in favour of the Corporation.

For cash settlement Futures, the Corporation may impose from time to time at its sole discretion Margin requirements on the Underlying Interest or Underlying Interest Equivalent as determined by the Corporation.

SECTION A-~~709~~707 ELIGIBLE COLLATERAL

Margin requirements may be fulfilled by depositing ~~with the Corporation~~, subject to Section A-212, one or more of the following forms of eligible collateral which meet certain criteria as described in the Risk Manual:

1) Cash – Clearing Members may deposit Cash by way of an irrevocable funds transfer to the Corporation. Funds so deposited may, from time to time, be partially or wholly invested by the Corporation for its account and, to the extent not so invested, shall be deposited to the credit of the Corporation in such financial institutions as the Board may select. Any interest or gain received or accrued on the investment of such funds shall belong to the Corporation. Such funds shall not be used by the Corporation as working capital.

- 2) Debt – Clearing Members may deposit with the Corporation debt Securities which respect certain eligibility criteria determined by the Corporation in the Risk Manual (“Debt Securities”). The Corporation establishes, reviews on a regular basis and publishes the list of eligible Debt Securities on its web site.

Debt Securities shall be freely negotiable and shall be valued at a discounted rate to their market value, as determined by the Corporation from time to time in accordance with the methodology set forth in the Risk Manual. Such valuation rate shall be applied to the market value of the relevant Securities. “Market value” as used in this Subsection A-~~709~~707(2) shall be determined on the close of each Business Day by the Corporation through reference to one or more data supply services retained by the Corporation for such purpose. If a market value is required to be determined on a non-Business Day, and the data supply service does not provide a market value for such day, the market value on the immediately preceding Business Day shall be used. If no market value is generally available for any Debt Securities accepted by the Corporation as eligible collateral, such Securities shall be valued at an amount determined by the Corporation.

The Debt Securities shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Debt Securities as Margin. All interest or gain received or accrued on such Debt Securities prior to any sale or negotiation thereof shall belong to the depositing Clearing Member and such interest will be paid to such depositing Clearing Member by the relevant issuer.

- 3) Valued Securities – In addition to the Underlying Interest and Underlying Interest Equivalent which may be deposited under Section A-~~708~~706, Clearing Members may deposit with the Corporation certain ~~Security~~Securities which respect certain eligibility criteria determined by the Corporation in the Risk Manual (“Valued ~~Security~~”). Securities). The Valued Securities shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Valued Securities as Margin.

~~The Valued Securities shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Valued Securities as Margin.~~

The Corporation may ~~from time to time~~ on an exceptional and temporary basis at its sole discretion, accept other forms of eligible collateral or cease accepting any form of eligible collateral and require, if applicable, the replacement of such collateral. When the Corporation ceases to accept a form of eligible collateral, the Corporation shall notify all Clearing Members who, where required, shall promptly replace all unacceptable forms of collateral deposited with the Corporation with eligible collateral.

~~SECTION A-710 DAILY CAPITAL MARGIN MONITORING CALLS~~

~~The Corporation will monitor the Margin requirement of a Clearing Member as a percentage of its capital. In the event that this ratio exceeds 100%, additional margin in the amount of the excess over the ratio of 100% will be collected from the Clearing Member in the form of acceptable Margin in accordance with Section A-709.~~

RULE A-8 DAILY SETTLEMENT

SECTION A-801 DAILY SETTLEMENT SUMMARY

- 1) Each Business Day the Corporation shall issue or make available to each Clearing Member ~~the Daily Settlement Summary Report which will summarize:~~ in accordance with the Operations Manual, the reports, notice, instruction, data or other information summarizing each Clearing Member's activities, including the payments, deposits, transfer, delivery, Margin and Clearing Fund obligations required in connection with such activities.
 - ~~a) the debit and credit premium for each account as shown on Consolidated Activity Reports;~~
 - ~~b) the net gains and losses for each account as shown on Consolidated Activity Reports;~~
 - ~~c) the net settlement for Exercised and Assigned Positions of cash settled Options;~~
 - ~~d) the net payment for Settlement Amounts resulting from OTCI;~~
 - ~~e) the debit or credit determined as necessary by the Corporation resulting from any adjustment reported by the Clearing Member;~~
 - ~~f) the net Margin required for each account as shown on a report ("Daily Margin Activity Report");~~
 - ~~g) the total Margin deposits held by the Corporation; and~~
 - ~~h) the net amount due to or from the Corporation.~~

- 2) For greater certainty, subject to any Rule which expressly prohibits netting, on each Business Day:
 - a) the Corporation shall have the right to net all payments owing to a Clearing Member on such Business Day, other than payments owing to a Clearing Member which are settled through a Central Securities Depository, against all payments owing by a Clearing Member on such Business Day, other than payments owing by a Clearing Member which are settled through a Central Securities Depository, such that one net amount shall be payable to or from such Clearing Member by the Settlement Time;
 - b) subject to Subsection A-704(2), the Corporation shall have the right to net Margin requirements, other than the Net Variation Margin Requirement under Section D-607, owing by a Clearing Member in respect of one product on such Business Day against excess Margin delivered by such Clearing Member and available in respect of another product on

such Business Day such that Margin in one net amount is required to be delivered by the Clearing Member on such Business Day or one net amount is available for withdrawal by such Clearing Member on such Business Day under Section A-~~704.704~~;

- c) in respect of the delivery versus payment settlement of Acceptable Securities through a Central Securities Depository, subject to Subsection D-606(~~106~~), the Corporation shall have the right to net all payments owing to a Clearing Member on such Business Day, including without limitation, any due and payable Postponed Payment Obligation, against all payments owing by a Clearing Member on such Business Day, including without limitation, any due and payable Postponed Payment Obligation, such that one Net Payment Against Delivery Requirement shall be payable to or from such Clearing Member for settlement at such Central Securities Depository by the End of Day DVP Settlement Time;
 - d) in respect of the delivery versus payment settlement of Acceptable Securities through a Central Securities Depository, subject to Subsection D-606(~~106~~), the Corporation shall have the right to net all settlement obligations for the same CUSIP/ISIN number for an Acceptable Security owing to a Clearing Member on such Business Day, including without limitation, any Rolling Delivery Obligation in respect of such Acceptable Security, against all settlement obligations for such Acceptable Security owing by a Clearing Member on such Business Day, including without limitation, any Rolling Delivery Obligation in respect of such Acceptable Security, such that one Net Delivery Requirement in respect of such Acceptable Security is owing to or from such Clearing Member by the End of Day DVP Settlement Time~~;-~~;
- 3) Notwithstanding Paragraph A-801(2)(c), as of the Morning Netting Cycle Timeframe on each Business Day, the Corporation shall net all Pending Payment Against Delivery Requirements owing to a Clearing Member against all Pending Payment Against Delivery Requirements owing by a Clearing Member, such that one Morning Net Payment Against Delivery Requirement shall be payable to or from such Clearing Member at the Morning Net DVP Settlement Timeframe; provided, however, that if the Morning Net Payment Against Delivery Requirement payable from a Clearing Member exceeds the amount of the CDCC Daylight Credit Facility, such Clearing Member shall be required to have available funds in its ~~cash account at the Central Securities Depository~~ CDS Funds Account in the amount of the CDCC Daylight Credit Facility only.
- 4) In respect of the Variation Margin Requirements, subject to Section D-607, the Corporation shall have the right to net the Variation Margin Requirements owing by a Clearing Member in respect of Fixed Income Transactions to which such Clearing Member is a party on such Business Day against any Variation Margin Requirements owing to such Clearing Member and available in respect of the Fixed Income Transactions to which such Clearing Member is a party on such Business Day such that a Net Variation Margin Requirement in one net amount is required to be delivered by the Clearing Member on such Business Day or one net amount is required to be delivered to the Clearing Member on such Business Day.
- 5) ~~4)~~ Notwithstanding Paragraphs A-801(2)(c) and A-801(2)(d), as of the Afternoon Netting Cycle Timeframe on each Business Day, the Corporation shall (i) net all Pending Delivery Requirements owing to a Clearing Member against all Pending Delivery Requirements owing by a Clearing Member with respect to each Acceptable Security, such that one Afternoon Net DVP Settlement Requirement in respect of such Acceptable Security shall be deliverable to or from such Clearing Member by the End of Day DVP Settlement Time; and (ii) net all Pending Payment Against

Delivery Requirements owing to a Clearing Member against all Pending Payment Against Delivery Requirements owing by a Clearing Member, such that one Afternoon Net DVP Settlement Requirement shall be payable to or from such Clearing Member by the End of Day DVP Settlement Time.

SECTION A-802 DAILY SETTLEMENT

- 1) On or before Settlement Time on each Business Day, as determined by the Bank of Canada to be a settlement day, each Clearing Member shall be obligated to pay the Corporation, in Cash, by irrevocable funds transfer or any other method as may be approved by the Corporation from time to time, the amount of any Net Daily Settlement ~~in an account~~ shown to be due to the Corporation on the Daily Settlement Summary Report (notwithstanding any error in such report).
- 2) If for any reason the Daily Settlement Summary Report is not available to the Clearing Member, it shall be the responsibility of that Clearing Member to ascertain from the Corporation the amount of any Net Daily Settlement, so that payment may be made before Settlement Time each Business Day.
- 3) Provided all applicable conditions precedent have been satisfied, one hour after Settlement Time ~~of~~ on each Business Day the Corporation shall be obligated to pay a Clearing Member the amount of any Net Daily Settlement ~~in an account~~ shown to be due from the Corporation to such Clearing Member on the Daily Settlement Summary Report for such account for such day. The Corporation may make such payment to the Clearing Member by uncertified cheque or electronic funds transfer in the amount of such Net Daily Settlement.
- 4) When the banks in a city where the Corporation has an office are closed on a Business Day, settlement shall nevertheless occur through the method of irrevocable funds transfer or any other method as may be approved by the Corporation from time to time on such Business Day if it has been determined by the Bank of Canada to be a settlement day.
- 5) If the Corporation does not have sufficient liquidity to pay all the Net Daily Settlements it owes to Clearing Members on a given Business Day, the Corporation shall fail to pay *pro rata* among such Clearing Members and that event shall constitute a Payment Default trigger under Paragraph A-409(5)(a) in respect of the affected Clearing Members.

SECTION A-803 PHYSICAL SETTLEMENT

Where the Corporation will effect the transfer of Acceptable Securities through a Central Securities Depository, the Corporation shall be exclusively responsible for the communication of Net Delivery Requirements, Gross Delivery Requirements and Afternoon Net DVP Settlement Requirements consisting of obligations to deliver Acceptable Securities to such Central Securities Depository and will bear no responsibility for the replacement of the Acceptable Securities in the event that the Clearing Member fails to perform on the physical delivery obligation. The Corporation will, however, bear the

responsibility of guaranteeing the Settlement Amounts derived from the physical delivery process up to the time a CSD Confirmation is issued, and, for greater certainty, has no liability in respect of such Settlement Amounts at any time after the issuance of such CSD Confirmation in respect of such Settlement Amounts. A “CSD Confirmation” means in respect of settlement instructions relating to a Net Delivery Requirement, a Gross Delivery Requirement or an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities, as the case may be, a trade confirmation issued by the applicable Central Securities Depository confirming that the applicable Provider of Securities’ securities account with such Central Securities Depository has been debited with Acceptable Securities in accordance with such settlement instructions; and in respect of settlement instructions relating to a Net Payment Against Delivery Requirement, a Gross Payment Against Delivery Requirement, a Morning Net Payment Against Delivery Requirement or an Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against the delivery of Acceptable Securities, as the case may be, a trade confirmation issued by the applicable Central Securities Depository confirming that the applicable Clearing Member’s ~~cash account with such Central Securities Depository~~ CDS Funds Account has been debited in accordance with such settlement instructions.

SECTION A-804 FAILED AND PARTIAL DELIVERIES

- 1) If a Clearing Member who is a Provider of Securities does not deliver Acceptable Securities pursuant to a Net Delivery Requirement, an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities or a Gross Delivery Requirement resulting from a Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe as it is required to do under these Rules, or only partially delivers such Acceptable Securities required to be delivered by it pursuant to these Rules, by the End of Day DVP Settlement Time (in all cases, a “Failed Delivery”), the reciprocal payment obligation of the Corporation in favour of that Clearing Member shall be reduced accordingly. For the avoidance of doubt, a Failed Delivery hereunder shall not constitute a breach of the Rules under Paragraph A-1A04(3)(a) or an event otherwise in and of itself constituting a reasonable ground for the Corporation to determine that a Clearing Member is a Non-Conforming Member. The quantity of such Acceptable Securities that has not been delivered shall constitute a Rolling Delivery Obligation of the failing Clearing Member for purposes of calculating the next Business Day’s Net Delivery Requirement under Section A-801(2)(d), and the Net Delivery Requirement of each subsequent Business Day, until the quantity of such Acceptable Securities due are delivered in full, at which time the Corporation’s Postponed Payment Obligation shall become due and payable. Notwithstanding the foregoing, a Failed Delivery will not be rolled beyond the maturity date of the relevant Acceptable Security. On the maturity date of the relevant Acceptable Security, the Rolling Delivery Obligation of the Provider of Securities will be converted into a cash settlement obligation at the Acceptable Security’s principal value at maturity, which amount shall be netted against the Corporation’s Postponed Payment Obligation. For the avoidance of doubt, the value of any Coupon Income payable with respect to an Acceptable Security that is the object of a Rolling Delivery Obligation and the value of any final Coupon Income payable on the maturity date of the relevant Acceptable Security shall be paid by the Provider of Securities to the Corporation.
- 2) As a direct consequence of a Clearing Member’s Failed Delivery, the Corporation will fail or partially deliver for the same quantity of Acceptable Securities *prorata*, in accordance with the Operations Manual, among Clearing Members who are Receivers of Securities with respect to such Acceptable Securities on the relevant Business Day from the Corporation. In the case of a Failed Delivery with respect to a Gross Delivery Requirement, the Corporation 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. The reciprocal Net Payment Against Delivery Requirement, Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against the delivery of Acceptable Securities or Gross Payment Against Delivery Requirement, as the case may be, of such Receivers of Securities in favour of the Corporation shall be reduced accordingly and the quantity of such Acceptable Securities that has not been delivered shall constitute a Rolling Delivery Obligation of the Corporation for purposes of calculating the next Business Day's Net Delivery Requirement, and the Net Delivery Requirement of each subsequent Business Day, until the quantity of Acceptable Securities due are delivered in full, at which time the Receiver of Securities' Postponed Payment Obligation shall become due and payable. Notwithstanding the foregoing, on the maturity date of the relevant Acceptable Security, the Rolling Delivery Obligation of the Corporation will be converted into a cash settlement obligation at the Acceptable Security's principal value at maturity, which amount shall be netted against the Receiver of Securities' Postponed Payment Obligation. For the avoidance of doubt, the value of any Coupon Income payable with respect to an Acceptable Security that is the object of a Rolling Delivery Obligation and the value of any final Coupon Income payable on the maturity date of the relevant Acceptable Security shall be paid by the Corporation to the Receiver of Securities.

- 3) Notwithstanding any other provision of this Section A-804, the Corporation may, on its own initiative, and shall, pursuant to a formal request by a Receiver of Securities affected by a Failed Delivery as set forth in Subsection A-804(2), terminate the daily roll mechanic set out under Subsection A-804(1) and Subsection A-804(2) and effect a buy-in transaction under Subsection A-804(4), in addition to the exercise of any other remedies under the Rules.
- 4) Upon termination of the daily roll mechanic set out under Subsection A-804(1) and A-804(2) pursuant to Subsection A-804(3), the Corporation shall satisfy its Net Delivery Requirement, its obligation to deliver Acceptable Securities against an Afternoon Net DVP Settlement Requirement consisting of a payment obligation of the Clearing Member or Gross Delivery Requirement (in all cases, the "Corresponding CDCC Delivery Requirement"), as the case may be, to Receivers of Securities with respect to such Acceptable Securities, notwithstanding any Failed Delivery by any Provider of Securities, by purchasing the missing quantity of such Acceptable Securities on the open market on such terms as the Corporation deems commercially reasonable in the circumstances. The difference between the price paid by the Corporation to purchase the missing quantity on the open market (including associated costs incurred) and the Purchase Price (or Repurchase Price, as the case may be) of the relevant Transaction(s) shall be charged to the Provider of Securities who was responsible for a Failed Delivery of such Acceptable Securities.
- 5) If the Corporation is unable to satisfy its Corresponding CDCC Delivery Requirement to the Receiver(s) of Securities of such Acceptable Securities under Subsection A-804(4) because they are unavailable on the open market or the Corporation determines in its sole discretion, taking into account the size and nature of the Failed Delivery, the market conditions prevailing at the time, the potential market effects of purchasing the missing quantity on the open market and associated costs, and such other circumstances that the Corporation, in its sole discretion, deems relevant, that such buy-in transaction would not be in the best interest of the Corporation, other Clearing Members or the general public, the Corporation will fail to satisfy its Corresponding CDCC Delivery Requirement to such Receiver(s) of Securities and will convert the relevant Failed Delivery into a cash settlement obligation at the Acceptable Security's fair market value, as determined by the Corporation in a commercially reasonable manner, netted against the Receiver(s) of Securities' Postponed Payment Obligation. Such cash settlement amount shall be

determined by the Corporation within five Business Days of the termination of the daily roll mechanic pursuant to Subsection A-804(3) and shall be immediately credited (or charged, as the case may be) by the Corporation to the relevant Receiver(s) of Security and simultaneously charged (or credited, as the case may be) by the Corporation to the Provider of Securities responsible for such Failed Delivery. Failure by the Provider of Securities responsible for the Failed Delivery, or by the relevant Receiver(s) of Securities, as the case may be, to pay such cash settlement amount to the Corporation shall constitute a payment default, upon which the Corporation may determine that the Clearing Member is a Non-Conforming Member and take such actions and remedies provided under these Rules against such Non-Conforming Member.

SECTION A-805 FINAL AND IRREVOCABLE PAYMENT

When the settlement of a payment obligation of a Clearing Member or the Corporation is made through an entry to or a payment out of an account as provided in Section A-802 or through an entry to or a payment out of an account as provided in Section A-803, such settlement of the payment obligation of a Clearing Member or the Corporation shall be final and irrevocable.

SECTION A-806 FAILED AND PARTIAL PAYMENTS AGAINST DELIVERY

- 1) If a Clearing Member does not have sufficient funds in its ~~cash account at the Central Securities Depository~~ CDS Funds Account to satisfy its payment against delivery obligation pursuant to Subsection A-801(3), or only partially settles such payment against delivery obligation (in either case, a “Failed Payment Against Delivery”) at the Morning Net DVP Settlement Timeframe, the Corporation shall impose a fine and may determine that the Clearing Member is a Non-Conforming Member, in accordance with Section 6 of the Operations Manual. In addition, the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.
- 2) If a Clearing Member does not have sufficient funds in its ~~cash account at the Central Securities Depository~~ CDS Funds Account to satisfy its Afternoon Net DVP Settlement Requirement pursuant to Subsection A-801(4)(ii) or any Gross Payment Against Delivery Requirement by the End of Day DVP Settlement Time or only partially settles such payment against delivery obligation (also, in either case, a Failed Payment Against Delivery), the Clearing Member shall ~~be deemed~~ automatically be determined by the Corporation to be a Non-Conforming Member in accordance with Section 6 of the Operations Manual and the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.
- 3) If the Corporation does not have sufficient funds in its ~~cash account at the Central Securities Depository~~ CDS Funds Account to satisfy all its Afternoon Net DVP Settlement Requirements pursuant to Subsection A-801(4)(ii) and all its Gross Payment Against Delivery Requirements in favour of Clearing Members by the End of Day DVP Settlement Time, it shall fail to settle its payment against delivery obligations at the Central Securities Depository *prorata* among such Clearing Members and that event shall constitute a Payment Default trigger under Paragraph A-409(5)(a) in respect of the affected Clearing Members.

RULE A-9 ADJUSTMENTS IN CONTRACT TERMS

SECTION A-901 APPLICATION

This Rule A-9 is applicable to Transactions where the Underlying Interest is a Security.

SECTION A-902 ADJUSTMENTS IN TERMS

- 1) Whenever there is a dividend, stock dividend, stock distribution, stock split, trust unit split, reverse stock split, reverse trust unit split, rights offering, distribution, reorganization, recapitalization, reclassification or similar event in respect of any Underlying Interest, or a merger, consolidation, dissolution or liquidation of the issuer of any Underlying Interest, the number of Derivative Instruments, the Unit of Trading, the Exercise Price, and the Underlying Interest, or any of them, with respect to all outstanding Derivative Instruments open for trading in that Underlying Interest may be adjusted in accordance with this Section A-902.
- 2) Subject to Subsection (13) of this Section A-902, all adjustments made pursuant to this Section A-902 shall be made by a committee ("Adjustments Committee"). The Adjustments Committee shall determine whether to make adjustments to reflect particular events in respect of an Underlying Interest, and the nature and extent of any such adjustment, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to Clearing Members and the Corporation, the maintenance of a fair and orderly market in Derivative Instruments on the Underlying Interest, consistency of interpretation and practice, efficiency of exercise settlement procedures, and the coordination with other clearing agencies of the clearance and settlement of transactions in the Underlying Interest. The Adjustments Committee may, in addition to determining adjustments on a case-by-case basis, adopt statements of policy or interpretation having general application to specified types of events. Any such statements of policy or interpretation shall be disseminated to all Clearing Members, Exchanges and securities and/or derivative instruments regulatory authorities having jurisdiction over the Corporation. Every determination by the Adjustments Committee pursuant to this Section A-902 shall be within the sole discretion of the Adjustments Committee and shall be conclusive and binding on all Clearing Members and not subject to review, other than review by securities and/or derivative instruments regulatory authorities having jurisdiction over the Corporation pursuant to applicable provisions of the respective statutes.
- 3) It shall be the general rule that there will be no adjustments of Options and similar instruments to reflect ordinary cash dividends or distributions, or ordinary stock dividends or distributions, or ordinary trust unit dividends or distributions declared by the issuer of the Underlying Interest, or any cash dividend or distribution declared by the issuer of the Underlying Interest if such dividend or distribution is less than \$12.50 per contract.
- 4) It shall be the general rule that there will be no adjustments of Transactions other than Options and similar instruments to reflect ordinary cash dividends or distributions, or ordinary stock dividends or distributions, or ordinary trust unit dividends or distributions declared by the issuer of the

Underlying Interest if such dividend or distribution is less than \$12.50 per contract.

5)

- a) ~~ii)~~ For all Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby one or more whole number of additional shares of the Underlying Interest are issued with respect to each outstanding share, each Option or similar instrument covering that Underlying Interest shall be increased by the same number of additional contracts as the number of additional shares issued with respect to each share of the Underlying Interest, and the Exercise Price per share in effect immediately prior to such event shall be proportionately reduced, and the Unit of Trading shall remain the same.
- b) ~~iii)~~ For all Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby other than a whole number of shares of the Underlying Interest is issued in respect of each outstanding share, the Exercise Price in effect immediately prior to such event shall be proportionately reduced, and the Unit of Trading shall be proportionately increased.
- c) ~~iiii)~~ For all Options and similar instruments it shall be the general rule that in the case of a reverse stock split, consolidation or combination of shares, or similar event, each Option and similar instrument covering the affected Underlying Interest shall be adjusted, solely for purposes of determining the property deliverable upon exercise of the Option or similar instrument, by decreasing the Unit of Trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the Unit of Trading for all such adjusted series of Options or similar instruments shall remain unchanged for purposes of determining the aggregate Exercise Price of the Option or similar instrument and for purposes of determining the premium for any such instrument purchased and sold.
- d) ~~iv)~~ For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby one or more whole number of additional shares of the Underlying Interest are issued with respect to each outstanding share, each Derivative Instrument covering that Underlying Interest shall be increased by the same number of additional contracts as the number of additional shares issued with respect to each share of the Underlying Interest, the last Settlement Price established immediately before such event shall be proportionately reduced, and the Unit of Trading shall remain the same.
- e) ~~v)~~ For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby other than a whole number of shares of the Underlying Interest is issued in respect of each outstanding share, the last Settlement Price established immediately before such event shall be proportionately reduced, and the Unit of Trading shall be proportionately increased.
- f) ~~vi)~~ For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a reverse stock split, consolidation or combination of shares, or similar event, each Derivative Instrument covering the affected Underlying Interest shall be adjusted, solely for purposes of determining the property deliverable upon

exercise of the instrument, by decreasing the Unit of Trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the Unit of Trading for all such adjusted series of Derivatives Instruments shall remain unchanged for purposes of determining the aggregate Settlement Price of the Derivatives Instrument and for purposes of determining the premium for any such instrument purchased and sold.

- 6) It shall be the general rule that in the case of any distribution made with respect to shares of an Underlying Interest, other than ordinary dividends or distributions subject to Subsection (3) and (4) of this Section A-902 and other than dividends or distributions for which adjustments are provided in Subsection (5) of this Section A-902, if an adjustment is determined by the Adjustments Committee to be appropriate, for Options and similar instruments:
- i) the Exercise Price in effect immediately prior to such event shall be reduced by the value per share of the distributed property, in which event the Unit of Trading shall not be adjusted, or
 - ii) the Unit of Trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the Underlying Interest represented by the Unit of Trading in effect prior to such adjustment, in which event the Exercise Price shall not be adjusted;

for all other Transactions for which an Exercise Price is not available:

- i) the last Settlement Price established immediately before such event shall be reduced by the value per share of the distributed property, in which event the Unit of Trading shall not be adjusted, or
 - ii) the Unit of Trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the Underlying Interest represented by the Unit of Trading in effect prior to such adjustment, in which event the Settlement Price shall not be adjusted.
 - iii) The Adjustments Committee shall, with respect to adjustments under this Subsection or any other Subsection of this Section A-902, have the authority to determine the value of distributed property.
- 7) In the case of any event for which adjustments are not provided in any of the foregoing Subsections of this Section A-902, the Adjustments Committee may make such adjustments, if any, with respect to the characteristics of the Derivative Instrument affected by such event as the Adjustments Committee determines.
- 8) Adjustments pursuant to this Section A-902 as a general rule shall become effective in respect of Transactions outstanding on the “ex-dividend date” established by the exchange or exchanges on which the Underlying Interest is traded. In the event that the “ex-dividend date” for an Underlying Interest traded on exchanges differs from one exchange to another, the Corporation shall deem the earliest date to be the “ex-dividend date” for the purposes of this Section A-902. “Ex-dividend

dates” established by any other exchange or exchanges on which an Underlying Interest may be traded shall be disregarded.

- 9) It shall be the general rule that (i) all adjustments of the Exercise Price of an outstanding Option or similar instrument shall be rounded to the nearest adjustment increment, (ii) when an adjustment causes an Exercise Price to be equidistant between two adjustment increments, the Exercise Price shall be rounded up to the next highest adjustment increment, (iii) all adjustments of the Unit of Trading shall be rounded down to eliminate any fraction, and (iv) if the adjustment is made pursuant to subparagraph (5)(iii) above, the value of the fractional share so eliminated as determined by the Corporation shall be added to the Unit of Trading, or if the adjustment is made pursuant to subparagraph (5)(ii) above, if the Unit of Trading is rounded down to eliminate a fraction, the adjusted Exercise Price may be further adjusted, to the nearest adjustment increment, to reflect any diminution in the value of the Option or similar instrument resulting from the elimination of the fraction.
- 10) It shall be the general rule that (i) all adjustments of the Settlement Price of an outstanding transaction other than those covering an Option or similar instrument shall be rounded to the nearest adjustment increment, (ii) when an adjustment causes a Settlement Price to be equidistant between two adjustment increments, the settlement price shall be rounded up to the next highest adjustment increment, (iii) all adjustments of the Unit of Trading shall be rounded down to eliminate any fraction, and (iv) if the adjustment is made pursuant to subparagraph (5)(v) above, the value of the fractional share so eliminated as determined by the Corporation shall be added to the Unit of Trading, or if the adjustment is made pursuant to subparagraph (5)(iv) above, if the Unit of Trading is rounded down to eliminate a fraction, the adjusted Settlement Price may be further adjusted, to the nearest adjustment increment, to reflect any diminution in the value of the Derivative Instrument resulting from the elimination of the fraction.
- 11) Notwithstanding the general rules set forth in Subsections (3) through (9) of this Section A-902 or which may be set forth as interpretations and policies under this Section A-902, the Adjustments Committee shall have the power to make exceptions in those cases or groups of cases in which, in applying the standards set forth in Subsection (2) thereof the Adjustments Committee shall determine such exceptions to be appropriate. However, the general rules shall be applied unless the Adjustments Committee affirmatively determines to make an exception in a particular case or group of cases.
- 12) For Exchange Transactions, the Adjustments Committee shall consist of two designated representatives of the exchange that lists the Derivative Instrument that the adjustments apply to, and one representative designated by the Corporation; and the quorum for transacting exchange transactions business at any meeting of the Adjustments Committee shall be two from the exchange and one from the Corporation. For OTCI, the Adjustments Committee will consist of three designated representatives of the Corporation; and the quorum for transacting OTCI business at any meeting of the Adjustments Committee is three designated representatives of the Corporation. The vote of a majority of the members of the Adjustments Committee in attendance at any meeting shall constitute the determination of the Adjustments Committee. The Adjustments Committee may transact its business by means of a telephonic, electronic or other communication facility that permits all participants to communicate appropriately with each other during the meeting. Notwithstanding the foregoing provisions of this Subsection, any representative of the Corporation or of an Exchange may designate any other representative of the Corporation or of the

exchange, respectively, to serve in his place at any meeting of the Adjustments Committee. In the event of such designation, the designee, for the purposes of such meeting, shall have all of the powers and duties under this Section A-902 of the person designating him. Any representative designated by the Corporation or the Exchange, or any other representative designated by such a representative, cannot serve on the Adjustments Committee if such person, is the beneficial holder of a long or short position in the Derivative Instrument or OTCI as to which the Adjustments Committee is to make a determination. As stipulated in the By-laws of the Corporation, a majority of the members of the Adjustments Committee shall be resident Canadians.

- 13) In the event that the Adjustments Committee is unable to determine whether to make adjustments in any particular case, the matter shall be referred to the Board for a determination.

INTERPRETATIONS AND POLICIES

1)

- a) ~~ii)~~ Cash dividends or distributions (regardless of size) declared by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis, as well as resumption of dividends or distributions will, as a general rule, be deemed to be “ordinary cash dividends or distributions” within the meaning of Subsection A-902(3). Cash dividends or distributions declared by the issuer of the Underlying Interest which are declared outside of a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis will be deemed to be “special cash dividends or distributions” if they exceed the threshold of \$12.50 per contract.
- b) ~~iii)~~ Stock dividends or distributions, or trust unit dividends or distributions declared by the issuer of the Underlying Interest in an aggregate amount that per dividend or distribution does not exceed 10% of the number of shares of the Underlying Interest outstanding as of the close of trading on the declaration date, and which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis will, as a general rule, be deemed to be “ordinary stock dividends or distributions” or “ordinary trust unit dividends or distributions” within the meaning of Subsection A-902(3).
- c) ~~iv)~~ Cash dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared outside of a regular policy or practice of paying such dividends or distributions and that exceeds \$12.50 per contract will be deemed to be “special cash dividends or distributions” within the meaning of Subsection A-902(3).
- d) ~~v)~~ Stock dividends or distributions, or trust unit dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared outside of a regular policy and that exceeds 10% of the number of shares of the Underlying Interest will be deemed to be “special stock dividends or distributions” or “special trust unit dividends or distributions” within the meaning of Subsection A-902(3).
- e) ~~vi)~~ Cash dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis, as well as

resumption of dividends or distributions will, as a general rule, be deemed to be “ordinary distributions” within the meaning of Subsection A-902(4). The Corporation will determine on a case-by-case basis whether other dividends or distributions are “ordinary distributions” or whether they are dividends or distributions for which an adjustment should be made.

- d) ~~vi)~~ Stock dividends or distributions or trust unit dividends or distributions by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis will, as a general rule, be deemed to be “ordinary distributions” within the meaning of Subsection A-902(4). The Corporation will ordinarily adjust for other stock dividends and distributions.

Nevertheless, the Adjustments Committee will determine, on its sole discretion, on a case-by-case basis whether other dividends or distributions are “ordinary dividends or distributions” or whether they are dividends or distributions for which adjustments should be made, regardless of the threshold of \$12.50 per contract applied to “special dividends or distributions”.

Normally, the Adjustments Committee shall classify a cash dividend or cash distribution as non-ordinary when it believes that similar cash dividends or cash distributions will not be paid on a quarterly or other regular basis. Notwithstanding that the Adjustments Committee has classified a cash dividend or cash distribution as non-ordinary, it may, with respect to events announced on or after February 1, 2012, classify subsequent cash dividends or cash distributions of a similar nature as ordinary if (i) the issuer discloses that it intends to pay such dividends or distributions on a quarterly or other regular basis, (ii) the issuer has paid such dividends or distributions for four or more consecutive months or quarters or two or more years after the initial payment, whether or not the amounts paid were the same from period to period, or (iii) the Adjustments Committee determines for other reasons that the issuer has a policy or practice of paying such dividends or distributions on a quarterly or other regular basis.

2)

- a) ~~i)~~ Adjustments will not ordinarily be made to reflect the issuance of so-called “poison pill” rights that are not immediately exercisable, trade as a unit or automatically with the Underlying Interest, and may be redeemed by the issuer. In the event such rights become exercisable, begin to trade separately from the Underlying Interest, or are redeemed, the Adjustments Committee will determine whether adjustments are appropriate.
- b) ~~ii)~~ Except as provided above in the case of certain “poison pill” rights, adjustments for rights distributions will ordinarily be made to Transactions other than those covering Options and similar instruments. When an adjustment is made for a rights distribution, the Unit of Trading in effect immediately prior to the distribution will ordinarily be adjusted to include the number of rights distributed with respect to the number of shares of the Underlying Interest comprising the Unit of Trading. If, however, the Corporation determines that the rights are due to expire before the time they could be exercised upon delivery under the contract, then delivery of the rights will not be required. Instead, the Corporation will ordinarily adjust the last Settlement Price established before the rights expire to reflect the value, if any, of the rights as determined by the Corporation in its sole discretion.
- c) ~~iii)~~ Adjustments will not be made to reflect a take-over bid or issuer bid made for the Underlying Interest, whether such offer is for cash, Securities or other property. This policy will apply without regard to whether the price of the Underlying Interest may be favourably or adversely affected by the offer or whether the offer may be deemed to be “coercive”. Outstanding Transactions ordinarily will be adjusted to reflect a merger, amalgamation,

arrangement or similar event that becomes effective following the completion of a take-over bid.

- d) ~~iv)~~ Adjustments will not be made to reflect changes in the capital structure of an issuer where all of the Underlying Interest in the hands of the public (other than dissenters' shares) are not changed into another Security, cash or other property. For example, adjustments will not be made merely to reflect the issuance (except as a distribution on an Underlying Interest) of new or additional debt, stock, trust units, or options, warrants or other securities convertible into or exercisable for the Underlying Interest, the refinancing of the issuer's outstanding debt, the repurchase by the issuer of less than all of the Underlying Interest outstanding or the sale by the issuer of significant capital assets.
- e) ~~v)~~ When an Underlying Interest is converted into a right to receive a fixed amount of cash, such as in a merger, amalgamation, arrangement or similar event, outstanding Options or similar instruments will be adjusted to require the delivery upon exercise of cash in an amount per share equal to the conversion price. As a result of such adjustments, the value of all outstanding In-the-money Options or similar instruments will become fixed, and all At-the-money and Out-of-the-money Options or similar instruments will become worthless. Outstanding transactions other than those covering Options or similar instruments will be adjusted to replace such Underlying Interest with such fixed amount of cash as the Underlying Interest, and the Unit of Trading shall remain unchanged.
- f) ~~vi)~~ In the case of a spin off or similar event by the issuer of an Underlying Interest which results in a property distribution, Derivatives Instruments will be adjusted to reflect such distribution. The value of the property distributed shall be reflected in the shares deliverable.
- g) ~~vii)~~ In the case of a corporate reorganization or similar occurrence by the issuer of an Underlying Interest which results in an automatic share-for-share exchange of the Underlying Interest for shares of another class in the capital of the issuer or in the resulting company, the Transactions on the Underlying Interest will ordinarily be adjusted to require delivery upon exercise of a like number of units of the shares of such other class or of the resulting company. Because the Securities are generally exchanged only on the books of the issuer and/or the resulting company, as the case may be, and are generally not exchanged physically, deliverable shares will ordinarily include certificates that are denominated on their face as shares in the original class of shares of the original issuer, but which, as a result of the corporate transaction, represent shares in the other class or in the resulting company, as the case may be.
- h) ~~viii)~~ When an Underlying Interest is converted in whole or in part into a debt security and/or a preferred stock, as in a merger, and interest or dividends on such debt security or preferred stock are payable in the form of additional units thereof, outstanding Transactions that have been adjusted to call for delivery of such debt security or preferred stock shall be further adjusted, effective as of the ex-date for each payment of interest or dividends thereon, to call for delivery of the securities distributed as interest or dividends thereon.
- i) ~~ix)~~ Notwithstanding Interpretation and Policy (1) under Section A-902, (i) "ordinary cash dividends or distributions" within the meaning of paragraph (3) of Section A-902 shall not, as a general rule, be deemed to include distributions of short-term or long-term capital gains by the issuer of the Underlying Interest, and (ii) "ordinary cash dividends or distributions" within the meaning of paragraph (3) of Section A-902 shall not, as a general rule, be deemed to include other distributions by the issuer of the Underlying Interest, provided that (a) the issuer is an entity that holds securities or replicates holding of securities that track the

performance of an index that underlies a class of index Options or index Futures, and the distribution on the Underlying Interest includes or reflects a dividend or other distribution on a security part of the index that resulted in an adjustment of the index divisor; or (b) the distribution on the Underlying Interest includes or reflects a dividend or other distribution on a security part of the index (I) that results in an adjustment of Options and similar instruments on other Underlying Interest pursuant to clause (ii)(a), or (II) that is not deemed an ordinary dividend or distribution under Interpretation (1) above.

Adjustments of the terms of Options and similar instruments on such Underlying Interest for distributions described in clause (i) or (ii) above shall be made in accordance with paragraph (6) of Section A-902, unless the Adjustments Committee determines, on a case-by-case basis, not to adjust for such a distribution; provided, however, that no adjustment shall be made for any such distribution where the amount of the adjustment would be less than \$.125 per Underlying Interest.

~~RULE A-10 – RECOVERY PROCESS~~ RULE A-10 – RECOVERY PROCESS

~~SECTION AA- 1001- RECOVERY POWERS~~ RECOVERY POWERS

- 1) ~~Unless otherwise specified in the applicable section of Rule A-10, upon~~ Upon the declaration by the Corporation of the beginning of a Recovery Process, ~~in accordance with Section A-1002, the Corporation may exercise any of rights or remedies against its Clearing Members against any Clearing Member which is not a Limited Clearing Member any of its rights and remedies set out in this Rule A-10 and the related provisions of the Default Manual (each of which rights and remedies, a “Recovery Power”) in the manner set out in the applicable sections below, including applying a Recovery Loss Cash Payment.~~
- 2) Upon the declaration by the Corporation of the beginning of a Recovery Process in accordance with Section A-1002, the Corporation may exercise a Reduced Amounts Distribution against a Limited Clearing Member subject to and in accordance with Section A-1005 and the related provisions of the Default Manual; provided, however, that the Corporation shall not have the right to exercise any other Recovery Power against any Limited Clearing Member without the Limited Clearing Member’s consent.

SECTION A- 1002—DECLARATION OF RECOVERY PROCESS

- 1) During a Default Management ~~Process~~ Period, the Corporation may declare the commencement of a Recovery Process, subject to approval by the Board, upon ~~any occurrence that, individually or in the aggregate (a “Recovery Event”), may, in the reasonable judgment of the Corporation, result in the Corporation incurring obligations, losses or expenses in excess of the sum of the following funds (which shall collectively be referred to as the “Default Waterfall”);~~ the occurrence of either of the following events (each, “Recovery Event”):
 - a) the Corporation, acting reasonably, determines that its Recovery Losses in connection with the suspension of the applicable Clearing Member may exceed the sum of the following amounts (which shall collectively be referred to as the “Default Waterfall”):
 - i) ~~(i)~~ the suspended Clearing ~~Members’~~ Member’s Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund);
 - ii) ~~(ii)~~ the Corporation’s own capital resources specifically set aside for such purpose; and

- iii) ~~(iii)~~ 200% of the aggregate value of all Clearing Fund deposits required at the beginning of the Default Management Period of the Clearing Members which have not been suspended during the Default Management Period; or

~~provided that the Recovery Event is caused or incurred in connection with the suspension of one or more Clearing Member(s) during the Default Management Period.~~

- b) ~~2) During a Default Management Process, the Corporation may declare the commencement of a Recovery Process, subject to approval by the Board, if, after the suspension of one or more Clearing Members and~~ after the exercise ~~of~~ by the Corporation of its rights and remedies set out in Rule A-4, ~~4 in connection with the suspension of the applicable Clearing Member,~~ the Corporation reasonably determines that it has been, or will likely be, unable to close-out all the positions of the suspended Clearing ~~Members. Such determination shall also constitute a Recovery Event~~ Member.

- 2) ~~3)~~ Upon the declaration of the commencement of a Recovery Process, the Corporation will notify all Clearing Members, the Exchanges, any regulatory agency having oversight over the Corporation, the Bank of Canada and any such other Entities as the Corporation may consider appropriate.

SECTION ~~AA~~- 1003- RECOVERY PROCESS

“Recovery Process ~~Recovery Process”~~ means any of the ~~actions,~~ rights ~~of~~ and remedies of the Corporation set out in this Rule and the related provisions of the Default Manual.

SECTION ~~AA~~- 1004- RECOVERY LOSSES

“Recovery Losses ~~Recovery Losses”~~ means any obligations, losses or expenses incurred or sustained by the Corporation as a result of, or in connection with, the suspension of a Clearing Member.

SECTION A-~~1005- [PLACEHOLDER]~~ 1005 REDUCED AMOUNTS DISTRIBUTION

~~Reserved.~~

SECTION A-~~1006- RECOVERY LOSS CASH PAYMENT~~

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process, if, in the reasonable opinion of the Corporation, the Recovery Event may result in the Corporation incurring ~~obligations, losses or expenses in an amount in excess of the sum of the following:~~ Recovery Losses in excess of the amounts available to it as part of the Default Waterfall, the Corporation may on any Business Day during the Reduced Amounts Distribution Period (as defined below) withhold the payment or transfer of all or a portion of the amounts owed by the Corporation and which are Qualified Amounts (as defined below) to a Clearing Member that has not been suspended. The exercise of such power to withhold

payment or transfer shall constitute a Recovery Power referred to as the “**Reduced Amounts Distribution**”.

- ~~(i) the suspended Clearing Members’ Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund);~~
- ~~(ii) the Corporation’s own capital resources specifically set aside for such purpose; and~~
- ~~(iii) 200% of the aggregate value of all Clearing Fund deposits required at the beginning of the Default Management Period of the Clearing Members which have not been suspended during the Default Management Period;~~

2) Before exercising the Reduced Amounts Distribution, the Corporation shall notify all Clearing Members of the date of the commencement of a period during which such power will be exercised (the “**Reduced Amounts Distribution Period**”). There shall be no more than one Reduced Amounts Distribution Period during any given Default Management Period and no Reduced Amounts Distribution Period may be in effect for more than four (4) consecutive Business Days during any given Default Management Period¹. The Corporation shall notify all Clearing Members of the date of the termination of the Reduced Amounts Distribution Period. The amounts retained by the Corporation in the exercise of the Reduced Amounts Distribution, whether converted into cash or otherwise (the “**Retained Amounts**”), may be used by the Corporation during or after the Reduced Amounts Distribution Period, in accordance with paragraph A-1005(6). The Corporation shall resume the payment or transfer of the Qualified Amounts becoming due after the termination of the Reduced Amounts Distribution Period.

3) On each Business Day of the Reduced Amounts Distribution Period (for the purpose of this Section A-1005, each, a “**Calculation Date**”), the Corporation shall exercise a Reduced Amounts Distribution to any of the following (each, a “**Qualified Amount**”) subject to the provisions of paragraph A-1005(5) below:

- a) In respect of all Futures and Options to which a Clearing Member is a party on a Calculation Date, the net amount owed by the Corporation to such Clearing Member in respect of:
 - i) The net value of the Gains and Losses for that day in respect of all such Clearing Member’s Open Positions in Futures;
 - ii) The Net Daily Premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation and purchased or sold on the Exchange; and
 - iii) The net agreed premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation, bilaterally negotiated, or entered into on any Acceptable Marketplaces.
- b) In respect of all Fixed Income Transactions to which a Clearing Member, other than a Limited Clearing Member, is a party on the Calculation Date (excluding, for the avoidance of doubt, any Repurchase Transaction for which the Repurchase Date is the Calculation Date, and any Cash Buy Sell Trade for which the Purchase Date is the Calculation Date), the Corporation shall determine the amount that would otherwise be owed by the Corporation to the Clearing Member (the “**RAD Net Gain**”) which shall be determined based on the

aggregate net sum of the differences, in respect of each of those Transactions, between (i) the Variation Margin Requirement which was required in respect of a Transaction on the Calculation Date and (ii) the Variation Margin Requirement which was required for the same Transaction on the last Business Day prior to the commencement of the Reduced Amounts Distribution Period. On each Business Day of the Reduced Amounts Distribution Period, the Qualified Amount shall equal the difference between the RAD Net Gain calculated for such Clearing Member and the sum of Retained Amounts retained by the Corporation on each previous Business Day of the Reduced Amounts Distribution Period for the same Transactions.

c) In respect of all Fixed Income Transactions to which a Limited Clearing Member is a party on a Calculation Date (excluding, for the avoidance of doubt, any Repurchase Transaction for which the Repurchase Date is the Calculation Date, and any Cash Buy Sell Trade for which the Purchase Date is the Calculation Date) and that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member, the Corporation shall calculate the amount that would otherwise be owed by the Corporation to the Limited Clearing Member (the “LCM RAD Net Gain”) which shall be determined based on the aggregate net sum of the differences, in respect of each of those Transactions, between (i) the Variation Margin Requirement which was required in respect of a Transaction on the Calculation Date and (ii) the Variation Margin Requirement which was required for the same Transaction on the last Business Day prior to the commencement of the Reduced Amounts Distribution Period. On each Business Day of the Reduced Amounts Distribution Period, the Qualified Amount shall be equal to the difference between the LCM RAD Net Gain calculated for such Limited Clearing Member and the sum of Retained Amounts retained by the Corporation on each previous Business Day of the Reduced Amounts Distribution Period for the same Transactions.

4) The notification by the Corporation to a Clearing Member of the value of the Retained Amount shall extinguish the Corporation’s obligation to pay or transfer any such amount to the Clearing Member.

5) At the end of each Business Day of the Reduced Amounts Distribution Period, the Corporation shall notify each Clearing Member of the Retained Amount relating to it as follows:

a) For each Clearing Member, other than a Limited Clearing Member, the Corporation shall calculate a net Retained Amount by aggregating the Qualified Amount in respect of all Futures and Options Transactions to which the Clearing Member is a party on such Business Day and the net Qualified Amount in respect of all Fixed Income Transactions to which the Clearing Member is a party on such Business Day.

b) Notwithstanding Section D-607, for each Limited Clearing Member, the Corporation shall calculate a net Retained Amount by determining the net Qualified Amount in respect of all Transactions to which the Limited Clearing Member is a party on such Business Day and that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member. During the Reduced Amount Distribution Period, the Corporation shall calculate separately (i) the aggregate Variation Margin Requirement in respect of all Transactions to which the Clearing Member is a party that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member, and (ii) the aggregate Variation Margin Requirement in respect of all the Transactions to which the Limited Clearing

Member is a party, excluding those Transactions that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member.

- 6) The Corporation shall only use the Retained Amounts for the purpose of satisfying or otherwise settling Recovery Losses, after exhausting the Default Waterfall, all in accordance with the provisions set out in the Default Manual.
- 7) In the case of the suspension of multiple Clearing Members, the Corporation shall only use the Retained Amounts withheld in connection with Fixed Income Transactions that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and a suspended Clearing Member, for the purpose of satisfying or otherwise settling Recovery Losses incurred in connection with the suspension of such Clearing Member.
- 8) Except as otherwise specified in this Section A-1005, the implementation of the Reduced Amounts Distribution does not affect the calculation and determination by the Corporation of amounts otherwise owed.

SECTION A- 1006- RECOVERY LOSS CASH PAYMENT

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the exercise of the Corporation's Reduced Amounts Distribution power in accordance with Section A-1005, if, in the reasonable opinion of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses or expenses in an amount in excess of the sum of the resources constituting the Default Waterfall and the Retained Amounts, and such amount is known or can reasonably be determined, the Corporation may require each Clearing Member which ~~have~~has not been suspended during the Default Management Period to pay to the Corporation its pro rata proportion of the Recovery Loss Cash Payment.
- 1) The Corporation shall determine the total amount of the Recovery Loss Cash Payment and calculate the ~~pro-rata~~ proportion to be paid by each Clearing Member that is not a suspended Clearing Member, pro rata, based on the quotient obtained by dividing the amount of each Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period by the aggregate amount of Clearing Fund deposits required at the beginning of the Default Management Period of all Clearing Members other than the suspended Clearing Members.
- 2) The Corporation shall notify each Clearing Member that is not a suspended Clearing Member of the amount payable by such Clearing Member as Recovery Loss Cash Payment.
- 3) The aggregate amounts payable in Recovery Loss Cash Payments by a Clearing Member during a Default Management Period shall not exceed the value of such Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period.

- 4) The Recovery Loss Cash Payment shall be paid by each Clearing Member no later than the first Settlement Time on the Business Day following the date the Corporation notifies Clearing Members in writing that the Recovery Loss Payment is due, unless any other date is specified in the Corporation's notice.
- 5) A Recovery Loss Cash Payment must be paid to the Corporation in Cash and, once received, will belong to the Corporation. The Corporation shall not be required to pay any interest in respect of any Recovery Loss Cash Payment.
- 6) The Corporation shall use the Recovery Loss Cash Payment after exhausting the funds available to the Corporation as part of the Default Waterfall and the Retained Amounts for the sole purpose of satisfying or otherwise settling Recovery Losses.

SECTION A- 1007- ~~PLACEHOLDER~~ RECOVERY AUCTION

~~Reserved~~

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the determination by the Corporation that it has been unable to transfer, close-out, or otherwise liquidate all the positions of the suspended Clearing Member(s), following the exercise of the rights and remedies set out in Rule A-4, the Corporation may hold a Recovery Auction with respect to the Fixed Income Transactions.
- 2) All Clearing Members (including Limited Clearing Members) will be entitled to participate to the Recovery Auction, in accordance with the methodology set forth in the Default Manual.

SECTION A- 1008- ~~PLACEHOLDER~~ VOLUNTARY CONTRACT TEAR-UP

~~Reserved~~

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the determination by the Corporation that it has been unable to transfer, close-out, or otherwise liquidate all the positions of the suspended Clearing Members, following the exercise of the rights and remedies set out in Rule A-4, and, in respect of the Fixed Income Transactions, following the holding of the Recovery Auction, the Corporation may implement voluntary contract tear-up ("Voluntary Contract Tear-Up"), on the conditions and in the manner set forth in this Section A-1008.
- 2) The Corporation may implement Voluntary Contract Tear-Up for any Futures, Options or Over-the-Counter Instruments cleared by the Corporation.
- 3) On the Business Day the Corporation determines to implement the Voluntary Contract Tear-Up, the Corporation shall notify, before the Close of Business, all Clearing Members of its intention to

implement Voluntary Contract Tear-up on that same Business Day in respect of any of the suspended Clearing Member Open Positions which have not been terminated. At the end of that same Business Day, the Corporation shall determine the opposite Open Positions which could be terminated. In making this determination, the Corporation shall use all commercially reasonable efforts to allocate all such terminable Open Positions pro-rata on the basis of the net opposite Open Positions of each Clearing Member which has not been suspended. At the Close of Business on that same Business Day, after the notification to the Clearing Members of the Retained Amounts, if applicable, the Corporation shall notify each Clearing Member of the terminable Open Positions allocated to it and the termination value of such Open Positions (the "Tear-Up Value") as determined in accordance with this Section A-1008, and each Clearing Member will be prompted to confirm or decline, to the Corporation, within the time period specified in the notice, the Voluntary Contract Tear-Up for each of the terminable Open Positions allocated to it by the Corporation. The Corporation shall then automatically terminate all the Open Positions which a Clearing Member has consented to terminate.

4) Tear-Up Value Determination

- a) In respect of each Future Open Position, the Corporation shall determine the Tear-Up Value of each terminable Open Position using the last Settlement Price reported by the Exchange on the same Business Day, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall fix the last Settlement Price in accordance with the best information available as to market price.
- b) In respect each Option Open Position, the Corporation shall determine the Tear-Up Value of each terminable Open Position using the Option Price reported by the Exchange, or the last OTCI Option Price, as the case may be, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall fix such closing price in accordance with the best information available as to market price.
- c) In respect of Fixed Income Transactions, the Corporation shall determine the Tear-Up Value in accordance with the usual pricing mechanism used to calculate the Net Variation Margin Requirement in accordance with Rule D-6. The Corporation shall terminate any other outstanding payment or transfer obligations in respect of all the Fixed Income Transactions which a Clearing Member has consented to terminate.

5) Tear-Up Amount and Settlement

- a) The Corporation shall then calculate for each Clearing Member, in respect of all Futures Open Positions which the Clearing Member has agreed to terminate, an amount (the "Future Tear-Up Amount"), representing the aggregate net sum of Tear-Up Values that is payable by the Corporation to the Clearing Member or by the Clearing Member to the Corporation. The Future Tear-Up Amounts shall be paid no later than the First Settlement Time on the Business Day following the date the Clearing Member has agreed to the Voluntary Contract Tear-Up subject to Section A-801(2)(a).
- b) The Corporation shall then calculate for each Clearing Member, in respect of all Options Open Positions which the Clearing Member has agreed to terminate, an amount (the "Option Tear-Up Amount"), representing the aggregate net sum of Tear-Up Values that is payable by the Corporation to the Clearing Member or by the Clearing Member to the Corporation. The Option Tear-Up Amounts shall be paid no later than the First Settlement Time on the

Business Day following the date the Clearing Member has agreed to the Voluntary Contract Tear-Up subject to Section A-801(2)(a).

- c) The Corporation shall then calculate for each Clearing Member, in respect of all Fixed Income Transactions which the Clearing Member has agreed to terminate, the Clearing Member's final Variation Margin Requirement associated with the Open Positions which have been terminated. Such Variation Margin Requirement shall be required to be deposited by the usual Settlement Time for the Net Variation Margin Requirement.

SECTION A- 1009- NO LIMITED RECOURSE

Nothing in this Rule shall limit the actions that may be taken by the Corporation pursuant to Rule A-4 against a Non-Conforming Clearing Member or a suspended Clearing Member.

SECTION A- 1010- NO EVENT OF DEFAULT

~~The No action or omission of the Corporation as part of the implementation of the Recovery Process, nor any action or omission of the Corporation taken or occurring in connection with the Recovery Process during a Default Management Period in accordance with Rule A-10 and the related provisions of the Default Manual shall constitute an Event of Default. For further clarity, each Clearing Member retains its close-out rights pursuant to Section A-409 in connection with any Event of Default which is not arising in connection or as a result of the Recovery Process.~~

SECTION A-1011 NO ADJUSTMENT OF PAYMENT

Nothing in this Rule shall affect a Clearing Member's obligation to satisfy any other obligation under the Rules.

SECTION A-1012 APPLICATION OF PAYMENTS

No amount paid or deposited by a Clearing Member in connection with a Recovery Event shall be applied by the Corporation to satisfy or to compensate the Corporation for obligations other than those arising in connection with such Recovery Event.

SECTION A-1013 RECOVERY OF LOSS

- 1) Notwithstanding the remedies available to the Corporation under the ~~Rule~~Rules and to the extent that a Recovery Loss has been sustained by the Corporation, the suspended Clearing Member shall remain liable to the Corporation for the full amount of such Recovery Loss until its repayment.
- 2) After the end of the Default Management Period, if the amount of Recovery Loss Cash Payments and Retained Amounts levied on Clearing Members as part of the Recovery Process is in excess of the total amount of Recovery Loss incurred by the Corporation, the Corporation shall pay or credit an amount equal to such excess to each Clearing Member to whom the amount was charged in

proportion to the amount paid by such Clearing Member in Recovery Loss Cash Payments and Retained Amounts determined in accordance with the provisions set out in the Default Manual, so long as such Clearing Member is not itself a suspended Clearing Member.

- 3) Notwithstanding the extinguishment of the Corporation's obligation to pay the value of the Retained Amount set out in subsection A-1005(4) and the provisions of subsection A-1013(2), if, after the end of a Default Management Period, any Retained Amounts levied on a Limited Clearing Member in connection with Fixed Income Transactions that were, before submission for clearing with the Corporation, entered into by such Limited Clearing Member and a suspended Clearing Member, are in excess of the Limited Clearing Member's share of the total amount of Recovery Loss determined in accordance with the provisions set out in the Default Manual and incurred by the Corporation in connection with the suspension of such suspended Clearing Member, the Corporation shall pay or credit to such Limited Clearing Member, an amount equal to such excess so long as the Limited Clearing Member is not itself a suspended Clearing Member.
- 4) ~~2)~~ If a Recovery Loss that has been satisfied with an amount levied from a Clearing Member, including through a as part of the Recovery Loss Cash Payment, Process is subsequently recovered by the Corporation from the Clearing Member whose suspension led to the Recovery Loss, or otherwise, in whole or in part, the net amount of such recovery shall be paid or credited to the Clearing Members to whom the Recovery Loss Cash Payment amount was charged in proportion to the amount paid by them each of them in Recovery Loss Cash Payments and Retained Amounts whether or not they remain Clearing Members. If, after paying or crediting all Clearing Members for all their Recovery Loss Cash Payments and Retained Amounts a net balance remains, the Corporation shall pay or credit the Clearing Members with the net balance, in accordance with Section A-612.
- 5) ~~3)~~ Any Clearing Member that has been charged a Recovery Loss Cash Payment or Retained Amounts under Section Sections A-1005 or A-1006, shall have the right to claim from the Clearing Member whose suspension led to the charging of the Recovery Losses being charged to it and the suspended Clearing Member shall be obliged to reimburse such other Clearing Member the amount paid by the Clearing Member to the extent such amount has not already been recovered by the Corporation pursuant to Subsections A-1013(2), (3) or (4).

RULE D-6 CLEARING OF FIXED INCOME TRANSACTIONS

The Sections of this Rule D-6 are applicable only to the clearing of Fixed Income Transactions by the Corporation, to the Limited Clearing Members and to those Clearing Members who are required to make a base deposit to the Clearing Fund for Fixed Income Clearing as set out in Paragraph A-601(2)(d).

SECTION D-601 DEFINITIONS

Notwithstanding Section A-102, for the purposes of Fixed Income Clearing, the following terms are defined as follows:

“**Accrued Coupon Income**” – means with respect to a Repurchase Transaction, the Coupon Income paid by an issuer of Purchased Securities and held by a Net Buyer under Paragraph D-606(95)(b) plus the accrued interest on such Coupon Income calculated at the Repo Rate for such Repurchase Transaction for the period from and including the date such Coupon Income was paid by such issuer up to and excluding the Repurchase Date.

“**Accrued Coupon Value**” – means with respect to any Purchased Security, the proportion of the Coupon Income payable by the issuer of the relevant Security on the next Coupon Payment Date corresponding to the number of days that have elapsed since the immediately preceding Coupon Payment Date up to the applicable calculation date, ~~calculated based on a calendar year of 365 days~~.

“**Afternoon Net DVP Settlement Requirement**” – means a settlement instruction sent to the Central Securities Depository at the Afternoon Netting Cycle Timeframe netting all then Pending Settlement Requirements between a Clearing Member and the Corporation, in accordance with Paragraph D-606(47)(b).

“**Afternoon Netting Cycle Timeframe**” – means the time specified in the Operations Manual at which the Corporation nets all then Pending Settlement Requirements into Afternoon Net DVP Settlement Requirements, in accordance with Paragraph D-606(47)(b).

“**Cash Buy or Sell Trade**” – means a transaction by which a Fixed Income Clearing Member buys (Cash Buy Trade) or sells (Cash Sell Trade) an Acceptable Security.

“**Close Leg**” – means, with respect to a Repurchase Transaction, the second part of a Repurchase Transaction where either (i) a Repo Party agrees to buy back Acceptable Securities from a Reverse Repo Party at a Repurchase Price to be paid by the Repo Party to the Reverse Repo Party, or (ii) a Reverse Repo Party agrees to sell back Acceptable Securities to a Repo Party at a Repurchase Price to be paid to the Reverse Repo Party by the Repo Party.

“**CORRA Rate**” – means the compounded daily Canadian Overnight Repo Rate Average, as determined by the appointed CORRA benchmark administrator, currently Thomson Reuters.

“**Coupon Income**” – means the interest amount payable to the holder of a Security by its issuer on a Coupon Payment Date.

“**Coupon Payment Date**” – means a date on which the issuer of a Security pays Coupon Income to the holder of the Security.

~~“**Economic Terms**” – means the transactional details of a Fixed Income Transaction as set out in Subsection D-603(1).~~

“**End of Day DVP Settlement Time**” – means the time specified in the Operations Manual at which the Fixed Income Clearing Member must have satisfied all its Afternoon Net DVP Settlement Requirements and any Gross Delivery Requirements and Gross Payment Against Delivery Requirements resulting from Same Day Transactions submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, in accordance with Paragraph D-606(17)(c).

~~“**Economic Terms**” – means the transactional details of a Fixed Income Transaction as set out in Subsection D-603(1).~~

“**Equivalent Security**” – means an Acceptable Security that is equivalent to the Purchased Security in that it is of the same issuer, part of the same issue, and of an identical type, nominal value, description and (except where otherwise specified by the Corporation) amount as the Purchased Security.

“**Expected Novation Date**” – means the date on which a Fixed Income Transaction is submitted by the Fixed Income Clearing Members and on which they wish that the Corporation will accept it for clearance.

“**Fixed Income Clearing**” – means the provision of clearing services by the Corporation of Fixed Income Transactions.

“**Fixed Income Clearing Member**” – means an applicant which meets the criteria set out in Section A – 1A01 and Subsection A-301(34) and is approved by the Corporation for Fixed Income Clearing, or a Limited Clearing Member.

“**Fixed Income Transaction(s)**” – means Repurchase Transaction(s) and/or Cash Buy or Sell Trade(s).

“**Floating Price Rate**” – means, in respect of a Repurchase Transaction, the overnight index swap (“OIS”) rate for a term that is the same as the Term of such Repurchase Transaction (and if an OIS rate is not available for the applicable Term, such Floating Price Rate will be determined by interpolating the

OIS rate between the two terms that are closest to the applicable Term), as determined by the Corporation in accordance with its customary practices for purposes of calculating mark-to-market payments and margin payments. For the purposes of this definition, “Term” shall mean the remaining number of days between the applicable calculation date and the Repurchase Date of the relevant Repurchase Transaction.

“**Forward Settlement Transaction**” – means a Cash Buy or Sell Trade or an Open Leg of a Repurchase Transaction, in each case, having a Purchase Date later than the Novation Date, or a Close Leg of a Repurchase Transaction.

“**Market Value**” – means, with respect to any Purchased Securities as of any time on any date, the current price as of such date for the relevant Purchased Securities as determined by the Corporation on the basis of then available price source quotations or alternative market information, as determined by the Corporation plus the Accrued Coupon Value in respect of such Purchased Securities to the extent not included in such current price.

“**Morning Net DVP Settlement Timeframe**” – means the timeframe specified in the Operations Manual during which ~~the Fixed Income Clearing Member there~~ must ~~have~~be available funds in ~~its cash account at the Central~~the designated CDS Funds Account and CDS Securities Depository Account of the Clearing Member or of its Settlement Agent to settle the lesser of (i) its Morning Net Payment Against Delivery Requirement, and (ii) the amount of the CDCC Daylight Credit Facility, in accordance with Paragraph D-606(~~H7~~)(c).

“**Morning Net Payment Against Delivery Requirement**” – means a settlement instruction sent to the Central Securities Depository at the Morning Netting Cycle Timeframe netting all then Pending Payment Against Delivery Requirements between a Clearing Member and the Corporation, in accordance with Paragraph D-606(~~H7~~)(a).

“**Morning Netting Cycle Timeframe**” – means the timeframe specified in the Operations Manual during which the Corporation nets all then Pending Payment Against Delivery Requirements into Morning Net Payment Against Delivery Requirements, in accordance with Paragraph D-606(~~H7~~)(a).

~~“MTM Repo Rate Payment” – represents a mark to market payment made in respect of a change in the current Floating Price Rate and means, in respect of a Repurchase Transaction, an amount that is payable to the Corporation by a Fixed Income Clearing Member that is a party to such Repurchase Transaction, or by the Corporation to a Fixed Income Clearing Member that is a party to such Repurchase Transaction, by comparing the Floating Price Rate to the Repo Rate.~~

“**N-Day Term Repurchase Transaction**” – means a Repurchase Transaction with a term longer than one Business Day.

“**Net Buyer**” – means a Fixed Income Clearing Member whose aggregate net sum of Net Funds Transfer Requirement, Net Funds Reversal Requirement, any applicable Postponed Payment Obligation(s) and any other payment obligation against delivery of an Acceptable Security due by such Fixed Income

Clearing Member to the Corporation on a given Business Day are greater than the aggregate net sum of Net Funds Transfer Requirement, Net Funds Reversal Requirement, any applicable Postponed Payment Obligation(s) and any other payment obligation against delivery of an Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Business Day, as determined by the Corporation pursuant to Paragraph A-801(2)(c).

“**Net Delivery Obligation**” – means, in respect of a Fixed Income Clearing ~~member~~Member, the quantity of a given Acceptable Security which is the aggregate net quantity of any Net Securities Transfer Requirement deliverable by or to such Fixed Income Clearing Member to or by the Corporation and any Net Securities Reversal Requirement deliverable by or to such Fixed Income Clearing Member to or by the Corporation, and any Rolling Delivery Obligation deliverable by or to such Fixed Income Clearing Member to or by the Corporation, as the case may be, with respect to such Acceptable Security, on a given Business Day, calculated in accordance with Subsection D-606(3).

~~“Net Funds Transfer Requirement” – the amount which is the aggregate net sum of Purchase Prices payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(4).~~

“**Net Funds Reversal Requirement**” – means the amount which is the aggregate net sum of Repurchase Prices payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(2).

~~“Net MTM Repo Rate Payment” – means, on any day the amount which is the aggregate net sum of all MTM Repo Rate Payments payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(5).~~

~~“Net MTM Reversal Requirement” – means, on any day, the previous Business Day’s Net MTM Repo Rate Payment made by the Fixed Income Clearing Member to the Corporation or by the Corporation to the Fixed Income Clearing Member, as the case may be, to be returned in accordance with Subsection D-606(6).~~“**Net OCF MTM Payment**” – means, on any day, **Funds Transfer Requirement** – means the amount which is the aggregate net sum of ~~all OCF MTM Payments~~Purchase Prices payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(71).

“**Net Payment Obligation**” – means, in respect of a Fixed Income Clearing Member, the amount which is the aggregate net sum of any Net Funds Transfer Requirement payable by or to such Fixed Income Clearing Member to or by the Corporation and any Net Funds Reversal Requirement payable by or to such Fixed Income Clearing Member to or by the Corporation, and any Postponed Payment Obligation due and payable by or to such Fixed Income Clearing Member to or by the Corporation, as the case may be, on a given Business Day, calculated in accordance with Subsection D-606(3).

“Net Price Valuation Requirement” – means, on any Business Day, the amount which is the aggregate net sum of all Price Valuation Requirements owed by a Fixed Income Clearing Member to the

Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(2).

“Net Repo Rate Requirement” – means, on any Business Day, the amount which is the aggregate net sum of all Repo Rate Requirements owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(1).

“Net Securities Reversal Requirement” – means the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(2).

“Net Securities Transfer Requirement” – means the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(1).

“Net Seller” – means a Fixed Income Clearing Member whose aggregate net quantity of Net Securities Transfer Requirement, Net Securities Reversal Requirement, any applicable Rolling Delivery Obligation(s) and any other delivery obligation in respect of a given Acceptable Security due by such Fixed Income Clearing Member to the Corporation on a given Business Day are greater than the aggregate net quantity of Net Securities Transfer Requirement, Net Securities Reversal Requirement, any applicable Rolling Delivery Obligation(s) and any other delivery obligation in respect of a given Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Business Day, as determined by the Corporation pursuant to Paragraph A-801(2)(d).

~~“Net Securities Transfer Requirement” – the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(1).~~ Variation Margin Requirement”- means, on any Business Day, the amount which is the aggregate net sum of all Net Repo Rate Requirements and all Net Price Valuation Requirements owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(3).

~~“Net Securities Reversal Requirement” – the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(2).~~

“Novation Date” – means the date on which a Fixed Income Transaction is accepted by the Corporation for clearance subject to conditions set forth herein, provided that (i) for a Forward Settlement Transaction, if the Expected Novation Date is not a Business Day or the Fixed Income Transaction is submitted after the Netting Cut-Off Time on that Business Day, the Novation Date shall be deemed to be the immediately following Business Day; and (ii) for a Same Day Transaction, if the Expected Novation Date is not a Business Day or the Same Day Transaction is submitted after the Submission Cut-Off Time on a date that is a Business Day, the Corporation will not accept the Same Day Transaction for clearing.

~~“OCF MTM Payment” represents an opportunity cost of funds payment in respect of an MTM Repo Rate Payment made and means, with respect to any Repurchase Transaction on any calculation date, an amount equal to one day’s interest, calculated by the applying the CORRA Rate determined on such calculation date (provided if such calculation date is not a Business Day, on the immediately following Business Day) to such MTM Repo Rate Payment on a 365 day basis, provided that if such Fixed Income Clearing Member had to pay an MTM Repo Rate Payment, the interest amount calculated in respect of such MTM Repo Rate Payment shall be payable by the Corporation to the Fixed Income Clearing Member, and if such Fixed Income Clearing Member received an MTM Repo Rate Payment, the interest amount calculated in respect of such MTM Repo Rate Payment shall be payable by the Fixed Income Clearing Member to the Corporation.~~ **“Open Leg”** – means, with respect to a Repurchase Transaction, the first part of a Repurchase Transaction where either (i) a Repo Party agrees to sell Acceptable Securities to a Reverse Repo Party at a Purchase Price to be paid by the Reverse Repo Party to the Repo Party, or (ii) a Reverse Repo Party agrees to buy Acceptable Securities from a Repo Party at a Purchase Price to be paid to the Repo Party by the Reverse Repo Party.

“OTCI Clearing Platform” – means the dedicated trade input screens for clearing and settlement of OTCI operated and/or used by the Corporation.

“Pending Delivery Requirements” – means, in respect of a given Business Day, any Gross Delivery Requirements and/or any Net Delivery Requirements which are due on such Business Day and have not yet settled at the Afternoon Netting Cycle Timeframe.

“Pending Payment Against Delivery Requirements” – means, in respect of a given Business Day, any Net Payment Against Delivery ~~Requirement~~Requirements and/or any Gross Payment Against Delivery Requirements which are due on such Business Day and have not yet settled at the Morning Netting Cycle Timeframe, or any Morning Net Payment Against Delivery ~~Requirement~~Requirements and/or Gross Payment Against Delivery Requirements which are due on such Business Day and have not yet settled at the Afternoon Netting Cycle Timeframe, as the case may be.

“Pending Settlement Requirements” – means, collectively, any Pending Delivery Requirements and/or any Pending Payment Against Delivery Requirements at the Afternoon Netting Cycle Timeframe.

“Price Differential” – means, with respect to any Repurchase Transaction, an amount payable by the Repo Party equal to an amount obtained by application of the Repo Rate for such Repurchase Transaction to the Purchase Price for such Repurchase Transaction (on a 365 day basis), for the actual number of days of the term of such Repurchase Transaction.

~~“Purchase Date”~~**Price Valuation Requirement”** – means, 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 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.

“Purchase Date” – means, with respect to any Repurchase Transaction, the date on which Purchased Securities are sold by the Repo Party to the Corporation and by the Corporation to the Reverse Repo Party; and with respect to any Cash Buy or Sell Trade, the date on which it settles, provided that if such date is not a Business Day, the Purchase Date shall be the immediately following Business Day.

“Purchase Price” – means, with respect to any Fixed Income Transaction, the amount at which the Purchased Securities are sold or to be sold by the Seller to the Corporation and by the Corporation to the Buyer.

“Purchased Securities” – means, with respect to any Fixed Income Transaction, the Acceptable Securities sold or to be sold by the Seller to the Corporation and by the Corporation to the Buyer.

“Quantity of Purchased Securities” – means, with respect to a Fixed Income Transaction, an amount equal to the Purchase Price for such Fixed Income Transaction on the Novation Date of such Fixed Income Transaction divided by the Market Value per dollar of the Specified Denomination of the relevant Purchased Securities, rounded up to the nearest whole number.

“Repo Party” or “Seller” – means, in respect of a Fixed Income Clearing Member, such Fixed Income Clearing Member who is the seller under a Fixed Income Transaction and who becomes the seller to the Corporation upon acceptance of the Fixed Income Transaction by the Corporation, and in respect of the Corporation, the Corporation when it has assumed the position of the seller under a Fixed Income Transaction pursuant to Section D-605. The term “Repo Party” will be used when referring specifically to a Repurchase Transaction, whereas the term “Seller” will be used when referring to a Cash Buy or Sell Trade or to Fixed Income Transactions generally.

“Repo Rate” – means, with respect to any Repurchase Transaction, the per annum fixed pricing rate agreed by the Repo Party and the Reverse Repo Party.

“Repo Rate Requirement” – represents a change in the current Floating Price Rate and means, in respect of a Repurchase Transaction, an amount 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.

“Repo Style” – means, in respect of Coupon Income payments of any Repurchase Transaction, either the US convention that applies as set forth in Paragraph D-606(95)(a), or the Canadian convention that applies as set forth in Paragraph D-606(95)(b).

“Repurchase Date” – means, with respect to any Repurchase Transaction, a day on which Equivalent Securities are to be sold by a Reverse Repo Party to the Corporation and by the Corporation to a Repo Party, in accordance with Section D-606; provided that if such date is not a Business Day, the Repurchase Date shall be the immediately following Business Day.

“**Repurchase Price**” – means, with respect to any Repurchase Transaction, the sum of the Purchase Price and the Price Differential.

“**Repurchase Transaction**” – means A) a trade originally entered into between two Fixed Income Clearing Members which is submitted to the Corporation for clearing in which either (i) a Repo Party agrees to sell Acceptable Securities to a Reverse Repo Party at a Purchase Price to be paid by the Reverse Repo Party to the Repo Party, with a simultaneous agreement by the Repo Party to purchase Equivalent Securities from the Reverse Repo Party at a future date at a Repurchase Price to be paid to the Reverse Repo Party by the Repo Party, or (ii) a Reverse Repo Party agrees to buy Acceptable Securities from a Repo Party at a Purchase Price to be paid to the Repo Party by the Reverse Repo Party, with a simultaneous agreement by the Reverse Repo Party to sell Equivalent Securities to the Repo Party at a future date at a Repurchase Price to be paid by the Repo Party to the Reverse Repo Party, and, as appropriate in the circumstances, B) the Transaction resulting from the novation of the trade described in A) pursuant to Section D-605 of the Rules.

“**Reverse Repo Party**” or “**Buyer**” – means, in respect of a Fixed Income Clearing Member, such Fixed Income Clearing Member who is the buyer of a Fixed Income Transaction and who becomes the buyer to the Corporation upon acceptance of the Fixed Income Transaction by the Corporation, and in respect of the Corporation, the Corporation when it has assumed the position of the buyer under a Fixed Income Transaction pursuant to Section D-605. The term “Reverse Repo Party” will be used when referring specifically to a Repurchase Transaction, whereas the term “Buyer” will be used when referring to a Cash Buy or Sell Trade or to Fixed Income Transactions generally.

~~“**Specified Denomination**” – with respect to an Acceptable Security, the denomination in which it was issued.~~

“**Same Day Transaction**” – means a Cash Buy or Sell Trade or an Open Leg of a Repurchase Transaction, in each case, having the same Novation Date and Purchase Date.

~~“**Specified Denomination**” – means, with respect to an Acceptable Security, the denomination in which it was issued.~~

“**Submission Cut-Off Time**” – means a time specified in the Operations Manual as the deadline on any Business Day for submitting Same-Day Transactions for clearance to the Corporation.

“**Variation Margin Requirement**” - means, in respect of a Fixed Income Transaction, an amount which is the aggregate net sum of the Repo Rate Requirement and the Price Valuation Requirement owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member.

Any capitalized term used in this Rule D-6 that is not defined in this Section D-601 shall have the meaning assigned to it in Section A-102.

SECTION D-602 PARAMOUNTCY

In the event of any inconsistency between the provisions of this Rule D-6 and the other provisions of the Rules, the provisions of this Rule D-6 will prevail.

SECTION D-603 ESSENTIAL TERMS OF FIXED INCOME TRANSACTIONS

- 1) In addition to and not in lieu of the Acceptance Criteria set forth in Section D-104, the following Economic Terms of a Fixed Income Transaction shall be required to be submitted to the Corporation:

Seller

Buyer

Purchased Securities (CUSIP/ISIN)

Quantity of Purchased Securities

Expected Novation Date

Purchase Price

Purchase Date

Repurchase Date (as applicable)

Repo Rate (as applicable)

Repo Style (indicate whether it is a US or Canadian style Repurchase Transaction, as applicable).

- 2) Subject to conditions set forth herein, once a Trade Confirmation has been issued by the Corporation, the Corporation shall assume the position of the Seller and become a seller to Buyer and shall assume the position of the Buyer and become the buyer to Seller under all Fixed Income Transactions in each case, as principal to such Fixed Income Transactions, as a result of the novation process set forth in Subsection D-605(3).

- 3) On the Purchase Date of each Fixed Income Transaction, the Seller shall transfer the Purchased Securities on such Purchase Date against payment of the Purchase Price by the Buyer. On the Repurchase Date of each Repurchase Transaction, the Reverse Repo Party shall transfer the Equivalent Securities against payment of the Repurchase Price by the Repo Party. The transfer and payment obligations referred to in this provision shall be subject to netting and settlement processes set forth in Section D-606.
- 4) Notwithstanding the use of expressions such as “Repurchase Date”, “Repurchase Price” and “margin” or any other Rule, all right, title and interest (free from liens, claims, charges, encumbrances) in and to the Purchased Securities and Equivalent Securities and money transferred or paid under these Rules shall pass to the party receiving such Purchased Securities, Equivalent Securities and money upon transfer or payment, and no security interest or hypothec is created in the Purchased Securities and Equivalent Securities and money transferred or paid. Each Fixed Income Clearing Member shall execute and deliver all necessary documents and take all necessary steps to procure that all right, title and interest in any Purchased Securities and in any Equivalent Securities shall pass to the party to which transfer is being made upon transfer of the same in accordance with these Rules, free from all liens, claims, charges and encumbrances, and such transfer will not violate any agreement to which such Fixed Income Clearing Member may be a party or by which such Fixed Income Clearing Member’s property may be bound.
- 5) For purposes of the *Interest Act* (Canada), if any rate of interest payable under any Fixed Income Transaction is expressed to be calculated on the basis of a period less than a full calendar year, the yearly rate of interest to which such rate is equivalent is the product obtained by multiplying such rate by a fraction, the numerator of which is the actual number of days in the calendar year and the denominator of which is the number of days comprising such other basis.

SECTION D-604 TRADE RECEPTION AND VALIDATION

- 1) Any Repurchase Transaction or Cash Buy or Sell Trade must be submitted for clearing to the Corporation through an Acceptable Marketplace (whether bilateral or multilateral) or through the CDS trade matching facility. The Corporation may require evidence as it deems reasonably acceptable that a Fixed Income Clearing Member is a duly authorized participant of any multilateral Acceptable Marketplace. The Corporation shall not bear any responsibility or liability for any error, delay, misconduct, negligence, or any other act or omission, by the multilateral Acceptable Marketplace or the CDS trade matching facility, as applicable.
- 2) Once a Repurchase Transaction or Cash Buy or Sell Trade is received by the Corporation, a variety of validations will occur in accordance with the OTCI Clearing Platform procedure. These validations are designed to ensure that all Economic Terms match and all Acceptance Criteria set forth in Section D-104 are satisfied, and the Corporation does not accept any Repurchase Transaction or Cash Buy or Sell Trade bearing attributes that are determined by the Corporation as not acceptable for clearing. The Corporation will not accept a Repurchase Transaction with a Repurchase Date later than the maturity date of the applicable Purchased Securities.

- 3) Any Same Day Transaction submitted after the Submission Cut-Off Time specified in the Operations Manual shall not be accepted by the Corporation for clearance and may be submitted by Fixed Income Clearing Members to the Central Securities Depository independently without being novated to the Corporation. Any Forward Settlement Transaction submitted after the Netting Cut-Off Time specified in the Operations Manual shall be deemed received by the Corporation for clearance on the following Business Day.
- 4) If the Acceptable Marketplace used for submitting a Repurchase Transaction or Cash Buy or Sell Trade for clearing is a multilateral facility, each Fixed Income Clearing Member transacting as Buyer or Seller shall be responsible for timely affirming the Fixed Income Transactions on the OTCI Clearing Platform, as directed by the Corporation.

SECTION D-605 CONFIRMATION AND NOVATION

- 1) Once all validations have occurred and the Fixed Income Transactions are either (i) duly affirmed by the Fixed Income Clearing Members on the OTCI Clearing Platform or (ii) received for clearing by the Corporation from the CDS trade matching facility, the Corporation shall issue a Trade Confirmation with respect to each individual Fixed Income Transaction and send it to the transacting Fixed Income Clearing Members. A Fixed Income Clearing Member shall be bound by the terms of a Fixed Income Transaction for which the Corporation has issued a Trade Confirmation in its name. The Corporation shall not bear any responsibility or liability for any error, delay, misconduct, negligence or other act or omission by the CDS trade matching facility.
- 2) The Corporation shall reject the Repurchase Transaction or Cash Buy or Sell Trade if (i) Economic Terms listed in Section D-603 are determined by the Corporation in its sole discretion as incorrect or incomplete when the Repurchase Transaction or Cash Buy or Sell Trade is submitted to the Corporation by or on behalf of a Fixed Income Clearing Member, or (ii) the Economic Terms submitted by or on behalf of the two Fixed Income Clearing Members that are parties to a Repurchase Transaction or Cash Buy or Sell Trade do not match, or (iii) any other Acceptance Criteria set forth in Section D-104 is not met. Such Repurchase Transaction or Cash Buy or Sell Trade will remain in effect solely between the persons party thereto in accordance with any terms agreed between them, and the Corporation shall have no further obligation or liability with respect to such Repurchase Transaction or Cash Buy or Sell Trade.
- 3) Upon the issuance of a Trade Confirmation by the Corporation under Subsection D-605(1) and notwithstanding the fact that the transacting Fixed Income Clearing Members may not have received such Trade Confirmation, the Repurchase Transaction or Cash Buy or Sell Trade shall be automatically novated to the Corporation, such that the original Repurchase Transaction 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 the Corporation where the Corporation is substituted as the Buyer, and one between the Buyer and the Corporation where the Corporation is substituted as the Seller. In respect of the Economic Terms, the Fixed Income Clearing Member acting as a Seller or a Buyer under such original Repurchase Transaction or Cash Buy or Sell Trade shall have the same rights against, and owe the same obligations to, the Corporation under such Repurchase Transaction or such Cash Buy or Sell Trade to which it is a

party as it had and owed in respect of its counterparty under the original Repurchase Transaction or Cash Buy or Sell Trade, as the case may be. For purposes hereof, a reference to the “same” rights or obligations is a reference to rights or obligations falling due for exercise or performance after the time at which a Trade Confirmation is issued in respect of a Fixed Income Transaction, and which are the same in nature and character as the rights or obligations arising from the Economic Terms of the original Repurchase Transaction or Cash Buy or Sell Trade (it being assumed, for this purpose, that such Repurchase Transaction or Cash Buy or Sell Trade was a legal, valid, binding and enforceable obligation of the parties thereto and that the Economic Terms thereof were as presented to the Corporation for clearing), notwithstanding the substitution in the person entitled to them or obliged to perform them and subject to any changes thereto as a result of the operation of these Rules.

- 4) Fixed Income Clearing by the Corporation is subject to, and contingent upon, the occurrence of the novation described in Subsection [D-605\(3\)](#) above. Effective as at the time of such novation, Fixed Income Clearing Members that were parties to the original Repurchase Transaction or Cash Buy or Sell Trade shall be released and discharged from their respective obligations to each other and the resulting Fixed Income Transactions shall be governed by these Rules.
- 5) If a Repurchase Transaction or a Cash Buy or Sell Trade is revoked, voided or otherwise declared invalid for any reason after the Economic Terms of it have been accepted by the Corporation for clearing, that revocation, avoidance or invalidity shall not affect any Fixed Income Transaction arising out of this Section D-605.

SECTION D-606 TRANSFERS AND PAYMENTS

- 4) In respect of any Forward Settlement Transaction, excluding a Close Leg of a Repurchase Transaction, at the applicable Netting Cut Off Time on a Purchase Date, the Corporation shall calculate with respect to each Fixed Income Clearing Member (i) the Net Securities Transfer Requirement with respect to each Acceptable Security by aggregating the Purchased Securities of such Acceptable Security due by each Fixed Income Clearing Member on such Purchase Date and netting them against the Purchased Securities of such Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Purchase Date, and (ii) the Net Funds Transfer ~~Requirements~~[Requirement](#) by aggregating all Purchase Prices due by each Fixed Income Clearing Member to the Corporation and netting them against all Purchase Prices due by the Corporation to such Fixed Income Clearing Member across all its Fixed Income Transactions.
- 1) In respect of any Close Leg of a Repurchase Transaction, at the applicable Netting Cut Off Time on each Repurchase Date, the Corporation shall calculate with respect to each Fixed Income Clearing Member (i) the Net Securities Reversal ~~Requirements~~[Requirement](#) with respect to each Acceptable Security by aggregating the Equivalent Securities of such Acceptable Security due by each Fixed Income Clearing Member on such Repurchase Date and netting them against the Equivalent Securities of such Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Repurchase Date; and (ii) the Net Funds Reversal ~~Requirements~~[Requirement](#) by aggregating all Repurchase Prices less all Accrued Coupon Income deductible pursuant to Paragraph D-606([95](#))(b), due by each Fixed Income Clearing Member to the

Corporation and netting them against all Repurchase Prices less all Accrued Coupon Income deductible pursuant to Paragraph D-606(95)(b), due by the Corporation to such Fixed Income Clearing Member across all of its Repurchase Transactions.

- 2) At the applicable Netting Cut Off Time on each Business Day, for each Fixed Income Clearing Member, the Corporation shall calculate (i) the Net Delivery Obligation with respect to an Acceptable Security by aggregating and netting the Net Securities Transfer Requirement, the Net Securities Reversal Requirement, and any Rolling Delivery Obligation, as applicable, owing to or by the Fixed Income Clearing Member with respect to such Acceptable Security on such Business Day (which Net Delivery Obligation shall be subject to further netting pursuant to Paragraph A-801(2)(d) and the other provisions of Rule A-8 to determine the Net Delivery Requirement); and (ii) the Net Payment Obligation by aggregating and netting the Net Funds Transfer Requirement, the Net Funds Reversal Requirement, any Coupon Income payable pursuant to Paragraph D-606(95)(a), and any Postponed Payment Obligation, as applicable, owing to or by the Fixed Income Clearing Member, provided, however, these amounts shall not be netted against any other payment owing to or by a Fixed Income Clearing Member other than as prescribed under Paragraph A-801(2)(c) and the other provisions of Rule A-8 to determine the Net Payment Against Delivery Requirement.

- 3) At the applicable Netting Cut Off Time on each Business Day, the Net Delivery Obligations and the Net Payment Obligations will be netted against all other payment and delivery obligations with respect to Acceptable Securities to determine the Net Delivery Requirements and the Net Payment Against Delivery Requirements pursuant to Paragraphs (c) and (d) of Subsection A-801(2), and communicated by the Corporation to Fixed Income Clearing Members that are Net Sellers with respect to a given Acceptable Security and/or Net Buyers. ~~Each~~ Fixed Income Clearing ~~Members~~ ~~are~~ Member is responsible for ensuring that there are sufficient funds and sufficient Equivalent Securities in respect of each Acceptable ~~Securities in their cash and securities accounts at CDS to satisfy their~~ Security in the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent to satisfy its Net Delivery Requirement and/or Net Payment Against Delivery Requirement, as applicable, as they become due in accordance with the rules of the Central Securities Depository and subject to Subsection D-606(117).

- 4) ~~At the end of each Business Day, the Corporation shall calculate the Net MTM Repo Rate Payment for each Fixed Income Clearing Member, which shall be due and payable at Settlement Time, by aggregating all MTM Repo Rate Payments due by each Fixed Income Clearing Member to the Corporation and netting them against all MTM Repo Rate Payments due by the Corporation to such Fixed Income Clearing Member across all its Repurchase Transactions provided that a MTM Repo Rate Payment shall not be calculated in respect of a Repurchase Transaction where such Business Day is the Repurchase Date of such Repurchase Transaction.~~

- 6) ~~At the end of each Business Day, the Net MTM Reversal Requirement will be due and payable at Settlement Time to a Fixed Income Clearing Member by the Corporation if the previous Business Day's Net MTM Repo Rate Payment was paid by the Fixed Income Clearing Member to the Corporation, and will be paid by such Fixed Income Clearing Member to the Corporation if the previous Business Day's Net MTM Repo Rate Payment was paid to the Fixed Income Clearing Member by the Corporation; provided that this Subsection D-606(6) shall not apply if such Fixed Income Clearing Member is a Non-Conforming Member.~~

7)

- a) ~~The payment of MTM Repo Rate Payments on a daily basis potentially distorts the pricing mechanisms for a Repurchase Transaction and in order to minimize the impact of such MTM Repo Rate Payments, the Corporation will, for each Fixed Income Clearing Member that is a party to a Repurchase Transaction, either charge interest on such MTM Repo Rate Payments received or pay interest on such MTM Repo Rate Payments paid, as determined pursuant to Paragraph D-606(7)(b).~~
- b) ~~At the end of each Business Day, an amount in respect of the Net OCF MTM Payment will be calculated, which shall be due and payable at Settlement Time (i) to a Fixed Income Clearing Member by the Corporation if it is determined on such day that a Net MTM Reversal Requirement is payable to such Fixed Income Clearing Member by the Corporation, or (ii) by a Fixed Income Clearing Member to the Corporation if it is determined on such day that a Net MTM Reversal Requirement is payable by such Fixed Income Clearing Member to the Corporation. The amount of such Net OCF MTM Payment shall be determined by aggregating all OCF MTM Payments due by each Fixed Income Clearing Member to the Corporation in respect of its Repurchase Transactions and netting them against all OCF MTM Payments due by the Corporation to such Fixed Income Clearing Member in respect of its Repurchase Transactions.~~

8) ~~Notwithstanding anything to the contrary herein, all payments to be made hereunder to a Fixed Income Clearing Member or to the Corporation in respect of a Net MTM Repo Rate Payment, a Net OCF MTM Payment, and a Net MTM Reversal Requirement which are due and payable at the same Settlement Time, shall be aggregated and netted against each other such that only one net payment shall be made either to a Fixed Income Clearing Member by the Corporation or to the Corporation by a Fixed Income Clearing Member in respect of such amounts, as may be further netted in accordance with, and otherwise subject to, Paragraph A-801(2)(a) and the other provisions of Rule A-8.~~

9)

- a) In respect of any Repurchase Transaction where the parties have agreed, as one of its Economic Terms, that Coupon Income will be paid to a Seller as it is received, known as a US style Repurchase Transaction, any Coupon Income paid by an issuer of Purchased Securities that has been transferred by a Net Seller to the Corporation and by the Corporation to a Net Buyer shall be paid on the Coupon Payment Date by the Net Buyer to the Corporation and by the Corporation to the Net Seller.
- b) In respect of any Repurchase Transaction where the parties have agreed, as one of its Economic Terms, that Coupon Income will not be paid to a Seller as it is received, known as a Canadian style Repurchase Transaction, any Coupon Income paid by an issuer of Purchased Securities that has been transferred by a Net Seller to the Corporation, and by the Corporation to a Net Buyer, shall be held by the Net Buyer until the applicable Repurchase Date. On such Repurchase Date, the Repurchase Price otherwise payable by a Net Seller to the Corporation and by the Corporation to a Net Buyer in respect of such Repurchase Transaction shall be reduced by the Accrued Coupon Income.

1) ~~10)~~ In respect of any Same Day Transaction, payment of the Purchase Price by the Buyer and delivery of the Quantity of Purchased Securities by the Seller will be settled on a gross basis immediately following the novation of each Same Day Transaction under Subsection D-605(3). Each Fixed Income Clearing ~~Members~~Member who ~~submit~~submits Same Day Transactions ~~are~~is responsible for ensuring that there are sufficient funds and sufficient Acceptable Securities in ~~their cash and securities accounts at the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent~~ to satisfy ~~their~~its Gross Delivery Requirement and/or Gross Payment Against Delivery Requirement, as applicable, as they become due in accordance with the rules of the Central Securities Depository and subject to Subsection D-606~~(117)~~.

2) ~~11)~~

- a) Notwithstanding the foregoing, at the Morning Netting Cycle Timeframe, the Corporation shall net any Pending Payment Against Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Payment Against Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member to determine the Morning Net Payment Against Delivery Requirement payable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(3).
- b) Notwithstanding the foregoing, at the Afternoon Netting Cycle Timeframe, the Corporation shall net any Pending Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member in respect of the same Acceptable Security to determine the Afternoon Net DVP Settlement Requirement deliverable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(4)(i), and/or net any Pending Payment Against Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Payment Against Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member to determine the Afternoon Net DVP Settlement Requirement payable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(4)(ii).
- c) Each Fixed Income Clearing Member is responsible for ensuring that there are sufficient funds in ~~its cash account at the Central Securities Depository~~the designated CDS Funds Account of the Clearing Member or its Settlement Agent, 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, and that there are sufficient funds and sufficient Acceptable Securities in ~~its cash and securities accounts at the Central Securities Depository~~the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent, to settle its Afternoon Net DVP Settlement Requirements and any Gross Delivery Requirements and Gross Payment Against Delivery Requirements resulting from Same Day Transactions submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, by the End of Day DVP Settlement Time, and otherwise comply with the rules of the Central Securities Depository.

SECTION D-607 VARIATION MARGIN REQUIREMENTS REQUIREMENT

- 1) ~~At the end of each Business Day, the Corporation shall calculate, in accordance with the methodology set forth in the Risk Manual, in~~ respect of all Repurchase Transactions to which a Fixed Income Clearing Member is a party, ~~on each day that is a Business Day, the Corporation shall determine whether, due to changes in the Market Value of the Purchased Securities, additional Margin~~the Net Repo Rate Requirement that is required to be ~~delivered~~transferred by such Fixed Income Clearing Member ~~or by the Corporation, by~~ Settlement Time on ~~such Business Day~~the following Business Day, by aggregating all Repo Rate Requirements due by each Fixed Income Clearing Member to the Corporation and netting them against all Repo Rate Requirements due by the Corporation to such Fixed Income Clearing Member across all its Repurchase Transactions, provided that a Repo Rate Requirement in respect of a Repurchase Transaction shall not be calculated where the Business Day is the Repurchase Date of such Repurchase Transaction.

- 2) ~~At the end of each Business Day, the Corporation shall calculate, in accordance with the methodology set forth in the Risk Manual, in~~ respect of all ~~Repurchase~~Fixed Income Transactions to which a Fixed Income Clearing Member is a party, ~~on each day that is a Business Day, the Corporation shall determine whether, due to changes in the Floating Price Rate and taking into account rate volatility and expected liquidation periods as determined in the Corporation's sole discretion, additional Margin is required to be delivered~~the Net Price Valuation Requirement that is required to be transferred by such Fixed Income Clearing Member ~~or by the Corporation, by~~ the Settlement Time on ~~such Business Day~~the following Business Day, by aggregating all Price Valuation Requirements due by each Fixed Income Clearing Member to the Corporation and netting them against all Price Valuation Requirements due by the Corporation to such Fixed Income Clearing Member across all its Fixed Income Transactions, provided that a Price Valuation Requirement in respect of a Repurchase Transaction shall not be calculated where the Business Day is the Repurchase Date of such Repurchase Transaction and, that a Price Valuation Requirement in respect a Cash Buy or Sell Trade shall not be calculated where the Business Day is the Purchase Date of such Cash Buy or Sell Trade.

- 3) ~~In respect of all Cash Buy or Sell Trades to which a Fixed Income Clearing Member is a party, on each Business Day commencing on the applicable Novation Date and ending on (but excluding) the applicable Purchase Date, the Corporation shall determine whether, due to changes in the Market Value of the applicable Acceptable Security, additional Margin is required to be delivered by such Fixed Income Clearing Member by the Settlement Time on such Business Day.~~Notwithstanding anything to the contrary herein, all obligations of a Fixed Income Clearing Member or of the Corporation in respect of a Net Repo Rate Requirement and a Net Price Valuation Requirement which are required to be transferred at the same Settlement Time, shall be aggregated and netted against each other such that only one net amount in the form of eligible collateral described in the Risk Manual shall be transferred either to a Fixed Income Clearing Member by the Corporation or to the Corporation by a Fixed Income Clearing Member. The aggregate net amount shall be referred to as the "Net Variation Margin Requirement". For further clarity, a negative Net Variation Margin Requirement shall represent the amount owed by the Corporation to the Clearing Member and a positive Net Variation Margin Requirement shall represent an amount owed by a Clearing Member to the Corporation.

~~The delivery of Margin under this Section D-607 shall be subject to the netting provisions of Paragraph A-801(2)(b) and to Rule A-7 and the other provisions of Rule A-8.~~On any Business Day, if there is a decrease in a Net Variation Margin Requirement of a Fixed Income Clearing Member, the Corporation shall transfer, in accordance with and subject to the conditions set forth in Section 8 of the Operations

Manual, eligible collateral in an amount equal to the decrease and, if applicable, comprised of the same CUSIP/ISIN securities which were previously pledged by the Fixed Income Clearing Member to the Corporation for the purpose of satisfying the Net Variation Margin Requirement.

- 4) On any Business Day, if there is an increase in a Net Variation Margin Requirement of a Fixed Income Clearing Member, the Fixed Income Clearing Member shall transfer, in accordance with and subject to the conditions set forth in Section 8 of the Operations Manual, eligible collateral in an amount equal to the increase and, if applicable, comprised of the same CUSIP/ISIN securities which were previously pledged by the Corporation to the Fixed Income Clearing Member for the purpose of satisfying the Net Variation Margin Requirement.



CDCC

PROPOSED RULES

30 August 2017

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

“Acceptable Instrument Types” or **“Acceptable OTCI”** – means Over-The-Counter Instruments which are determined by the Corporation as acceptable for clearing with the Corporation.

“Acceptable Marketplace” – means a bilateral or multilateral marketplace, other than an Exchange, where buyers and sellers conclude transactions in Acceptable Instrument Types including bilateral trades between two Fixed Income Clearing Members and which meets any of the following requirements (i) in the case of a marketplace which is an alternative trading system (“ATS”), it has qualified as such and complies with the applicable requirements of National Instrument 21-101 – Marketplace Operations (“21-101”) and National Instrument 23-101 – Trading Rules (“23-101”) as determined by the Corporation, and (ii) in the case of an inter-dealer bond broker (“IDBB”), it has qualified as such and complies with applicable IROC Rules including IROC Rule 2800 and applicable requirements of 21-101 and 23-101 as determined by the Corporation, and (iii) in the case of bilateral trades between Fixed Income Clearing Members involving an SRO Clearing Member, the SRO Clearing Member complies with applicable requirements of 21-101 and 23-101 as determined by the Corporation.

“Acceptable Security” – means a Security determined by the Corporation as acceptable for purposes of clearing Fixed Income Transactions and Futures for which the deliverable security is a fixed income security.

“Acceptable Treasury Bills” – means a short-term debt instrument, having a maturity of less than one year, issued by the Government of Canada and sold at a discount.

“Acceptable Underlying Interest” – means an Underlying Interest which is determined by the Corporation as acceptable for clearing by the Corporation.

“Acceptance Criteria” – means the criteria established by the Corporation for acceptance or rejection of an OTCI in accordance with the provisions of Section D-104.

“Account Control Agreement” – means an account control agreement in form acceptable to the Corporation entered into between the Corporation, a Clearing Member and an Approved Custodian.

“Additional Deposit” – means the additional amount required of the Clearing Member in addition to the Clearing Fund deposit pursuant to Section A-606.

“Affiliate” – means an Entity that controls, is controlled by, or is under common control with the Clearing Member. Control is defined as (a) ownership, control, or holding with power to vote 20 percent or more of a class of voting securities of the Entity or Clearing Member; or (b) consolidation of the Entity or Clearing Member for financial reporting purposes.

“Afternoon Net DVP Settlement Requirement” – has the meaning attributed thereto in Section D-601.

“Afternoon Netting Cycle Timeframe” – has the meaning attributed thereto in Section D-601.

“American Option” (or “American Style Option”) – means an Option which can be exercised at any time from issuance until its Expiration Date.

“Amounts Due” – has the meaning attributed thereto in Subsection A-409(10).

“Application for Membership” – means the Application for Membership which, when completed by a Clearing Member candidate and accepted by the Corporation, forms part of the Membership Agreement together with the Rules which are incorporated by reference therein and form a part thereof, as such Application for Membership may from time to time be amended, changed, supplemented or replaced in whole or in part.

“Approved Custodian” – means an Approved Securities Intermediary approved by the Corporation to act in such capacity pursuant to Section A-224.

“Approved Depository” – means an Approved Securities Intermediary approved by the Corporation to act in such capacity pursuant to Section A-223.

“Approved Processes” – means any CDCC function for processing Transactions for clearing by the Corporation. CDCC may make available more than one Approved Process in respect of any clearing service.

“Approved Securities Intermediary” – means a financial institution approved by the Corporation in accordance with the criteria set forth in Section A-222 and, as applicable, Sections A-223 and A-224.

“Assigned Position” – means the position of the Clearing Member in any account for which such Clearing Member is the assigned Clearing Member in such account.

“At-the-Money Option” – means a call Option or a put Option with an Exercise Price that is equal to the Market Price of the Underlying Interest.

“Authorized Representative” – means a person for whom the Clearing Member has filed evidence of authority pursuant to Section A-202.

“Bank Clearing Member” – means a Clearing Member that is a bank to which the Bank Act (Canada), as amended from time to time, applies.

“Base Deposit” – means the minimum Clearing Fund deposit required of each Clearing Member pursuant to Section A-603.

“Base Initial Margin” – means a component of the Margin deposit required of each Clearing Member calculated in accordance with the Risk Manual.

“Board” – means the Board of Directors of the Corporation.

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

“By-laws” – means the By-laws of the Corporation as the same may be amended from time to time.

“**Calculation Agent**” – means the Corporation when calculating certain close-out amounts as provided in Subsection A-409(9).

“**Call Underlying Interest Deposit**” – means the deposit by an Approved Depository acting on behalf of a Clearing Member or a client thereof of the Underlying Interest of a call Option with the Corporation through a Central Securities Depository.

“**Canada Mortgage Bonds (CMB)**” – means bullet maturity bonds that are fixed rate with a semi-annual coupon issued by Canada Housing Trust and guaranteed by Canada Mortgage and Housing Corporation.

“**Capital Adequacy Return (CAR)**” – means the documents specified from time to time by the Office of the Superintendent of Financial Institutions in its guidelines relating to capital adequacy requirements applicable to banks.

“**Cash**” – means money in the lawful currency of Canada.

“**Cash Settlement Amount**” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(6).

“**Cash Settlement Amount Calculation Request**” – has the meaning attributed thereto Subsection A-409(6).

“**Cash Settlement Amount Calculation Request Date**” – has the meaning attributed thereto Subsection A-409(6).

“**Cash Settlement Payment Default**” – has the meaning attributed thereto in Subsection A-409(6).

“**Cash Settlement Payment Request**” – has the meaning attributed thereto in Subsection A-409(6).

“**CDCC Daylight Credit Facility**” – means the daylight credit facility of the Corporation, the amount of which is subject to change from time to time, with prior notice to Clearing Members.

“**CDCC Materials**” – means any material, data and information developed, created or compiled by the Corporation and provided by the Corporation to the Clearing Members in any form, and including the software, trade-marks, logos, domain names, documentation (including the Rules), Approved Processes, technical information, systems (including the clearing systems and electronic transmission systems), hardware and networks, that comprises the CDCS provided by the Corporation to the Clearing Members.

“**CDCS**” – means “Canadian Derivatives Clearing Service” and refers to the clearing and settlement system operated by CDCC, which is governed by the Rules.

“**CDS**” – means CDS Clearing and Depository Services Inc., acting as Central Securities Depository in Canada or acting in any other capacity, or any successor thereof.

“**CDS Funds Account**” – means a funds account established by a CDS participant under the CDS Participants Rules.

“**CDS Securities Account**” – means a securities account established by a CDS participant under the CDS Participants Rules.

“**CDS Participants Rules**” – mean the rules and procedures established by CDS that may from time to time be amended, changed, supplemented or replaced in whole or in part.

“**CDSX**” – means the clearing and settlement system comprising the Depository Service and the Settlement Service (each, as defined in the CDS Participants Rules) of CDS.

“**Central Securities Depository**” – means any central securities depository acceptable to the Corporation, including CDS.

“**Class Group**” – means all Options and Futures relating to the same Underlying Interest.

“**Class of Futures**” – means all Futures covering the same Underlying Interest.

“**Class of Options**” – means all Options of the same style within the same maturity category on the same Underlying Interest.

“**Clearing Fund**” – means the fund established pursuant to Rule A-6 Clearing Fund Deposits.

“**Clearing Member**” – means an applicant who has been admitted to membership in the Corporation.

“**Client**” – means those customers of a Clearing Member who are not Market Makers or trading on behalf of a broker.

“**Client Account**” – means the account or accounts required to be established for Transactions of the Clearing Members' Clients pursuant to Sections B-102, B-103, C-102, C-103, D-102 and D-103.

“**Clients Settlement Account**” – means the account established by Section A-403.

“**Close of Business**” – means the time at which the Business Day ends, as specified in the Operations Manual. The time may, at the sole discretion of the Corporation, be modified to address shortened trading days on Exchanges.

“**Closing Buy Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Short Position in the Series of Futures involved in such transaction.

“**Closing Purchase Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Short Position in the Series of Options involved in such transaction.

“**Closing Sell Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Long Position in the Series of Futures involved in such transaction.

“**Closing Writing Transaction**” – means an Exchange Transaction the result of which is to reduce or eliminate a Long Position in the Series of Options involved in such transaction.

“**Commodity**” – means any agricultural product, forest product, product of the sea, mineral, metal, hydrocarbon fuel, natural gas, electric power, currency or precious stone or other gem, and any goods, article, service, right or interest, or class thereof, whether in the original or processed state.

“**Competent Authority**” – has the meaning attributed thereto in Subsection A-409(3).

“**Confirmation Transmission**” – means the electronic transmission made by a Clearing Member to the Corporation confirming that the Expiry Report detailed in Section B-307 is accepted.

“**Consolidated Activity Report**” – means a daily report listing all Options, Futures and OTCI transactions.

“Consolidated Affiliate” – means, with respect to a Clearing Member, an Entity the financial results of which are consolidated with those of such Clearing Member for financial reporting purposes.

“Contract Specifications” – means the specifications prescribed by the relevant Exchange with respect to a particular Option or Future.

“Corporation” or **“CDCC”** – means Canadian Derivatives Clearing Corporation.

“CORRA Rate” – has the meaning attributed thereto in Section D-601.

“Corresponding CDCC Delivery Requirement” – has the meaning attributed thereto in Subsection A-804(4).

“Coupon Income” – has the meaning attributed thereto in Section D-601.

“Crown” – means any of (i) the “Federal Crown”, which means Her Majesty the Queen in right of Canada, (ii) the “BC Crown”, which means Her Majesty the Queen in right of British Columbia, (iii) the “Alberta Crown”, which means Her Majesty the Queen in right of Alberta, (iv) the “Saskatchewan Crown”, which means Her Majesty the Queen in right of Saskatchewan, (v) the “Manitoba Crown”, which means Her Majesty the Queen in right of Manitoba, (vi) the “Ontario Crown”, which means Her Majesty the Queen in right of Ontario, (vii) the “Quebec Crown”, which means Her Majesty the Queen in right of Quebec, (viii) the “NB Crown”, which means Her Majesty the Queen in right of New Brunswick, (ix) the “NS Crown”, which means Her Majesty in right of Nova Scotia, (x) the “PEI Crown”, which means Her Majesty the Queen in right of Prince Edward Island and (xi) the “Newfoundland Crown”, which means Her Majesty in right of Newfoundland and Labrador.

“CSA” – means the Canadian Securities Administrators.

“Current Rating” – means, at any particular time with respect to an Entity which has applied for membership as a Limited Clearing Member or which has been admitted as a Limited Clearing Member, as applicable, (i) a rating issued within the last 12 months by a Designated Rating Organization for such Entity, (ii) if the Entity is not the subject of a Current Rating issued by a Designated Rating Organization, a rating issued by a Designated Rating Organization within the last 12 months for the Long-term Obligation of such Entity, or (iii) if neither such Entity itself nor the Long-term Obligation of such Entity is the subject of a Current Rating issued by a Designated Rating Organization, a rating issued by a Designated Rating Organization within the last 12 months for the Long-term Obligation of such Entity’s Consolidated Affiliate or Plan Sponsor.

“CUSIP/ISIN” – are acronyms standing for Committee on Uniform Security Identification Procedures and International Securities Identification Number respectively, herein used to refer to a security identifier assigned by CDS to any security.

“Daily Settlement Summary Report” – means the report designated as such by the Corporation as described in the Operations Manual.

“Debt Securities” – has the meaning attributed thereto in Subsection A-707(2).

“Default Auction” – has the meaning attributed thereto in Section A-609.

“Default Management Period” – means the period described in Section A-411.

“Default Management Period End Date” – means the date described in Section A-411.

“Default Manual” – means any manual designated as such by the Corporation, as amended from time to time.

“Default Value” – means the value determined by the Calculation Agent in accordance with Subsection A-409(6).

“Default Waterfall” – means the sum of the amounts listed under Subsections A-1002(1)(i)(A) to (B), inclusively and which are available to the Corporation.

“Delivery Agent” – means the party through which the Corporation will effect the transfer of the Underlying Interest between the buyer and seller.

“Delivery Default” – has the meaning attributed thereto in Subsection A-409(6).

“Delivery Month” – means the calendar month in which a Future may be satisfied by making or taking delivery.

“Delivery Request” – has the meaning attributed thereto in Subsection A-409(6).

“Deposit” – has the meaning attributed thereto in Paragraph A-212(1)a).

“Depository Agreement” – means an agreement entered into between the Corporation and an Approved Depository.

“Depository Receipt” – means a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit.

“Derivative Instrument” – means a financial instrument, the value of which derives from the value of an Underlying Interest. Without limiting the foregoing, this Underlying Interest may be a commodity or a financial instrument such as a stock, a bond, a currency, a stock or economic index or any other asset.

“Designated Eligibility Rating” – has the meaning attributed thereto in Subsection A-1B04.

“Designated Maintenance Rating” – has the meaning attributed thereto in Section A-1B05.

“Designated Rating Organization” or **“DRO”** – means any of DBRS Limited, Fitch, Inc., Moody’s Canada Inc. or Standard & Poor’s Rating Services (Canada), or any other credit rating organization designated as a “designated rating organization” by the CSA under National Instrument 25-101 - Designated Rating Organizations, and includes any affiliate of a Designated Rating Organization that issues credit ratings in a foreign jurisdiction and that has been designated as a “DRO affiliate” under the terms of the CSA’s designation of such Designated Rating Organization.

“Detailed Futures Consolidated Activity Report” – means the report created by the Corporation on a daily basis reporting the aggregate position in Futures held by a Clearing Member, which also contains the Settlement of Gains and Losses for that Clearing Member for that day.

“Early Termination Date” – has the meaning attributed thereto in Subsection A-409(7).

“Electronic Communication” – means, in respect of the Corporation, any one or more of the following: the posting of a notice, report or other information on the Corporation’s website, the transmission of a notice, report or other information to a Clearing Member by means of electronic mail and the making

available on the Corporation's computer, in a form accessible to a Clearing Member, of a notice, report or other information.

“Emergency” – means a situation materially affecting the Corporation's operations resulting from i) riot, war or hostilities between any nations, civil disturbance, acts of God, fire, accidents, strikes, earthquakes, labour disputes, lack of transportation facilities, inability to obtain materials, curtailment of or failure in obtaining sufficient power, gas or fuel, computer malfunction (whether mechanical or through faulty operation), malfunction, unavailability or restriction of the payment, computer or bank wire or transfer system and any other cause of inability that is beyond the reasonable control of the Corporation; ii) any action taken by Canada, a foreign government, a province, state or local government or body, authority, agency or corporation, and any Exchange, Central Securities Depository, Approved Custodian, Acceptable Marketplace, Market Centre and Delivery Agent; iii) the bankruptcy or insolvency of any Clearing Member or the imposition of any injunction or other restraint by any government agency, court or arbitrator upon a Clearing Member which may affect the ability of that member to perform its obligations; iv) any circumstance in which a Clearing Member, a Central Securities Depository, an Approved Custodian or any other Entity has failed to perform contracts, is insolvent, or is in such financial or operational condition or is conducting business in such a manner that such Entity cannot be permitted to continue in business without jeopardizing the safety of assets, of any Clearing Member or the Corporation; or v) any other unusual, unforeseeable or adverse circumstance which is not within the control of the Corporation.

“End of Day DVP Settlement Time” – has the meaning attributed thereto in Section D-601.

“Entity” – shall include an individual, a legal person, a corporation, a partnership, a trust and an unincorporated organization or association.

“Escalation Procedure” – has the meaning attributed thereto in Section 11 of the Operations Manual.

“European Option” (or “European Style Option”) – means an Option which can be exercised only on its Expiration Date.

“Event of Default” – has the meaning attributed thereto in Subsection A-409(2).

“Exchange” – means an exchange whose trades are guaranteed and/or cleared by the Corporation.

“Exchange Transaction” – means a transaction through the facilities of an Exchange for:

- a) the purchase or writing of an Option or the reduction or elimination of a Long or Short Position in an Option; or
- b) the buying or selling of a Future or the reduction or elimination of a Long or Short Position in a Future.

“Exercise Notice” – means a notice to the Corporation in the form prescribed by the Corporation, notifying the Corporation of the intent of the Clearing Member executing such notice to exercise an Option.

“Exercised Position” – means the position of a Clearing Member in any account in respect of Options which have been exercised by such Clearing Member in such account.

“Exercise Price” – means the specified price per unit at which the Underlying Interest may be purchased (in the case of a call) or sold (in the case of a put) upon the exercise of an Option. (Sometimes referred to as the Strike Price).

“Exercise Settlement Amount” – means the amount which must be paid by the Corporation to the Clearing Member exercising a put Option or who has been assigned a call Option, against delivery of the Underlying Interest.

“Exercise Settlement Date” – means the date prescribed by the relevant Exchange within Contract Specifications of a particular Option.

“Expiration Date” – unless otherwise specified, means, in the case of monthly Options, the third Friday of the month and year in which the Option expires, or in the case of weekly Options, any Friday following the listing week which is a Business Day, but which is not an expiration day for any other Options already listed on the same underlying. If any such Friday is not a Business Day, then the Expiration Date will be the first preceding Business Day that is not an expiration day for any other Options already listed on the same underlying.

“Expiration Time” – means the time on the Expiration Date, as fixed by the Corporation, at which the Option expires. Unless subsequently changed by the Corporation, the Expiration Time shall be 10:45 p.m. on the Expiration Date.

“Expiry Response Screen” – means a computer display also known as the “Expiry Workspace” made available to Clearing Members in connection with Rule B-3.

“Failed Delivery” – has the meaning set out (i) in Subsection A-804(1) with respect to the delivery of an Acceptable Security, (ii) in Section B-407 with respect to the delivery of an Underlying Interest of an Option, (iii) in Section C-512 with respect to the delivery of an Underlying Interest of a Future other than an Acceptable Security, or (iv) in Section D-304 with respect to the delivery of an Underlying Interest of an OTCI that is not a Fixed Income Transaction.

“Failed Payment Against Delivery” – has the meaning attributed thereto in Section A-806.

“Failure to Pay” – has the meaning attributed thereto in Subsection A-409(4).

“Final Settlement Amount” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(10).

“Financial Asset” – has the meaning assigned to this term by the QSTA.

“Financial Institution Clearing Member” – means a Clearing Member that is either

- a) a financial services cooperative regulated pursuant to an Act respecting financial services cooperatives (Québec), or
- b) a credit union central or a central cooperative credit society, which is incorporated and regulated under the laws of Canada or under the legislature of a province,

one of whose principal purposes is to provide liquidity support to local credit unions or financial services cooperatives.

“Firm” – means a Clearing Member acting for its own account.

“Firm Account” – means the account or accounts required to be established for Firm Transactions of the Clearing Members pursuant to Sections B-102, B-103, C-102, C-103, D-102 and D-103.

“Fixed Income Clearing Member” – has the meaning attributed thereto in Section D-601.

“Fixed Income Transaction” – has the meaning attributed thereto in Section D-601.

“Forward Curve” – means the summary representation of the price of a commodity on a forward basis obtained by amalgamating all Reference Prices by tenor as defined in Section D-201.

“Forward Price” – means the price extracted from the Forward Curve and used in the daily Mark-to-Market Valuation and margining processes as defined in Section D-202.

“Future” – means a contract:

- a) in the case of a Future settled by delivery of the Underlying Interest, to make or take delivery of a specified quantity and quality, grade or size of an Underlying Interest during a designated future month at a price agreed upon when the contract was entered into on an Exchange; or
- b) in the case of a Future settled in cash, to pay to or receive from the Corporation the difference between the final settlement price and the trade price pursuant to standardized terms and conditions set forth by the Exchange where the contract is concluded and which is cleared by the Corporation.

“Future Tear-Up Amount” – has the meaning attributed thereto in Section A-1008.

“Futures Underlying Interest Deposit” – means the deposit by an Approved Depository acting on behalf of a Clearing Member or a client thereof of the Underlying Interest of a Future with the Corporation through a Central Securities Depository.

“Futures Sub-Accounts Consolidated Activity Report” – means the report created by the Corporation on a daily basis reporting the aggregate position held by a Clearing Member in each of its sub-accounts, which also contains the Settlement of Gains and Losses for that day with respect to each sub-account.

“Good Deliverable Form” – Underlying Interests shall be deemed to be in good deliverable form for the purposes hereof only if the delivery of the Underlying Interests in such form would constitute good delivery under the Contract Specifications.

“Gross Delivery Requirement” – means the quantity of Acceptable Securities required to be physically delivered through a Central Securities Depository by or to a Clearing Member, expressed on a gross basis, in accordance with Subsection D-606(7).

“Gross Payment Against Delivery Requirement” – means the amount required to be paid against physical delivery through a Central Securities Depository by or to a Clearing Member, expressed on a gross basis, in accordance with Subsection D-606(7).

“Guaranteeing Delivery Agent” – means a Delivery Agent who bears the responsibility of guaranteeing the acquisition or delivery of the Underlying Interest in the event of a delivery failure.

“Include”, “Includes” and “Including” – where used in these Rules, means “include”, “includes” and “including”, in each case, without limitation.

“Insolvency Event” – has the meaning attributed thereto in Subsection A-409(3).

“Insolvency Proceedings” – has the meaning attributed thereto in Subsection A-409(3).

“In-the-Money-Option” – means a call Option with an Exercise Price that is less than the Market Price of the Underlying Interest or a put Option where the Exercise Price exceeds the Market Price of the Underlying Interest.

“Instrument” – means a bill, note or cheque within the meaning of the Bills of Exchange Act (Canada) or any other writing that evidences a right to the payment of money and is of a type that in the ordinary course of business is transferred by delivery with any necessary endorsement or assignment, but does not include a security.

“Intra-Day Margin Call” – means the requirement to deposit supplementary Margin, as determined by the Corporation in accordance with Section A-705, at any time the Corporation deems necessary, and notably at such times as are specified in Section 2 of the Operations Manual.

“Joint Regulatory Financial Questionnaire and Report” – means the documents required under the applicable rules of the Investment Industry Regulatory Organization of Canada.

“LCM RAD Net Gain” – has the meaning attributed thereto in Section A-1005.

“Limited Clearing Member” – means an applicant that has been admitted to membership by the Corporation as a “Limited Clearing Member” in accordance with Rule A-1B and which has also been admitted to membership of the Corporation as a Fixed Income Clearing Member.

“Liquidating Settlement Account” – means the account created following the default of a Clearing Member to recognize the value of all gains, losses, and expenses due to or from the Non-Conforming Member during the liquidation of positions and Margin Deposits, in accordance with Section A-402.

“Long Position” – means a Clearing Member’s interest as:

- a) the holder of one or more Options of a Series of Options; or
- b) the buyer of one or more Futures of a Series of Futures; or
- c) the buyer of an Over-The-Counter Instrument.

“Long-term Obligation” – means a senior unsecured debt the original maturity of which is greater than one year.

“Margin” – means any and all of the deposits made by or on behalf of a Clearing Member with the Corporation or another person (including a Central Securities Depository or any other type of Securities Intermediary, including an Approved Custodian, a financial institution or the Bank of Canada) required or made pursuant to Rule A-7 Margin Requirements.

“Margin Deposit” – means, collectively,

- a) any and all Securities, Cash, Instruments, cheques, Underlying Interests, Underlying Interest Equivalents, Long Positions and Short Positions;
- b) any and all of the deposits required or made pursuant to Rule A-6 Clearing Fund Deposits, Rule A-7 Margin Requirements, Rule B-4 Delivery and Payment with Respect to Options Exercised, Rule C-5 Delivery of Underlying Interest of Futures and Rule D-3 Physical Delivery of Underlying Interest on Over-the-Counter Instruments, including Margins, Base Deposits, Additional Deposits, Variable Deposits, Put Escrow Receipts, Call Underlying

Interest Deposits, and Futures Underlying Interest Deposits, and any other form of deposit accepted from time to time by the Corporation; and

- c) any and all Financial Assets transferred to the Corporation through the facilities of a Central Securities Depository or held by an Approved Securities Intermediary;

deposited by or on behalf of a Clearing Member with the Corporation or another person (including a Central Securities Depository or any other type of Securities Intermediary, including an Approved Custodian, a financial institution or the Bank of Canada) for purpose of the performance of the obligations of the Clearing Member under the Rules.

“Mark-to-Market Valuation” – means the value determined by the Corporation representing the net asset value of a Transaction or account held by a Clearing Member, as defined in Section D-202.

“Market Centre” – means the local facility where the exchange of Underlying Interests occurs.

“Market Maker” – means an individual who has been approved by the Exchange on which he trades to trade for his own account or for the account of the Exchange member or non-member by which he is employed or for which he acts as agent in Options or Futures, and may include a futures trader, an options trader, a trader member, a market maker and a market specialist.

“Market Maker Account” – means the account or accounts required to be established for Exchange Transactions of the Clearing Member's Market Makers pursuant to Sections B-102, B-103, C-102 and C-103.

“Market Price” – means the aggregate price of the Unit of Trading of the Underlying Interest as determined by the relevant or applicable Exchange or Exchanges.

“Matured Amounts” – means any financial cash flows resulting from the expiration of an OTCI.

“Maturity Date” – means the date on which final obligations related to a Transaction are executed.

“Minimum Threshold” – means the quantity starting from which an OTCI can be cleared.

“Morning Net DVP Settlement Timeframe” – has the meaning attributed thereto in Section D-601.

“Morning Net Payment Against Delivery Requirement” – has the meaning attributed thereto in Section D-601.

“Morning Netting Cycle Timeframe” – has the meaning attributed thereto in Section D-601.

“Multi-Purpose Account” – means a Market Maker Account and/or a Netted Client Account.

“Net Daily Premium” – when applied to any account of a Clearing Member for any Settlement Time, means the net amount payable to or by the Corporation at such Settlement Time in respect of all Exchange Transactions of the Clearing Member in Options in such account as a purchasing Clearing Member and a writing Clearing Member.

“Net Daily Settlement” – means the amount shown on the Daily Settlement Summary Report.

“Net Delivery Requirement” – with respect to Acceptable Securities, means the quantity thereof required to be physically delivered through a Central Securities Depository by or to a Clearing Member, expressed on a net basis, in accordance with Paragraph A-801(2)(d); and, with respect to any Underlying Interest of

an OTCI that physically settles, other than Acceptable Securities, means the quantity of such Underlying Interest required to be physically delivered through a Delivery Agent by or to a Clearing Member, expressed on a net basis, in accordance with Section D-303.

“Net Payment Against Delivery Requirement” – means the amount required to be paid against physical delivery through a Central Securities Depository by or to a Clearing Member, expressed on a net basis, in accordance with Paragraph A-801(2)(c).

“Netted Client Account” – means a type of Client Account that requires specific documentation be signed between the Clearing Member and the Corporation, in which the Transactions of a sole Client are held on a net basis.

“Netting Cut Off Time” – means, with respect to a Business Day and a Clearing Member, a time specified in the Operations Manual on such Business Day for purposes of determining, in respect of such Clearing Member, all net payment and delivery obligations owing by or to such Clearing Member in accordance with these Rules on such Business Day.

“Non-Conforming Member” – has the meaning attributed thereto in Section A-1A04.

“Non-delivered Assets” – has the meaning attributed thereto in Subsection A-409(6).

“Non-Payment of the Cash Settlement Amount following a Delivery Default” – has the meaning attributed thereto in Subsection A-409(6).

“Notional Quantity” – means the size of the OTCI transaction expressed either outright, or in accordance with the number of contracts underlying the OTCI transaction.

“Open Interest” or **“Open Position”** – means the position of a buyer or a seller of an Option, of a Future or of an OTCI which has not expired.

“Opening Buy Transaction” – means an Exchange Transaction the result of which is to create or increase a Long Position in the Series of Futures involved in such transaction.

“Opening Purchase Transaction” – means an Exchange Transaction the result of which is to create or increase a Long Position in the Series of Options involved in such Exchange Transaction.

“Opening Sell Transaction” – means an Exchange Transaction the result of which is to create or increase a Short Position in the Series of Futures involved in such transaction.

“Opening Writing Transaction” – means an Exchange Transaction the result of which is to create or increase a Short Position in the Series of Options involved in such Exchange Transaction.

“Operations Manual” – means the manual designated as such by the Corporation and any schedule to the Operations Manual including the Risk Manual, as amended from time to time.

“Option” – means a contract which, unless otherwise specified, gives the buying Clearing Member the right to buy (a call) or sell (a put) at a specified quantity of an Underlying Interest at a fixed exercise price during a specified time period and which obligates the writing Clearing Member to sell (a call) or buy (a put) the Underlying Interest, pursuant to standardized terms and conditions set forth by the Exchange where the contract is concluded or to the terms determined by the Corporation as acceptable and which is cleared by the Corporation.

“Option Price” – means the price per Option Series, reported by the Exchange at the end of any Business Day.

“Option Tear-Up Amount” – has the meaning attributed thereto in Section A-1008.

“Option Type” – means a put Option or a call Option.

“Options Daily Transaction Report” – means a report created by the Corporation providing the net premium payable/receivable.

“OTCI Option Price” – means the price per Option Series determined by the Corporation in accordance with the methodology set out in the Risk Manual.

“Out-of-the-Money Option” – means a call Option with an Exercise Price that exceeds the Market Price of the Underlying Interest or a put Option where the Exercise Price is less than the Market Price of the Underlying Interest.

“Over-The-Counter Instrument” or **“OTCI”** – means any bilaterally negotiated transactions, including Fixed Income Transactions, as well as any transactions entered into on any Acceptable Marketplaces.

“Payment Default” – has the meaning attributed thereto in Subsection A-409(5).

“Payment Request” – has the meaning attributed thereto in Subsection A-409(5).

“Pending Payment Against Delivery Requirements” – has the meaning attributed thereto in Section D-601.

“Pending Delivery Requirements” – has the meaning attributed thereto in Section D-601.

“Plan Sponsor” – means an Entity that established and maintains a registered pension plan.

“Postponed Payment Obligation” – with respect to the Corporation, means the amount by which its Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against delivery of Acceptable Securities or its Gross Payment Against Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in favour of a Provider of Securities has been reduced as a result of the Provider of Securities’ failure to deliver Acceptable Securities on the Business Day they were due by the End of Day DVP Settlement Time and the payment by the Corporation of such reduction has been postponed until full delivery by the Provider of Securities in accordance with Subsection A-804(1); and with respect to a Clearing Member who is a Receiver of Securities, means the amount by which its Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against delivery of Acceptable Securities or its Gross Payment Against Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in favour of the Corporation has been reduced as a result of the Corporation’s failure to deliver Acceptable Securities on the Business Day they were due by the End of Day DVP Settlement Time and the payment by such Clearing Member of such reduction has been postponed until full delivery by the Corporation in accordance with Subsection A-804(2).

“President” – means the person appointed by the Board as chief executive officer and chief administration officer of the Corporation.

“Product Type” – means the attribute of an OTCI which describes the rights and obligations of the counterparties involved in the transaction insofar as cash flows are concerned.

“Provider of Securities” – means a Clearing Member who owes to the Corporation a Net Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(3) or Paragraph A-801(2)(d) or a Gross Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(6), as the case may be.

“Put Escrow Receipt” – means a receipt, in a form that is acceptable to the Corporation, issued by an Approved Depository certifying that it holds Cash in the amount of the Exercise Price of a put Option on behalf of a Clearing Member or a client thereof, in trust for the Corporation.

“Qualified Amount” – means an amount which may be subject to the Reduced Amounts Distribution power, as defined under Section A-1005.

“QSTA” means the Act respecting the transfer of securities and the establishment of security entitlements (Quebec).

“RAD Net Gain” – has the meaning attributed thereto in Section A-1005.

“Receiver of Securities” – means a Clearing Member who is owed by the Corporation a Net Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(3) or Paragraph A-801(2)(d) or a Gross Delivery Requirement with respect to an Acceptable Security in accordance with Subsection D-606(6), as the case may be.

“Recovery Event” – has the meaning attributed thereto in Section A-1002.

“Recovery Loss Cash Payment” – means the payment which may be required by the Corporation pursuant to Section A-1006.

“Recovery Loss” or **“Recovery Losses”** – has the meaning attributed thereto in Section A-1004.

“Recovery Power” – has the meaning attributed thereto in Section A-1001.

“Recovery Process” – has the meaning attributed thereto in Section A-1003.

“Reduced Amounts Distribution Period” – means the period during which the Corporation exercises the Reduced Amounts Distribution power, as defined under Section A-1005.

“Reduced Amounts Distribution” or **“RAD”** – means the Recovery Power defined under Section A-1005.

“Reference Crown” – means, with respect to an Entity that is a Crown Corporation, a mandatary of the Crown, an agency of the Crown or a public body of the Crown, the Crown which has established the Entity or under whose authority the Entity is acting.

“Reference Price” – means the price determined by the Corporation in accordance with Section D-201.

“Registry” – means any registry designated by the Corporation which, for the purposes of clearing Futures Contracts on Carbon Dioxide Equivalent (CO₂e) Units with physical settlement, has been established in order to ensure the accurate accounting of holding, transfer, acquisition, surrender, cancellation and replacement of the Carbon Dioxide Equivalent (CO₂e) Units.

“Regulatory Body” - with reference to a Financial Institution Clearing Member, means the Office of the Superintendent of Financial Institutions, association or other body, organization or agency, whether governmental, professional, self-regulatory or otherwise, having jurisdiction over that Clearing Member or over any part of the business carried on by it.

“Replacement Eligibility Metric” –has the meaning attributed thereto in Subsection A-1B04(g).

“Replacement Maintenance Metric” – has the meaning attributed thereto in Subsection A-1B04(g).

“Replacement Metric” – has the meaning attributed thereto in Subsection A-1B04(g).

“Retained Amount” – means an amount retained, collected, accounted for, or otherwise set aside by the Corporation in the exercise of its Reduced Amounts Distribution power, whether converted into cash or otherwise, as defined under Section A-1005.

“Risk Limits” – refers to the set of risk management limits imposed by the Corporation on Clearing Members’ clearing activities as updated from time to time by the Corporation.

“Risk Manual” – means the manual designated as such by the Corporation and any schedule to the Risk Manual including the Default Manual, as amended from time to time.

“Rolling Delivery Obligation” – with respect to a Clearing Member who is a Provider of Securities, means the quantity of a given Acceptable Security that it has failed to deliver to the Corporation under an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities under Subsection A-801(4) or a Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time under Subsection D-606(6), as the case may be, on the Business Day it was due by the End of Day DVP Settlement Time, which is rolled into the calculation of the next Business Day’s Net Delivery Requirement (and the Net Delivery Requirement of each subsequent Business Day) of such Clearing Member, in accordance with, and until such time as set out under, Subsection A-804(1); and with respect to the Corporation and a Clearing Member who is a Receiver of Securities, means the quantity of a given Acceptable Security that the Corporation has failed to deliver to such Clearing Member under an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities under Subsection A-801(4) or a Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time under Subsection D-606(6), as the case may be, on the Business Day it was due by the End of Day DVP Settlement Time (as a direct consequence of a Provider of Securities’ failure to deliver all or a part of its Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities or its Gross Delivery Requirement resulting from any Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, as the case may be, in respect of such Acceptable Security on such Business Day) which is rolled into the calculation of the Corporation’s next Business Day’s Net Delivery Requirement (and the Net Delivery Requirement of each subsequent Business Day) in favour of such Clearing Member, in accordance with, and until such time as set out under, Subsection A-804(2).

“Rules” or **“these Rules”**– means the Rules of the Corporation and the Operations Manual, as any such rules, and manual may from time to time be amended, changed, supplemented or replaced in whole or in part.

“SRO Clearing Member” – means a Clearing Member that is within the audit jurisdiction of the Investment Industry Regulatory Organization of Canada.

“Same Day Transaction” – has the meaning attributed thereto in Section D-601.

“Securities Intermediary” – has the meaning assigned to this term by the QSTA.

“Security” – means a document that is

- a) issued in bearer, order or registered form;
- b) of a type commonly dealt in upon securities exchanges or markets or commonly recognized in any area in which it is issued or dealt in as a medium for investment;
- c) one of a class or series or by its terms is divisible into a class or series of documents; and
- d) evidence of a share, participation or other interest in property or in an enterprise or is evidence of an obligation of the issuer;

and includes such a document, not evidenced by a certificate, the issue and any transfer of which are registered or recorded in records maintained for that purpose by or on behalf of the issuer.

“Series of Futures” – means all Futures of the same class covering the same quantity of an Underlying Interest and having the same delivery month.

“Series of Options” – means all Options of the same class, the same type, covering the same quantity of an Underlying Interest and having the same Exercise Price and Expiration Date.

“Settlement Accounts” – has the meaning attributed thereto in Section A-217.

“Settlement Agent” – has the meaning attributed thereto in Section A-1A01.

“Settlement Amount” – means the amount calculated in accordance with these Rules payable to the delivering Clearing Member upon delivery of or cash settlement for the Underlying Interest in respect of a Transaction.

“Settlement of Gains and Losses” – means the settlement with the Corporation of the gains and losses on Open Positions in Futures pursuant to Section C-302.

“Settlement Price” – means the official daily closing price of a Future, as determined in accordance with Section C-301.

“Settlement Time” – means, with respect to a particular Transaction and a particular Business Day, the time on such Business Day as established by the Corporation in the Operations Manual and if no Business Day is specified, the time on the next Business Day following the trade day, calculation date or Coupon Payment Date, as applicable, as established by the Corporation in the Operations Manual, by which time Settlement of Gains and Losses, premium payments, all Margin requirements and all other payments required in respect of such Business Day, trade day, calculation date or Coupon Payment Date must be submitted to the Corporation.

“Short Position” – means a Clearing Member’s obligation as:

- a) the writer of one or more Options of a Series of Options; or
- b) the seller of one or more Futures in a Series of Futures; or
- c) the seller of an Over-The-Counter Instrument.

“Spread Position” means:

- a) the situation in which there is carried in a Clearing Member's Client Account both an Option in the Short Position and an Option of the same Class of Options in the Long Position; or
- b) the situation in which there is carried in a Clearing Member's Client Account both a Long Position and a Short Position in Futures.

“**Straddle Position**” – means an equal number of call and put Options covering the same Underlying Interest and having the same Exercise Price and Expiration Date.

“**Style of Options**” – means the classification of an Option as either an American Option or a European Option. (Parts A and B of these Rules shall apply to both Styles of Options unless a specific Style of Option is designated).

“**Submission Cut-Off Time**” – has the meaning attributed thereto in Section D-601.

“**Tear-Up Amount**” – has the meaning attributed thereto in Section A-1008.

“**Tear-Up Value**” – has the meaning attributed thereto in Section A-1008.

“**Tender Notice**” – means a notice to the Corporation in the form prescribed by the Corporation, notifying the Corporation of the intent of the Clearing Member executing such notice to deliver the Underlying Interest of the Future.

“**Termination Value**” – means the amount determined by the Calculation Agent in accordance with Subsection A-409(10).

“**Trade Confirmation**” – means the official document issued to a Clearing Member which details the attributes of the OTCI transaction and which signals the acceptance of the transaction for clearing by the Corporation.

“**Trade Price**” – means the price agreed upon for the Future when the contract is entered into on an Exchange.

“**Transactions**” – means all Futures, Options and Over-The-Counter Instruments which are determined by the Corporation as acceptable for clearing.

“**Transaction Value**” – has the meaning attributed thereto in Subsection A-409(10).

“**Type of Options**” – means the classification of an Option as either a “put” or a “call”.

“**Uncovered Residual Risk**” or “**URR**” – means the amount of risk determined by the Corporation to be uncovered by the Base Initial Margin model set in accordance with the Risk Manual, resulting from an estimation of the loss that the Corporation would face in extreme but plausible market conditions done through rigorous stress tests. The URR represents the largest uncovered risk from a Clearing Member and its Affiliates (excluding Limited Clearing Members).

“**Underlying Interest**” – means an asset which underlies and determines the value of a Derivative Instrument or of an OTCI. The Underlying Interest may be a commodity or a financial instrument such as a stock, a bond, a currency, a stock or economic index or any other asset.

“**Underlying Interest Equivalent**” – means the Securities specified in Section A-706.

“Unit of Trading” – in respect of any Series of Futures and Series of Options or any OTCI, means the number of units of the Underlying Interest designated by the Corporation and the Exchange on which the Derivative Instrument is traded (as applicable) as being the number of units subject to a single Future or Option contract.

“Valued Securities” – has the meaning attributed thereto in Subsection A-707(3).

“Variable Deposit” – means the Clearing Fund deposit which may be required in addition to a Base Deposit pursuant to Section A-603.

“Voluntary Contract Tear-Up” – means the Recovery Power defined under Section A-1008.

RULE A-1A MEMBERSHIP IN THE CORPORATION

SECTION A-1A01 – ELIGIBILITY FOR MEMBERSHIP

- a) In order to apply for membership and subject to Subsection A-1A01(b), an applicant must be:
 - i) a member or approved participant in good standing with an exchange recognized in a Canadian province; or
 - ii) a bank or an authorized foreign bank to which the Bank Act (Canada), as amended from time to time, applies; or
 - iii) a Financial Institution that is either
 - a) a financial services cooperative regulated pursuant to an Act respecting financial services cooperatives (Québec), or
 - b) a credit union central or a central cooperative credit society, which is incorporated and regulated under the laws of Canada or under the legislature of a province,
- b) one of whose principal purposes is to provide liquidity support to local credit unions or financial services cooperatives.
- c) In order to apply for membership as a Limited Clearing Member, an applicant must meet the eligibility requirements set out in Section A-1B03 of the Rules.
- d) A Clearing Member that intends to submit Stock Options or Share Futures to the Corporation for clearing must be a full member participant in good standing with CDS.
- e) A Clearing Member that intends to submit bond Options and/or bond Futures to the Corporation for clearing, must be a full member participant in good standing with CDS.
- f) A Clearing Member that intends to submit physically settled OTCI transactions to the Corporation for clearing, must ensure that it and/or its Client is in good standing and remains as such at all times with the appropriate Market Centres and/or Delivery Agents. Furthermore, and where appropriate, the Clearing Member and/or its Client need to ensure access to a transportation system for the physical transport of the Underlying Interest to the appropriate Market Centres and/or Delivery Agents.
- g) A Clearing Member that intends to submit Futures Contracts on Carbon Dioxide Equivalent (CO_{2e}) Units with physical settlement to the Corporation for clearing must ensure that at all times it and/or its client is and remains in good standing with the Registry as this term is defined in Section A-102 of the Rules.
- h) A Clearing Member that intends to submit Fixed Income Transactions to the Corporation for clearing must be a full member participant in good standing with CDS.
- i) The Corporation may in its sole discretion waive the requirements set forth in clauses (c), (d), (f) or (g) if the Clearing Member enters into and maintains an agency agreement with a

securities intermediary that is a full member participant in good standing with CDS (a “**Settlement Agent**”) in form and substance satisfactory to the Corporation, pursuant to which such entity agrees to act as the Clearing Member’s agent for the purpose of fulfilling such Clearing Member’s obligations to the Corporation under these Rules and the Application for Membership. Where a Clearing Member acts through a Settlement Agent, the Corporation may, on an annual basis, send a written notice (“**Notice**”) to the Settlement Agent requiring the Settlement Agent to provide the Corporation with (i) its audited financial statements for the last fiscal year, along with accompanying notes related to the balance sheet; (ii) an independent auditors’ report on the suitability of the system of the Settlement Agent’s internal controls pertaining to its administration, information technology, trading, assignment, exercise, settlement, and margin and collateral; and (iii) the Settlement Agent’s current business continuity plan and disaster recovery plan. Where the Corporation requests the information listed at (i) to (iii) above, the Settlement Agent must provide the information or items requested by the Corporation within the time period specified in the Notice.

SECTION A-1A02 STANDARDS OF MEMBERSHIP

Every applicant to become a Clearing Member must meet such standards as may be adopted from time to time by the Board, including the following:

- a) the applicant must meet the minimum financial resilience requirements then in effect, in accordance with Section A-301 or, in the case of an applicant to become a Limited Clearing Member, the minimum financial resilience requirements for admission as a Limited Clearing Member then in effect, in accordance with Section A-1B04;
- b) the applicant must be engaged, or propose to engage, in the clearance of Options or Futures which are the subject of Exchange Transactions or in the clearance of Fixed Income Transactions or other OTCI transactions through the facilities of the Corporation;
- c) the applicant shall demonstrate to the Corporation that it maintains adequate operations facilities and staff and has sufficient and competent personnel for the expeditious and orderly transactions of business with the Corporation and other Clearing Members, and to meet the requirements of these Rules; and
- d) unless the applicable Entity is applying to become a Limited Clearing Member, the applicant has deposited with the Corporation its initial deposit with the Clearing Fund in the amount and at the time required by the Rules and has signed and delivered to the Corporation an agreement in such form as the Board shall require.

SECTION A-1A03 ADMISSION PROCEDURE

Applications for membership shall be in such form and contain such information as the Board shall from time to time prescribe. Officers of the Corporation shall review applications for membership and shall recommend approval or disapproval thereof to the Board. The Corporation may but is not obligated to examine the books and records of any applicant and such applicant's facilities which support the applicant’s business, risk management, technology infrastructure, operations, corporate governance, assets and affairs, in each case relating to the applicant's contemplated clearing activities as a Clearing Member under these Rules, and take such evidence as it may deem necessary or employ such other means as it may deem desirable or appropriate to ascertain relevant facts bearing upon the applicant’s qualifications. If the officers of the Corporation propose to recommend to the Board that an application for membership be disapproved,

it shall first notify the applicant of its proposed recommendation and the grounds therefore, and shall afford the applicant an opportunity to be heard and to present evidence on its own behalf.

If the applicant fails to request a hearing or if, after a hearing, officers of the Corporation still propose to recommend disapproval, officers of the Corporation shall make their recommendation to the Board in writing, accompanied by a statement of the grounds therefore, and a copy thereof shall be furnished to the applicant on request.

The Board shall independently review any recommendation by officers of the Corporation, and if the applicant so requests, afford the applicant further opportunity to be heard and to present evidence. If the Board disapproves the application, written notice of its decision, accompanied by a statement of the grounds thereof, shall be provided to the applicant.

An applicant shall have the right to present such evidence as it may deem relevant to its application.

Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any applicant whose application has been disapproved to avail itself of any right of appeal which is provided to such applicant by applicable law.

SECTION A-1A04 NON-CONFORMING MEMBER

- 1) A Clearing Member who is or may become insolvent or unable to meet its obligations shall immediately notify the Corporation of its situation by telephone. Such notice shall be confirmed by the Clearing Member by notice in writing to the Corporation sent by facsimile transmission within the next business day.
- 2) A Clearing Member who, in the judgement of the Corporation or pursuant to notification to the Corporation under Subsection (1), is or may be insolvent or unable to meet its obligations, becomes a Non-Conforming Member.
- 3) A Limited Clearing Member who does not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05 shall automatically be determined by the Corporation to be a Non-Conforming Member.
- 4) Without limiting the application of this Rule, any one of the following events, whether actual or anticipated by the Corporation, constitutes a reasonable ground for the Corporation to determine in its judgement that a Clearing Member is a Non-Conforming Member:
 - a) breach of any term, eligibility, qualification, standard or condition of the Application for Membership or any other violation of these Rules;
 - b) breach of a rule of an Exchange, a Central Securities Depository, an applicable self-regulatory organization or regulatory agency, or of any other recognized, designated or foreign investment exchange or clearing agency which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - c) refusal of an application for membership, breach of the terms of membership or contractual agreement, or suspension, termination or expulsion from membership of an Exchange, a Central Securities Depository, an applicable self-regulatory organization, Market Centres and/or Delivery Agents, the Registry, or any other recognized, designated or foreign investment exchange or clearing agency;

- d) refusal of a licence, breach of the terms of its licence or withdrawal or suspension of such licence by a regulatory agency which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - e) contemplated, threatened or actual action by a Crown, a regulatory agency, a court of justice or an administrative authority against or in respect of the Clearing Member under any provision or process of law or regulation which in the Corporation's reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation;
 - f) default in a payment, deposit, delivery or acceptance of delivery required or payable under the Application for Membership or these Rules;
 - g) an order, arrangement, proposal, distress or execution is presented, made or approved in any jurisdiction to or by a court of competent jurisdiction, a Crown or a regulatory agency, relating to the termination, bankruptcy, insolvency or winding up of the Clearing Member or the appointment of an administrator, receiver manager, trustee, or person with similar power in connection with the Clearing Member;
 - h) the determination on reasonable grounds by the Corporation that the Clearing Member is in such financial or operating condition that its continuation as a Clearing Member in good standing would jeopardize the interests of the Corporation or other Clearing Members;
 - i) any of the conditions set out in paragraphs (a) to (h) applies to an Affiliate of a Clearing Member, having, in the reasonable judgement of the Corporation, a material impact on the financial condition of the Clearing Member; or
 - j) such other event which in the Board's or, if time does not permit action by the Board, the Corporation's, reasonable determination has a material adverse effect on the Clearing Member or its ability to perform its obligations to the Corporation.
- 5) If a Clearing Member is late in making a payment at Settlement Time, the Corporation shall impose fines and may deem that Clearing Member a Non-Conforming Member, in accordance with Section 7 of the Operations Manual. In addition, the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.
- 6) Notwithstanding anything to the contrary contained in Subsection A-1A04(4), if (i) a Clearing Member is in default in relation to any payment, deposit, delivery or acceptance of delivery required or payable under these Rules, (ii) the Escalation Procedure is applicable in connection with such default, and (iii) such Clearing Member has duly notified the Corporation under the Escalation Procedure in accordance with Section 11 of the Operations Manual, the Corporation may, subject to complying with the Escalation Procedure and providing prior notification to the Bank of Canada, determine that such Clearing Member is a Non-Conforming Member.
- 7) Except where the Corporation has been notified under Subsection (1), the Corporation shall, in writing or by telephone, notify a Clearing Member that it has become a Non-Conforming Member. Before doing so, the Corporation will enter into consultations with the Bank of Canada with respect to a Clearing Member who may be affected by an order under subsection 39.13(1) of the Canada Deposit Insurance Corporation Act or the Affiliates of such Clearing Member. The Corporation may also, in its sole discretion, notify the Board, all Clearing Members, the Exchanges, the appropriate self-regulatory organization or regulatory agency of which the Clearing Member is a member, the regulatory agency of the Corporation, and such other Entities as the Corporation may consider appropriate.

- 8) The Corporation can reinstate the status of a Non-Conforming Member to a Clearing Member in good standing if the Clearing Member resolves, to the satisfaction of the Corporation, the issue(s) which led to its Non-Conforming Member status.

SECTION A-1A05 SUSPENSION

- 1) The Board may suspend a Non-Conforming Member, taking into consideration whether the suspension may protect the integrity of the market.
- 2) Upon such suspension, the Corporation shall cease to act for the suspended Non-Conforming Member.
- 3) The suspension may be total or may be for any function with respect to a particular security or class of securities, with respect to a particular transaction or class of transactions, or with respect to securities or transactions generally. Any suspension may be limited to a particular location or office of the Non-Conforming Member.
- 4) The Board may lift the suspension of the Non-Conforming Member if the Corporation in its sole discretion determines that the Non-Conforming Member has corrected the situation which caused the Corporation to suspend the Non-Conforming Member in such a manner that it is unlikely to occur again.
- 5) A suspended Non-Conforming Member shall remain liable to the Corporation for all obligations, costs and expenses, including all Margin requirements, including calls whether occurring before or after suspension, and other requirements, arising out of or in connection with such Non-Conforming Member's positions, and shall cooperate fully with the Corporation in respect of all matters arising out of or relating to the settling of or dealing with such positions.

SECTION A-1A06 NOTICE OF SUSPENSION TO CLEARING MEMBERS

Upon the suspension of a Non-Conforming Member, the Corporation shall notify all Clearing Members, the Exchanges, and the suspended Non-Conforming Member's applicable self-regulatory organization or regulatory agency, the regulatory agency of the Corporation and such other Entities as the Corporation may consider appropriate. Such notice shall state, in general terms, how pending Exchange Transactions, Open Positions, tendered Exercise Notices or Tender Notices, Exercised Positions, Assigned Positions, and other pending matters will be affected, what steps are to be taken in connection therewith, and the right of the suspended Non-Conforming Member to appeal the suspension before the Board.

SECTION A-1A07 APPEAL OF SUSPENSION

A Non-Conforming Member suspended pursuant to Section A-1A05 shall receive from the Corporation a written statement of the grounds for its suspension, and shall have the right to appeal its suspension within ten business days from the effective date of the suspension.

Where a suspended Non-Conforming Member appeals its suspension, the Board shall give the appellant the opportunity to be heard as promptly as possible, and in no event more than 14 days after the filing of the notice of appeal.

The appellant shall be notified of the time, place and date of the hearing not less than three business days in advance of such date. At the hearing, the appellant shall be afforded an opportunity to be heard and to present evidence on its own behalf and may, if it so desires, be represented by counsel. As promptly as possible after the hearing the Board shall, by the vote of a majority of its members, affirm or reverse the suspension, and then instruct the Secretary of the Corporation to notify the appellant in writing of the decision. If the decision shall have been to affirm the suspension, the appellant shall be given a written statement of the grounds thereof.

The filing of an appeal of a suspension shall not impair the validity or stay the effect of the suspension appealed from. The reversal of a suspension shall not invalidate any acts of the Corporation taken prior to such reversal pursuant to such suspension and the rights of any person which may arise out of any such acts shall not be affected by the reversal of such suspension.

Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any Clearing Member the suspension of which has been affirmed by the Board to avail itself of any right of appeal which is provided to such Clearing Member by applicable law.

SECTION A-1A08 TERMINATION OF MEMBERSHIP

- 1) The Board shall, at its next meeting following the calendar month in which the Non-Conforming Member is suspended, or if an appeal is heard pursuant to Section A-1A07, following the calendar month in which the Board has affirmed the decision to suspend, lift the suspension or terminate the membership in the Corporation of a suspended Non-Conforming Member.
- 2) A Non-Conforming Member shall be given the opportunity to be heard by the Board before its membership is terminated.
- 3) Fifteen business days before the meeting of the Board at which the termination of a suspended Non-Conforming Member is to be considered, the Corporation shall give to the suspended Non-Conforming Member notice in writing of the meeting and a summary of the reasons for the proposed termination.
- 4) A committee of the Board shall not exercise the powers of the Board under this Rule A-1A, and the Board and the suspended Non-Conforming Member may mutually agree on a variation of such notification and meeting date.
- 5) The suspended Non-Conforming Member shall cease to be a Clearing Member as of the date and hour specified in the written decision of the Board.
- 6) The Corporation shall notify the regulatory bodies which have jurisdiction over the Corporation when a meeting of the Board is called to authorize the termination of the membership of a suspended Non-Conforming Member.
- 7) The Corporation shall promptly notify other Clearing Members, the Exchanges, the suspended Non-Conforming Member's applicable self-regulatory organization or regulatory agency, the regulatory agency of the Corporation and such other Entities as the Corporation may consider appropriate, that the Board has terminated the membership of a suspended Non-Conforming Member, indicating the effective date of the termination.

SECTION A-1A09 VOLUNTARY WITHDRAWAL

- 1) A Clearing Member may, at any time, notify the Corporation that it wishes to withdraw as a Clearing Member of the Corporation, by giving a minimum of 30 days' prior written notice. The Clearing Member shall cease to be a Clearing Member on the later of (a) the date of expiry of the notice period or (b) the date, as determined by the Corporation, on which the Clearing Member has satisfied all of its obligations toward the Corporation and any applicable requirements for withdrawal, including the closing of all the Clearing Member's Open Positions and the performance of any obligation arising in connection with the closing of such Open Positions. Withdrawal of a Clearing Member which has provided a prior notice of withdrawal to the Corporation, in the event that a Default Management Period is initiated before the effective date of withdrawal, shall not occur until the end of the Default Management Period and such Clearing Member shall cease to be a Clearing Member at the date, as determined by the Corporation, on which the Clearing Member has satisfied all of its obligations toward the Corporation.
- 2) The Corporation shall notify all Clearing Members upon receipt of a notice of withdrawal pursuant to Section A-1A09(1).
- 3) Upon receipt of a notice of withdrawal pursuant to Section A-1A09(1) from a Non-Conforming Member, the Corporation shall promptly notify the Board, all Clearing Members, the Exchanges, the self-regulatory organization or agency having jurisdiction over the activities of such Non-Conforming Member and any regulatory agency having jurisdiction over the activities of the Corporation and any other entity or organization that the Corporation may consider appropriate, that it has received a notice of withdrawal from such Non-Conforming Member.

SECTION A-1A10 TRANSFER/SURVIVAL OF OBLIGATIONS

- 1) A Clearing Member may not allocate or transfer any rights or obligations under any Transaction confirmed in its name except as otherwise expressly provided in these Rules or with the prior consent of the Corporation, in its sole discretion.
- 2) The liabilities and obligations of a Clearing Member to the Corporation and to other Clearing Members, and of the Corporation and other Clearing Members to the Clearing Member, arising from its membership shall survive the suspension, termination or withdrawal of the Clearing Member's membership as though the former Clearing Member were still a Clearing Member.
- 3) Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any suspended or terminated Non-Conforming Member to avail itself of any right of appeal which is provided by applicable law.

SECTION A-1A11 REINSTATEMENT OF MEMBERSHIP

- 1) A Clearing Member which has withdrawn as a Clearing Member or had its membership terminated may at any time be considered for reinstatement by the Board provided that the Clearing Member, if it is then eligible for membership, re-applies to become a Clearing Member, pays any entrance or reinstatement fee determined by the Board, meets the standards and qualifications for membership, demonstrates to the satisfaction of the Board that it has discharged all of its liabilities and indebtedness to the Corporation and the other Clearing Members, and the application for membership is accepted by the Board.
- 2) The Board may, in its sole discretion and on terms and conditions determined by the Board, approve or reject the new application for membership from a terminated or withdrawn Clearing Member.

A committee of the Board shall have no authority to exercise the powers of the Board under this Rule A-1A.

RULE A-1B LIMITED CLEARING MEMBERS MEMBERSHIP

SECTION A-1B01 LIMITED CLEARING MEMBERS CORE PRINCIPLES

1) No Clearing Fund Contribution

Subject to applicable law, a Limited Clearing Member shall not be required to make a deposit or contribution to the Clearing Fund or to provide any other type of collateral or Margin Deposit to the Corporation which could be realized upon, applied or used by the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

2) No Obligation Resulting From the Default of Another Clearing Member

Subject to applicable law and Section A-1005, Limited Clearing Members shall not have any obligation to the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

3) No Reduction of Corporation's Obligations

Subject to applicable law and Section A-1005, the Corporation shall not have the right to reduce or terminate any of its obligations to any Limited Clearing Member in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation.

4) For further clarity, no Limited Clearing Member will be subject to any Recovery Power which may be available to the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation or in connection with a Recovery Process, other than the exercise of the Corporation's Reduced Amounts Distribution power pursuant to Section A-1005. This shall not preclude a Limited Clearing Member to voluntarily participate in any (i) auction held by the Corporation in connection with the failure by another Clearing Member to pay or perform any of its obligations to the Corporation or (ii) Recovery Power in accordance with the Rules.

5) Specific Margin Requirements

6) A Limited Clearing Member shall be required to deposit Margin in accordance with Rule A-1B08 and the Operations Manual.

SECTION A-1B02 DEFINITIONS

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-1B03 LIMITED CLEARING MEMBERS ELIGIBILITY FOR MEMBERSHIP

In order to apply for membership as a Limited Clearing Member, an applicant must intend to submit Fixed Income Transactions to the Corporation for clearing and its Application for Membership must specify that it wishes to be admitted as a Limited Clearing Member on the basis that it is one of the following:

- a) a Crown, a public body of a Crown, an agency of the Crown, a mandatary of the Crown or a Crown corporation other than the Bank of Canada;
- b) the Bank of Canada;
- c) a federally or provincially regulated pension plan board, pension fund or compensation fund, the majority of whose assets under management are used to fund obligations under one or more pension plans serving the retirement needs of employees in the broader public sector, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable, or in relation to which bankruptcy and insolvency laws do not apply and a winding-up of such entity is subject to an administrator's fiduciary and statutory obligations; or
- d) a Crown, a public body of a Crown, a Crown corporation or an agency or mandatary of the Crown, the majority of whose assets under management are assets used to fund obligations under one or more pension plans and, if applicable to such entity, government funds, and in relation to which bankruptcy, insolvency, winding-up or restructuring or the appointment of an administrator, receiver manager, trustee or person with similar power in connection with the entity requires the taking of a special action by a federal or provincial legislative body or a governmental body, organization or agency having jurisdiction over that entity, as applicable.

SECTION A-1B04 LIMITED CLEARING MEMBERS STANDARDS OF MEMBERSHIP

Every applicant to become a Limited Clearing Member other than the Bank of Canada must meet such standards as may be adopted from time to time by the Board, including, at the time of its application, the following:

- a) the applicant must have a Current Rating issued by at least two Designated Rating Organizations that is at or above (each a “**Designated Eligibility Rating**”):
 - i) in the case of an applicant specifying that it wishes to be admitted as a Limited Clearing Member on the basis of the membership requirements prescribed by Subsection A-1B03(a) above, both the rating of the applicant's Reference Crown and the ratings set forth in Option A below; or
 - ii) in the case of an applicant specifying that it wishes to be admitted as a Limited Clearing Member on the basis of the membership requirements prescribed by Subsections A-1B03(c) or (d) above, the ratings set forth in Option B below:

<u>Designated Rating Organization</u>	<u>Option A</u>	<u>Option B</u>
DBRS Limited	A Low	AA
Fitch Inc.	A-	AA
Moody's Canada Inc.	A3	Aa2
Standard & Poor's Rating Services (Canada)	A-	AA

- b) there must be no announcement by the Designated Rating Organizations referred to in Subsection (a) above or their respective DRO affiliates that the Limited Clearing Member's Current Rating may be downgraded to a rating that would not at a minimum be equal to the applicable Designated Eligibility Rating;
- c) the applicant must propose to engage in the clearance of Fixed Income Transactions through the facilities of the Corporation;
- d) the applicant must demonstrate to the satisfaction of the Corporation that:
 - i) it is sufficiently active in the Canadian repurchase transactions market and the Canadian bond cash buy or sell trading market;
 - ii) it has been self-executing in the Canadian repurchase transactions market for a continuous period of a minimum of three years prior to applying for membership with the Corporation;
 - iii) it is currently party to master repurchase agreements in a standard form acceptable to the Corporation under which it has agreed to enter into repurchase transactions in the Canadian market with a minimum of three other Clearing Members that are actively clearing Fixed Income Transactions through the facilities of the Corporation;
 - iv) it has adequate operations facilities including adequate technical functionality to clear Fixed Income Transactions with the Corporation, and has sufficient and competent personnel for the expeditious or orderly transactions of business with the Corporation and other Fixed Income Clearing Members and to meet the requirements of the Rules;
 - v) it has the capacity, power and authority to execute and deliver the Application for Membership for Limited Clearing Members and perform its obligations to the Corporation under these Rules; and
 - vi) it has the capacity, power and authority to grant in favour of the Corporation a first ranking pledge, lien, security interest and hypothec on collateral to secure the performance of all of its obligations to the Corporation pursuant to these Rules.
- e) if required by the Corporation, the applicant must arrange for the delivery by its counsel to the Corporation of a netting and insolvency opinion, in form and substance acceptable to the Corporation, with respect to the applicant's proposed Fixed Income Transactions;
- f) the applicant must demonstrate sound corporate governance practices, an effective corporate structure, prudent portfolio and risk management practices and procedures, a risk profile and other elements and factors, which render, in the opinion of the Corporation, the applicant suitable as a Fixed Income Clearing Member such that accepting the applicant would not cause undue risk to the Corporation or other Fixed Income Clearing Members or to the soundness of the Corporation's Fixed Income Transactions clearing system; and

- g) The Corporation may in its sole discretion waive the requirements set forth in Subsections (a) and (b) above under the condition that the Limited Clearing Member enters into an agreement with the Corporation that establishes, as determined by the Corporation in its sole discretion and agreed in writing by the Corporation and such Limited Clearing Member at the time that such Entity's Application for Membership is submitted to the Corporation, (i) any financial resilience metric acceptable to the Corporation (a "Replacement Metric"), (ii) the minimum level of the Replacement Metric required by the Corporation in order to admit such Entity as a Limited Clearing Member, pursuant to Subsection A-1B04 (a "Replacement Eligibility Metric") and (iii) the minimum level of the Replacement Metric which must be maintained by such Limited Clearing Member pursuant to Section A-1B05 (a "Replacement Maintenance Metric"), which agreement shall be in form and substance satisfactory to the Corporation.

SECTION A-1B05 ONGOING FINANCIAL RESILIENCE REQUIREMENTS

Except with respect to the Bank of Canada, a Limited Clearing Member must:

- 1) subject to subsection (2) below, maintain a Current Rating issued by at least one Designated Rating Organization that is at or above the ratings set forth below (a "**Designated Maintenance Rating**"):
 - a) in the case of a Limited Clearing Member admitted on the basis of the membership requirements prescribed by Subsection A-1B03(a) above, the ratings set forth in Option A below; or
 - b) in the case of a Limited Clearing Member admitted on the basis of the membership requirements prescribed by Subsections A-1B03(c) or (d) above, the ratings set forth in Option B below:

<u>Designated Rating Organization</u>	<u>Option A</u>	<u>Option B</u>
DBRS Limited	BBB	A
Fitch Inc.	BBB	A
Moody's Canada Inc.	Baa2	A2
Standard & Poor's Rating Services (Canada)	BBB	A

in each case, provided there has been no announcement by the Designated Rating Organization or its DRO affiliate that the Current Rating may be downgraded to a rating that would not at a minimum be equal to the Designated Maintenance Rating; or

- 2) in the case of a Limited Clearing Member in respect of which a Replacement Metric has been established pursuant to Subsection A-1B04(g), maintain its Replacement Metric to the level that was deemed acceptable by the Corporation as Replacement Maintenance Metric at the time of Application for Membership.

SECTION A-1B06 DUE DILIGENCE

In addition to the powers of the Corporation provided in Sections A-304 and A-305, the Corporation has the authority to inspect at least annually the financial condition (including its books and records), business, risk management, technology infrastructure, operations, corporate governance, assets and affairs of Limited Clearing Members and may require any responsible representative of the Limited Clearing Member to

answer any questions deemed reasonably necessary by the Corporation to assess the Limited Clearing Member's ongoing compliance with the Rules.

SECTION A-1B07 LIMITED CLEARING MEMBERS ONGOING MONITORING

- 1) If the Corporation determines as a result of any early warning notice under Section A-303, any filing under Section A-304 or A-305 or any general or special examination under Section A-306 or Section A-1B06, or from any other information given to or obtained by it, including from the Limited Clearing Member, in accordance with the Rules, that a Limited Clearing Member does not maintain a Current Rating issued by a minimum of two different DROs that is at or above the applicable Designated Eligibility Rating or, if applicable, does not maintain its Replacement Metric at or above the applicable Replacement Eligibility Metric, the Corporation may take any or all of the following actions:
 - a) review the reports issued by a DRO in respect of the Limited Clearing Member, its Consolidated Affiliate or Plan Sponsor;
 - b) engage discussion with the Limited Clearing Member to determine any remedial actions to be taken by the Limited Clearing Member, and, where appropriate, require the Limited Clearing Member to provide a plan, including estimated timelines to address the situation;
 - c) generally monitor the implementation of the plan provided under Subsection A-1B07(c) where applicable;
 - d) determine and notify, or recommend to the Board, as appropriate, any action, necessary or advisable for the protection of the Corporation, Clearing Members or the public; and
 - e) immediately take any action pursuant to Section A-1B06.

SECTION A-1B08 LIMITED CLEARING MEMBER MARGIN REQUIREMENTS

- 1) Prior to the Settlement Time on every Business Day, every Limited Clearing Member shall be obligated to deposit Margin determined by the Corporation in accordance with Rule A-7 Margin Requirements and the methodology set out in the Risk Manual.
- 2) In respect of all Transactions to which a Limited Clearing Member is a party, a multiplier (the "Effective Ratio"), as established and reviewed on a periodic basis pursuant to the methodology set out in the Risk Manual, shall be applied to the Base Initial Margin required to be deposited by such Limited Clearing Member pursuant to Rule A-7 and calculated in accordance with the methodology set forth in the Risk Manual.

RULE A-2 MISCELLANEOUS REQUIREMENTS

SECTION A-201 OFFICES

Every Clearing Member shall maintain an office at a location approved by the Corporation. A representative of the Clearing Member authorized in the name of the Clearing Member to sign all instruments and take all action necessary for conducting business with the Corporation shall be present at such office on every Business Day between such hours as may be specified from time to time by the Corporation. Such representative shall be subject to the approval of the Corporation and shall be authorized to act on behalf of the Clearing Member by a written power of attorney in the case of a partnership or by a resolution of the

board of directors in the case of a corporation. Such power of attorney or resolution, as the case may be, shall be in a form approved by the Corporation.

SECTION A-202 EVIDENCE OF AUTHORITY

- 1) Every Clearing Member shall file with the Corporation a certified list of the signatures of the representatives (“Authorized Representatives”) of such Clearing Member (including partners and officers) who are authorized to sign certificates, cheques, agreements, receipts, orders and other papers necessary for conducting business with the Corporation, together with an executed copy of the powers of attorney, resolutions or other instruments giving such authority.
- 2) Any Clearing Member who has given a person a power of attorney or other authorization to transact business with the Corporation shall, immediately upon the withdrawal, retirement, resignation or discharge of such person or the revocation of his power to act, give written notice of such fact to the Corporation.
- 3) Where:
 - a) a document is presented by a Clearing Member to the Corporation which bears an authorization stamp of a Clearing Member in the form approved by the Corporation; or,
 - b) data is transferred electronically from a Clearing Member to the Corporation,

the Corporation shall be entitled to assume the authenticity of the authorization stamp and the authority of the person presenting the document or initiating the electronic transfer to do so on behalf of the Clearing Member.

- 4) The Corporation shall be entitled to rely and act upon any instruction given hereunder. The Corporation shall be under no obligation to ensure the genuineness or validity of any signature purporting to be that of an authorized signatory of the Clearing Member, of any stamp purporting to be an authorized stamp, or of the authority of any person initiating any electronic data transfer. The Corporation shall have no responsibility in the event that any such signature, stamp or data is forged, unauthorized or otherwise invalid or ineffective.

SECTION A-203 RECEIPT OF DOCUMENTS

- 1) A box or other facility at an office of the Corporation (or of a designated agent of the Corporation) will be assigned to each Clearing Member for the distribution of forms, papers, documents, notices, statements and such other items as the Corporation deems appropriate. An item deposited in a Clearing Member's box shall be deemed received by such Clearing Member when deposited.
- 2) Every Clearing Member shall be responsible for sending an Authorized Representative at an office of the Corporation for receipt of cheques, drafts and all items placed in the box of the Clearing Member at such intervals as may be necessary for the Clearing Member to perform all obligations and duties required by these Rules.

SECTION A-204 DOCUMENTS AND OTHER ITEMS SUBMITTED TO THE CORPORATION

All reports, documents, papers, statements, notices, cheques, drafts, certificates of deposit and other items required by the Rules to be submitted to the Corporation shall, except as may otherwise be specifically

prescribed by the Rules, be delivered to the designated office of the Corporation or its agent at such times, on such forms and in such manner as the Corporation shall prescribe. Each item delivered to the Corporation shall clearly indicate the identity of the Clearing Member making such submission.

INTERPRETATION AND POLICIES

01. Every Clearing Member shall be required to use an authorization stamp, in a form approved by the Corporation, in lieu of manual signatures, on such reports, documents, papers, statements, notices, and other items as the Corporation shall from time to time prescribe.

02. The Corporation shall provide each Clearing Member with two authorization stamps at no charge. Any additional authorization stamps requested by a Clearing Member will be charged by the Corporation to such Clearing Member based upon the Corporation's costs. In lieu of an authorization stamp provided by the Corporation, a Clearing Member may use a member-selected authorization stamp, provided that the stamp meets such requirements as the Corporation may from time to time impose with respect to format and content and the Clearing Member files with the Corporation such documentation as the Corporation may require authenticating the member-selected authorization stamp.

03. Each Clearing Member shall be bound by all such reports, documents, papers, statements, notices and other items as the Corporation shall prescribe pursuant to Paragraph 01. above, bearing the Clearing Member's authorization stamp.

SECTION A-205 RECORDS

- 1) Every Clearing Member shall keep up to date records showing, with respect to each Transaction:
 - a) the names of the parties to the Transaction;
 - b) the trade date;
 - c) the name of the client;
 - d) if in respect of a Future, the Class and Series of Futures, the Underlying Interest, the number of contracts, the contract price, the delivery month and year, whether the transaction was a buy or sell transaction and whether it was an opening or closing transaction;
 - e) if in respect of an Option, the Class and Series of Options, the Underlying Interest, the number of contracts, the premium, the Exercise Price, the expiry month, whether the transaction was a purchasing or a writing transaction and whether it was an opening or a closing transaction;
 - f) if in respect of any OTCI the trade details as specified in the Trade Confirmation; and
 - g) such other information as may from time to time be required by law, regulation, an Exchange or the Corporation.

- 2) Every Clearing Member shall retain and keep readily accessible to the Corporation in a form acceptable to the Corporation, all records required by these Rules, including without limitation, the records referred to in Subsection A-205(1), for at least seven (7) years from the end of the calendar year to which such records relate in such form as the Corporation may authorize. The Corporation shall be entitled to inspect or take temporary possession of any such records at any time upon demand. All reports shall be available to the Corporation no later than 8:00 a.m. on the Business Day immediately following the report date. A Clearing Member must file any information requested by the Corporation within the time period specified in such demand.

SECTION A-206 NOTICES AND REPORTS BY THE CORPORATION

- 1) Unless otherwise specifically provided for in any other Rule, the Corporation may give notice to a Clearing Member in such manner as the Corporation deems appropriate in the circumstances of the notice being given, including by telephone, by hand delivery, by fax and by Electronic Communication.
- 2) Each Clearing Member shall by notice in writing signed by a Clearing Member's Authorized Representative provide to the Corporation the names of at least two individuals and their positions for the purposes of telephone communications. The Corporation shall attempt to contact such individuals (or any other persons at the Clearing Member holding such positions) (the "CDCC Contacts") in connection with all telephone communications during business hours. If the CDCC Contacts are not available, the Corporation shall be entitled, during business hours, to provide telephone communications to any person answering the telephones at the Clearing Member. All telephone communications by the Corporation will be logged, electronically or manually, by the Corporation in one or more files ("Notice Files") kept for that purpose, recording the time and subject matter of the call, the individual at the Corporation who made the call and the individual at the Clearing Member who received the call. The Notice File, absent manifest error, shall be deemed to be correct.
- 3) Telephone communications given in accordance with Paragraph A-206(2) or in accordance with Subsection A-206(9) shall constitute full and proper notice notwithstanding the absence of any written or electronic confirmation of same.
- 4) For the purposes of this Section A-206, "business hours" shall mean from 8:00 a.m. to the Close of Business on any Business Day.
- 5) The Corporation may from time to time prescribe the form of reports to be given by the Corporation to Clearing Members. These reports may be sent by hand delivery, fax or Electronic Communication.
- 6) Each Clearing Member shall maintain a computer system at the Clearing Member's designated office capable of obtaining, displaying and receiving Electronic Communications from the Corporation. Each Clearing Member shall have an obligation to review promptly each report, notice, instruction, data or other information made available by the Corporation to such Clearing Member through Electronic Communication. Each Clearing Member shall be responsible for advising the Corporation by telephone (confirmed in writing), fax or hand delivered notice on the Business Day on which a report is deemed to have been received or the Expiration Date of any item requiring change for any reason and the failure to report any such required change by such time shall constitute a waiver of the Clearing Member's right to have such item changed.
- 7) Upon the Corporation delivering or making available a notice or report in accordance with this Section A-206, the Corporation's obligation to furnish, issue or deliver such notice or report shall have been fulfilled.
- 8) Subject to Subsection A-206(9):
 - a) a notice given by telephone shall be deemed to have been received by a Clearing Member as of and to be effective from the time of the telephone call to an individual in accordance with Paragraph A-206(2) or Subsection A-206(9), as the case may be, as recorded in the relevant Notice File, unless the notice or another Rule specifically provides otherwise;

- b) a notice given or report sent by fax shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received as of and, unless otherwise stated, to be effective from and after the time of the fax on the day it is sent, unless the notice or another Rule specifically provides otherwise;
 - c) a notice or report given by Electronic Communication shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received on and to be effective as of the day it is sent, unless the notice or another Rule specifically provides otherwise; and
 - d) a notice given by mail shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received and to be effective on the fifth day after mailing and a notice given or report sent by hand delivery shall be addressed to one or more of the CDCC Contacts and shall be deemed to have been received and to be effective on the earlier of when it actually is received by the Clearing Member and the next Business Day immediately following the date it was sent.
- 9) Where a notice is given or a report is sent by any means out of business hours or on a day that is not a Business Day, the notice or the report, as the case may be, shall be deemed to have been received on the earlier of
- a) the time the Corporation confirms it has actually been communicated to a responsible individual with the Clearing Member; and
 - b) the beginning of the next following Business Day.

For greater certainty, under Paragraph A-206(9)(b), where a notice is given or report is received prior to 9:00 a.m. on a Business Day, it shall be deemed to have been received not later than 9:15 a.m. on that Business Day. The Corporation shall maintain a list of emergency contact telephone and/or fax numbers of not less than three responsible individuals employed by each Clearing Member with whom the Corporation can communicate out of ordinary business hours if the Corporation determines such communication is necessary or advisable. It shall be the responsibility of each Clearing Member to ensure that the individuals so selected can be readily contacted outside of ordinary business hours, and that the contact numbers for them are kept current.

SECTION A-207 PAYMENT OF FEES AND CHARGES

- 1) The Corporation may levy such fees and charges related to such services provided to Clearing Members as it deems appropriate. All or any part of the proceeds from such levy may be applied to such purposes as the Corporation shall determine from time to time.
- 2) Fees and charges owing by a Clearing Member to the Corporation shall be due and payable within 30 days following the date of the invoice.

SECTION A-208 FORCE MAJEURE OR EMERGENCY

On the happening of a *force majeure* or an Emergency, the Corporation is entitled to take such action as it deems necessary and appropriate or require any Clearing Member to take such action as the Corporation may direct in respect of the same. In taking such action, the Corporation reserves the right, with regards to the settlement of a Transaction, to make a cash settlement in lieu of the delivery of the Underlying Interest.

SECTION A-209 TIME

All times herein are Eastern Time prevailing in Montreal and Toronto at the time of the event.

SECTION A-210 DISTRIBUTION OF INFORMATION, CONFIDENTIALITY AND USE OF CDCC MATERIALS

1) Clearing Member Information

- a) The Corporation may provide, on a confidential basis, any information regarding a Clearing Member to the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory authority having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate, when, in the opinion of the Corporation, such information is relevant to the preservation of the integrity of the securities industry and derivative markets or the provision of such information is in the public interest.
- b) The Corporation may also receive, on a confidential basis, any information regarding a Clearing Member from the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate. Where in the opinion of the Corporation such information is relevant, the Corporation shall be entitled to rely upon such information for the purposes, among others, of Rule A-3, Financial Resilience Requirements.
- c) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to provide any information regarding the Clearing Member to the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate provided that such other persons have an obligation to maintain the confidentiality of such information.
- d) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to receive any information regarding the Clearing Member from the Exchange(s) of which the Clearing Member is a member, the Clearing Member's applicable self-regulatory organization or regulatory or governmental agency, as the case may be, other clearing organizations of which the Clearing Member is a member, Market Centres, Delivery Agents, any Central Securities Depository, any Approved Custodian, any Acceptable Marketplace, the Corporation's auditors and any regulatory or governmental agency having jurisdiction over the Corporation, and such other persons and organizations as the Corporation may consider appropriate.
- e) Each Clearing Member, by virtue of its membership in the Corporation, is deemed to have authorized the Corporation to release any information regarding the Clearing Member that is

in a statistical summary or other format, provided the information does not specifically identify a particular Clearing Member.

- f) The Clearing Member, by virtue of its membership in the Corporation, is deemed to have released the Corporation and each of its directors, officers and employees from any and all liability whatsoever which may arise by virtue of information being furnished to the Corporation or any organization considered appropriate, for such purposes, by the Corporation.

2) Corporation Confidential Information

- a) A Clearing Member will not disclose any Confidential Information to any person and will not copy, reproduce or store in a retrieval system or data base any Confidential Information except for such copies and storage as may be required by the Clearing Member for its own internal use when employing CDCS.
- b) The Confidential Information will remain the exclusive property of the Corporation or the relevant third party.
- c) A Clearing Member will take reasonable security measures and use reasonable care to protect the secrecy of, and to avoid the disclosure to or use by third parties of, Confidential Information.
- d) Upon ceasing to be a Clearing Member or at any time upon the request of the Corporation, the Clearing Member will delete any Confidential Information from all retrieval systems and data bases or destroy same as directed by the Corporation and provide the Corporation with an officer's certificate attesting to such deletion or destruction.

For the purposes of this Subsection A-210(2), "Confidential Information" means all information relating to the Corporation, including all CDCC Material and any other information relating to CDCS such as trading data or procedures furnished by or on behalf of the Corporation to a Clearing Member, regardless of the manner in which it is furnished (whether oral or in writing or in any other form or media), but does not include:

- a) the Rules;
- b) information that is already published or otherwise is or becomes readily available to the public, other than by a breach of the Rules;
- c) information that is rightfully received by the Clearing Member from a third party not in breach of any obligation of confidentiality to the Corporation;
- d) information that is proven to be known by the Clearing Member on a non-confidential basis prior to disclosure by the Corporation; or
- e) information that is proven to be developed by the Clearing Member independent of any disclosure by the Corporation.

3) Use of CDCC Materials

- a) The Corporation grants each Clearing Member a limited, non-exclusive, revocable and non-transferable license to use CDCC Materials only for uses directly related to the Clearing Member's use of CDCS. The Clearing Member will not use CDCC Materials or any information obtained or derived from CDCC Materials except in accordance with this license. The Clearing Member acknowledges and agrees that all ownership right in the CDCC Materials belongs to the Corporation or its suppliers.

- b) If a Clearing Member (with CDCC's permission) discloses CDCC Materials or any information obtained or derived from CDCC Materials to a client (including to any of its Affiliates) receiving services from a Clearing Member, the Corporation may require the Clearing Member to obtain an undertaking from such client to comply with Section A-210 in its use of CDCC Materials or any information obtained or derived from CDCC Materials.
- c) Except as provided in Paragraphs (a) and (b) of this Subsection A-210(3), a Clearing Member will not: (i) copy or modify the CDCC Materials; (ii) sell, sublicense or otherwise transfer the CDCC Materials to any third party; (iii) reverse engineer or create derivative works based on the CDCC Materials; or (iv) use, disclose or communicate CDCC Materials or any information obtained or derived from CDCC Materials to or for the benefit of any third party or any Affiliate of the Clearing Member by any means whatsoever whether as a back-office service provider, outsourcer, or wholesaler to any third party or Affiliate of the Clearing Member or for the benefit of any joint venture or partnership to which the Clearing Member is a party.

SECTION A-211 NOTICE OF PROPOSED AMENDMENTS TO RULES

As required by law, the Corporation shall provide all Clearing Members with the text of any proposed rule change and a statement of its purpose and effect on Clearing Members. This Section A-211 shall not require the Corporation to provide Clearing Members with any proposed rule change in the cases where notice is not required by law including (i) the Corporation is of the opinion that an emergency requires the rule change without public consultation, (ii) the change is in respect of a new derivative, (iii) where the impact of a change on a Clearing Member is minor, (iv) the change pertains to a routine operational process or an administrative practice, (v) the change is intended for purposes of harmonization or compliance with an existing rule or with legislation, or (vi) the change corrects an error of form, a clerical error, a mistake in calculation or makes stylistic changes. The non-receipt by any Clearing Member of proposed rule changes under this Section A-211 shall not affect the validity, force or effect of any action taken by the Corporation pursuant thereto.

SECTION A-212 DEPOSITS AND WITHDRAWALS

1) General

- a) From time to time, each Clearing Member will be required to make payments, deposits or transfers of Cash, Securities, certificates, property, Underlying Interests, Underlying Interest Equivalents or other interests or rights (a "Deposit") to the Corporation under these Rules, to assure the performance of the obligations of such Clearing Member or to fulfil such Clearing Member's obligations to the Corporation hereunder.
- b) Each Deposit shall be deemed to have been made at the time that (i) the Deposit has been delivered to and accepted by the Corporation, (ii) where the Corporation has the authority or under these Rules is entitled to transfer or apply any monies, securities or position from any Clearing Member's account, whether such account is held at the Corporation or elsewhere, at the time such transfer or application is effected by the Corporation, or (iii) a Put Escrow Receipt, a Call Underlying Interest Deposit or a Futures Underlying Interest Deposit has been accepted by the Corporation.
- c) At the time of any Deposit hereunder, the Clearing Member shall indicate on the appropriate form filed with the Corporation the details and purpose of the Deposit.

- 2) Put Escrow Receipts, Call Underlying Interest Deposits or Futures Underlying Interest Deposits will be accepted only if the Approved Depository has agreed in writing in the form prescribed by the Corporation, that:
 - a) the Deposit has been received by such Approved Depository and is in Good Deliverable Form;
 - b) the Deposit shall be immediately delivered to the order of the Corporation in accordance with the terms and conditions of a Depository Agreement made between such Approved Depository and the Corporation (i) with respect to a Put Escrow Receipt, on demand at any time during the period the Corporation holds the Put Escrow Receipt, and (ii) with respect to a Call Underlying Interest Deposit or Futures Underlying Interest Deposit, by being pledged to the Corporation through a Central Securities Depository during the life of the relevant call Option or Future;
 - c) the Deposit shall remain (i) with respect to a Put Escrow Receipt, on deposit with the Approved Depository in trust for the Corporation until the Put Escrow Receipt is returned to the Approved Depository, or the Deposit is delivered to the order of the Corporation on demand in accordance with the relevant Put Escrow Receipt and the terms of the Depository Agreement; and (ii) with respect to a Call Underlying Interest Deposit or Futures Underlying Interest Deposit, on deposit with the Corporation through a Central Securities Depository until the Call Underlying Interest Deposit or Futures Underlying Interest Deposit is returned to the Approved Depository, or the Deposit is seized by the Corporation in accordance with the terms of the Depository Agreement; and
 - d) the Corporation shall have the right to hold the Put Escrow Receipt, Call Underlying Interest Deposit or Futures Underlying Interest Deposit until the Corporation is satisfied, following the filing of a withdrawal request pursuant to this Section, that all Margin required has been deposited with the Corporation.
- 3) The Clearing Member shall deliver the Deposit to the Corporation (together with such covering forms as the Corporation may require), between the hours specified by the Corporation. Clearing Members shall ensure that at all times the Deposits are not held by them but by the Corporation or an Approved Depository.
- 4) A Deposit may be withdrawn by a Clearing Member between the hours specified by the Corporation; provided, however, that the Corporation may continue to hold a Deposit:
 - a) following the Expiration Date of the relevant Options until all obligations of the Clearing Member arising from the assignment of Exercise Notices have been performed; or
 - b) following the acceptance of a Tender Notice until all obligations of the Clearing Member arising from the delivery of or payment for the Underlying Interest have been performed.

A Clearing Member seeking to withdraw a Deposit shall submit a duly completed withdrawal request in the form prescribed by the Corporation and must comply with the applicable notice requirements as set out in the Operations Manual.

- 5) Put Escrow Receipts, Call Underlying Interest Deposits and Futures Underlying Interest Deposits shall be deemed Underlying Interest Equivalents in accordance with Section A-706.
- 6) Deposits
 - a) At the time of the delivery of a Deposit, the Clearing Member shall indicate on the appropriate form filed with the Corporation whether the Deposit is a 'bulk deposit' or a 'specific deposit'.

- b) A bulk deposit may be made in respect of any number of unspecified Option Short Positions or unspecified Futures Short Positions held in the account of the Clearing Member for which the Deposit is made.
 - c) A specific deposit may be made only of Underlying Interest or Underlying Interest Equivalent held for the account of a named depositor in respect of a specified put or call Option Short Position or specified Futures Short Position held by the Clearing Member for such depositor. The Clearing Member shall maintain a record of each specific deposit, identifying the depositor, the account in which the Underlying Interest or Underlying Interest Equivalent is held and the specified positions for which the specific deposit has been made.
 - d) No Underlying Interest or Underlying Interest Equivalent held for the account of a Client may be deposited hereunder in respect of a position in any account other than a Client Account. No Underlying Interest or Underlying Interest Equivalent held for any Market Maker may be deposited hereunder in respect of a position in any account other than such Market Maker Account.
 - e) The Deposit hereunder by a Clearing Member of any Underlying Interest or Underlying Interest Equivalent held for the account of any Client may be made only to the extent permitted by applicable law, regulations and policies of the Corporation and shall constitute the certification of the Clearing Member to the Corporation that such Deposit does not contravene any provision of applicable law, regulations or policies of the Corporation.
 - f) The Clearing Member shall not deposit hereunder more Underlying Interest or Underlying Interest Equivalent held for a Client Account than is fair and reasonable in light of the indebtedness of the Client to such Clearing Member and the Client's positions with the Clearing Member.
 - g) The Corporation shall not use any Underlying Interest or Underlying Interest Equivalent in bulk deposit in a Client Account or a Market Maker Account, or the proceeds therefrom, to satisfy any obligation of the Clearing Member to the Corporation other than an obligation arising out of such Client Account or Market Maker Account.
- 7) Depository Receipts
- a) A Clearing Member may file a Depository Receipt issued by an Approved Depository (in the form approved by the Corporation) which certifies that the Underlying Interest or Underlying Interest Equivalent described therein is held by such Approved Depository in trust for the Corporation (in the case of a Put Escrow Receipt) or is pledged to the Corporation through a Central Securities Depository (in the case of a Call Underlying Interest Deposit or Futures Underlying Interest Deposit) on the instructions of a named depositor.
 - b) In the event any Short Position for which a Depository Receipt has been deposited is closed out by a Closing Purchase Transaction or by a Closing Buy Transaction, as the case may be, the Clearing Member making such Deposit may promptly request the withdrawal of the Depository Receipt evidencing such Deposit.
 - c) If a Clearing Member requests the withdrawal of a Depository Receipt issued in respect of a put or call Option or a Future while it is still outstanding, it may do so subject to satisfying the Margin requirement with respect thereof. When such Margin is deposited, the Corporation will release and return the Depository Receipt previously filed in respect of such put or call Option or Future, as the case may be.

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.

SECTION A-214 ELECTRONIC INTERFACES

As many functions previously conducted by the movement of paper between the Corporation and Clearing Members are now, or will in the future be, executed by electronic transfers of data to and from the Corporation, the words “access”, “deliver”, “furnish”, “instruct”, “issue”, “make available”, “notify”, “receive”, “submit” and “tender” shall include, where appropriate, the movement of information by electronic means between the Corporation and a Clearing Member.

SECTION A-215 LIABILITY

- 1) Notwithstanding anything to the contrary in the Rules, all obligations of the Corporation described in the Rules are solely to its Clearing Member. For greater certainty, the Rules are not to be interpreted or construed to imply that the Corporation has any obligation to any Entity other than its Clearing Members. Without limiting the generality of the foregoing, the Corporation is also not liable for obligations of a non-Clearing Member, or of a Clearing Member to a non-Clearing Member, of a Clearing Member to another Clearing Member who is acting for it as an agent, or obligations to a Client by a Clearing Member, nor shall the Corporation become liable to make deliveries to or accept deliveries from any such Entity.
- 2) Notwithstanding the fact that a Clearing Member may not be a member of an Exchange on which Options or Futures trade, such Clearing Member shall nonetheless be subject to the position limits, exercise limits and any risk limits established by such Exchange.
- 3) CDCS provides to Clearing Members, among other things, electronic data transmission services in connection with the acceptance and/or clearance of Transactions including, but not limited to, clearing and settlement, margining, holding of deposits and the preservation or communication of data in or through any computer or electronic data transmission system.
- 4) The Corporation shall not be required to perform any obligation under the Rules or make available CDCS nor shall it be held liable for any failure or delay in the performance of its obligations to any Clearing Member due to the unavailability of CDCS, if, as a result of *force majeure* or Emergency, it becomes impossible or impracticable to perform such obligation or make available CDCS, and where the Corporation could not, after using reasonable efforts (which would not require the Corporation to incur a loss other than immaterial, incidental expenses), overcome such impossibility or impracticability.
- 5) The Corporation shall not be liable to a Clearing Member for any direct or indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or other liability or claim suffered or incurred by or made against a Clearing Member as a result of the use by the Clearing Member of CDCS or any failure of CDCS or any act or omission of the Corporation, its directors, officers or employees, or members of any standing or ad hoc committee formed by the Corporation, regardless of whether such act or omission constitutes negligence. By making use of CDCS, Clearing Members expressly agree to accept any and all such loss, damage, cost, expense, or other liability or claim arising from the use of CDCS.

- 6) The Corporation shall not be liable to a Clearing Member for any indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or any other liability or claim suffered or incurred by or made against a Clearing Member as a result of the failure by the Corporation to pay a Settlement Amount owing in respect of a transaction, regardless of whether such failure constitutes negligence.
- 7) In the event any legal proceeding is brought by any person against the Corporation seeking to impose liability on the Corporation as a direct or indirect result of the use by a Clearing Member of CDCS, the Clearing Member shall reimburse the Corporation for:
 - a) all expenses and legal fees incurred by the Corporation in connection with the proceeding;
 - b) any award pronounced against the Corporation in any judgment in the event it is found to be liable; and
 - c) any payment made by the Corporation, with the consent of the Clearing Member, in settlement of any such proceeding.
- 8) The exemption from liability of the Corporation set out in this Section A-215 shall not extend to, nor limit liability for damages caused through an intentional or gross fault as defined in Article 1474 of the Civil Code of Québec.

SECTION A-216 AUDITED STATEMENTS OF THE CORPORATION

After they have been presented to the Board, the Corporation shall furnish at its expense to each Clearing Member one copy of:

- a) the balance sheet forming part of its audited financial statements for such fiscal year, with accompanying notes related to the balance sheet;
- b) the report of the Corporation's independent auditor thereon; and
- c) the report of the Corporation's independent auditors on the suitability of the system of internal controls of the Corporation with the objectives of internal control stated by the Corporation pertaining to its:
 - i) administration;
 - ii) information technology;
 - iii) trading/assignment/exercise; and
 - iv) margin and collateral.

SECTION A-217 CORPORATION AS AGENT RE SETTLEMENT ACCOUNTS

Each Clearing Member will establish a separate Canadian dollar bank account, and if a Clearing Member clears Options, Futures, or Options and Futures, a separate United States of America dollar Bank account, for settling Transactions in this currency (the "Settlement Accounts"). Each Clearing Member hereby appoints the Corporation to act as its agent, and the Corporation hereby accepts such appointment upon the terms and conditions hereof, solely for the purpose of effecting, on behalf of such Clearing Member, electronic payment instructions from the Settlement Accounts for the purpose of paying all amounts owing by the Clearing Member to CDCC. Nothing herein shall abrogate a Clearing Member's obligations

hereunder to maintain sufficient funds in the Settlement Accounts for the purposes of ensuring complete and timely settlement of the Clearing Member's obligations hereunder.

SECTION A-218 WAIVER OF IMMUNITY

Each Clearing Member irrevocably waives, with respect to itself and all of its revenues and assets, and each Limited Clearing Member, with respect to any pension plan or fund or compensation fund in respect of which it is acting and all revenues and assets of such pension plan or fund or compensation fund, all immunity on the grounds of sovereignty or other similar grounds from suit, jurisdiction of any court, relief by way of injunction, order for specific performance or for recovery of property, attachment of its assets (whether before or after judgment) and execution or enforcement of any judgment to which it or its revenues or assets might otherwise be entitled in any proceedings in the courts of any jurisdiction and irrevocably agrees that it will not claim any such immunity in any proceedings.

SECTION A-219 PARAMOUNTCY

In the event of any conflict between the Operations Manual (including any Schedule to the Operations Manual) and these Rules (without reference to the Operations Manual), the terms and conditions of the Rules (without reference to the Operations Manual) will govern to the extent of such inconsistency.

SECTION A-220 GOVERNING LAW

The Rules shall be governed by and construed in accordance with the laws of the province of Quebec and the federal laws of Canada applicable therein. Each Clearing Member, by virtue of its membership in the Corporation, attorns to the jurisdiction of the courts of Quebec.

The term "pledge" (and any correlative term) in the Rules and any Application for Membership includes a security interest and hypothec and any provision whereby a pledge is or shall be granted includes the grant of a security interest and hypothec.

SECTION A-221 CONTACT INFORMATION

Each Clearing Member shall, upon admission as a Clearing Member and, promptly following any change in such information, communicate to the Corporation the names and full contact information for its Clearing Member Level 1, Clearing Member Level 2 and Clearing Member Level 3 contacts, as set forth in the Operations Manual.

SECTION A-222 APPROVED SECURITIES INTERMEDIARY

- 1) An Approved Securities Intermediary is a financial institution that meets the following criteria:
 - a) It is (i) a trust company to which the Trust and Loan Companies Act (Canada) applies or subject to the Loan and Trust Corporations Act (Ontario) or an Act Respecting Trust Companies and Savings Companies (Quebec) or equivalent legislation of other provinces of Canada, or (ii) such other institution as the Board may, in its sole discretion, approve from time to time;

- b) It has a minimum capital of \$25,000,000, for which current audited financial statements are available;
 - c) It is a full member participant in good standing with CDS;
 - d) It is not subject to bankruptcy, insolvency, winding-up or restructuring proceedings and no administration, receiver manager, trustee or person with similar power has been appointed in connection with the entity; and
 - e) It is party to an agreement with a Clearing Member pursuant to which (a) the Corporation may, on an annual basis, require the Corporation's auditor to make any general or special examination of the financial affairs of the Approved Securities Intermediary or to report upon the whole or any aspect of the business or affairs thereof; (b) the Corporation's auditor, for the purpose of this special examination shall be entitled to request from the Approved Securities Intermediary, or its auditors, any information or items which the auditors believe to be relevant to any transactions directly or indirectly related to the business of the Corporation and no person, Approved Securities Intermediary, or Clearing Member shall withhold, conceal, destroy or refuse to give any such information or items reasonably required by the Corporation's auditors for the purpose of this examination, and (c) an Approved Securities Intermediary must provide any information or items requested by the Corporation's auditor within the time period specified on the request.
- 2) In the event that Margin Deposits are made through an Approved Securities Intermediary in accordance with these Rules, the Corporation shall not be liable for any direct or indirect or consequential loss, damage, loss of anticipated profit, loss of bargain, cost, expense, or other liability or claim suffered or incurred by or made against a Clearing Member as a result of the use by the Clearing Member of an Approved Securities Intermediary or any failure of an Approved Securities Intermediary. By making use of an Approved Securities Intermediary, Clearing Members expressly agree to accept any and all such loss, damage, cost, expense, or other liability or claim arising from the use of an Approved Securities Intermediary.

SECTION A-223 APPROVED DEPOSITORY

- 1) The Corporation may accept that Deposits be made through an Approved Depository in accordance with these Rules on the basis that the Approved Depository is an Approved Securities Intermediary that meets the following additional criteria:
- a) It enters into a Depository Agreement with the Corporation in form acceptable to the Corporation;
 - b) It enters into an agreement with the depositor (either a Clearing Member or a client of a Clearing Member) wishing to make Deposits in the form of Cash to be held in trust for the Corporation and certified by Put Escrow Receipts, and/or Call Underlying Interest Deposits and/or Futures Underlying Interest Deposits to be pledged to the Corporation through a Central Securities Depository pursuant to Section A-706, which agreement shall clearly set forth the conditions under which the Approved Depository will handle such Deposits, issue Depository Receipts and honour the Corporation's demands for release in respect of Put Escrow Receipts, consistent with the terms of the Depository Agreement;
 - c) It holds each Deposit that is the object of a Put Escrow Receipt as custodian for the account of the depositor in trust for the Corporation with the express authority from the depositor to act in such capacity in respect of a specific put Option;

- d) It holds each Deposit that is the object of a Put Escrow Receipt free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or in any third party's favour;
- e) It is duly authorized by the depositor to release a Deposit that is the object of a Put Escrow Receipt in favour of the Corporation in accordance with the terms of the Depository Agreement;
- f) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific call Option;
- g) It pledges on behalf of the depositor each Deposit that is the object of a Call Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour;
- h) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit to the Corporation through a Central Securities Depository with the express authority from the depositor to effect such pledge of the relevant Underlying Interest in respect of a specific Future; and
- i) It pledges on behalf of the depositor each Deposit that is the object of a Futures Underlying Interest Deposit free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour.

SECTION A-224 APPROVED CUSTODIAN

- 1) The Corporation may accept that a Clearing Member satisfies the Margin requirements pursuant to Rule A-7 Margin Requirements by depositing all Margin required to be deposited through an Approved Custodian in accordance with these Rules on the basis that the Approved Custodian is an Approved Securities Intermediary that meets the following additional criteria:
 - a) It enters into an Account Control Agreement with the Clearing Member and the Corporation in form acceptable to the Corporation, which agreement shall clearly set forth the conditions under which the Approved Custodian shall hold the securities pledged by the Clearing Member to the Corporation, subject to the control (within the meaning of the *Securities Transfer Act, 2006* (Ontario) as in effect from time to time (the "STA")) of the Corporation, and comply with the Corporation's instructions, including notice of exclusive control, consistent with the terms of the Account Control Agreement and the Rules; and
 - b) It accepts that the Corporation shall have control within the meaning of the STA over each deposit made by the Clearing Member into the account subject to the Account Control Agreement free from liens or encumbrances and does not subject it or any part of it to any right (including any right of set-off), charge, security interest, lien or claim of any sort in its own or any third party's favour.
- 2) Notwithstanding anything to the contrary contained in the Rules or in the Account Control Agreement between the Corporation and a Clearing Member, the Corporation shall not deliver a notice of exclusive control (as defined in the applicable Account Control Agreement) or entitlement order (within the meaning of the STA) to an Approved Custodian pursuant to the terms of such Account Control Agreement (other than an entitlement order given jointly by the Corporation and

the Clearing Member for the withdrawal by such Clearing Member of collateral other than income contained in the account subject to the Account Control Agreement) , unless such Clearing Member is suspended in accordance with Section A-1A05; and, in connection with a notice of exclusive control that has been delivered in connection with an Account Control Agreement, if the Clearing Member is no longer suspended, the Corporation shall promptly deliver notice rescinding such notice of exclusive control to the Approved Custodian in accordance with the Account Control Agreement.

RULE A-3 FINANCIAL RESILIENCE REQUIREMENTS

SECTION A-301 MINIMUM CAPITAL REQUIREMENTS

- 1) This Section A-301 is not applicable to Limited Clearing Members.
- 2) Unless a specific temporary exception is made by the Corporation in the case of a particular Clearing Member due to unusual circumstances, a Clearing Member shall not at any time permit its minimum capital to be less than:
 - a) the minimum capital adequacy requirement adopted from time to time by the Investment Industry Regulatory Organization of Canada, for an SRO Clearing Member;
 - b) the minimum capital adequacy requirement adopted from time to time by the Office of the Superintendent of Financial Institutions, for a Bank Clearing Member; or
 - c) the minimum capital adequacy requirement adopted from time to time by the Regulatory Body having jurisdiction over the Clearing Member, and that is judged by the Corporation to be comparable to such capital adequacy requirement applicable to a Bank Clearing Member, for a Financial Institution Clearing Member.
- 3) Every Clearing Member shall file with the Corporation, on request, a report covering the computation of the capital requirements.
- 4) A Fixed Income Clearing Member, in spite of Subsection A-301(2), must also meet the following criteria:
 - a) if it submits only Firm Fixed Income Transactions,
 - i) have minimum capital of \$50,000,000 and be a primary dealer for government securities auctions for the Bank of Canada; or
 - ii) have minimum capital of \$100,000,000.
 - b) if it submits both Firm Fixed Income Transactions and Client Fixed Income Transactions, have minimum capital of \$200,000,000.
 - c) for the purpose of this Subsection A-301(4), “capital” means the Clearing Member’s shareholder’s equity as reflected in its most recent financial statement filed with the Investment Industry Regulatory Organization of Canada or with Office of the Superintendent of Financial Institutions or the Regulatory Body having jurisdiction over the Clearing Member, as the case may be, in accordance with Section A-305, which financial statement is updated on a monthly basis or quarterly basis, as applicable. The Corporation may also, in its sole discretion, take into consideration other forms of capital as a substitute for shareholder’s equity, including the subordinated debt of the Clearing Member or an irrevocable parent company guarantee covering the Clearing Member satisfactory to the Corporation.
 - d) for the purpose of this Subsection A-301(4), “Firm Fixed Income Transactions” shall mean all Fixed Income Transactions submitted by a Clearing Member for its own account and for the account of any of its Affiliates, and “Client Fixed Income Transactions” shall mean all Fixed Income Transactions submitted by a Clearing Member for the account of any of its Clients, other than any of its Affiliates.

SECTION A-302 FINANCIAL RESILIENCE

No Transaction shall be cleared by the Corporation for any Clearing Member to which Section A-301 applies from the time the Corporation acquires actual knowledge that such Clearing Member does not meet the minimum capital adequacy requirements prescribed in Section A-301.

No Transaction shall be cleared by the Corporation for any Limited Clearing Member from the time the Corporation acquires actual knowledge that such Limited Clearing Member does not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05.

SECTION A-303 EARLY WARNING

- 1) A Clearing Member to which Section A-301 applies shall notify the Corporation immediately if such a Clearing Member has any indication or suspicion that it may not meet the minimum capital adequacy requirements prescribed in Section A-301 or that any calculation of its capital requirement, as determined from time to time by the Corporation, reflects a capital deficiency or early warning situation as provided in this Section A-303.
- 2) A Limited Clearing Member shall notify the Corporation immediately if such a Clearing Member has any indication or suspicion that it may not meet the minimum ongoing financial resilience requirements prescribed in Section A-1B05.
- 3) An SRO Clearing Member shall advise the Corporation immediately if such Clearing Member enters any early warning level (as defined from time to time by the Investment Industry Regulatory Organization of Canada).
- 4) A Bank Clearing Member shall advise the Corporation immediately if such Clearing Member fails to meet the minimum capital adequacy requirements that may be set from time to time by the Office of the Superintendent of Financial Institutions.
- 5) A Financial Institution Clearing Member shall advise the Corporation immediately if such Clearing Member fails to meet the minimum capital adequacy requirements that may be set from time to time by the Regulatory Body having jurisdiction over such Clearing Member.
- 6) A Limited Clearing Member shall advise the Corporation immediately if such Limited Clearing Member fails to maintain its Designated Eligibility Rating or Designated Maintenance Rating; or its Replacement Eligibility Metric or Replacement Maintenance Metric, as applicable.

SECTION A-304 AUDITS

- 1) The Corporation has the authority to inspect the books and records of Clearing Members and may require any Clearing Member and any responsible representative of such Clearing Member to appear personally before the Corporation and produce its books and records and answer questions deemed reasonably necessary by the Corporation regarding any actual or alleged violation of the Rules.
- 2) Unless otherwise agreed to by the Corporation, the audit of the financial statements of a Clearing Member will take place on the fiscal year-end of such Clearing Member.
- 3) The audit of the financial statements of a Clearing Member shall be conducted in accordance with generally accepted auditing standards and shall include a review of the accounting system, the internal accounting control and procedures for safeguarding securities. It shall include all audit

procedures necessary under the circumstances to support the opinions which must be expressed to meet all legal and regulatory requirements applicable to such Clearing Member.

- 4) Clearing Members shall cause their auditors to also comment on any material inadequacies found to exist in the accounting system, the internal accounting control or in the procedures for safeguarding securities and shall indicate any corrective action the Clearing Member has taken or which it proposes to implement and shall provide copies of these comments to the Corporation.

SECTION A-305 FILING PROCEDURES

- 1) Each SRO Clearing Member shall deliver to the Corporation one copy of Parts I and II of the Joint Regulatory Financial Questionnaire and Report, together with the certificate of partners or directors, as required by the self-regulatory body of which such SRO Clearing Member is a member, in the form prescribed by such self-regulatory body promptly after such documents are provided to the self-regulatory body.
- 2) Each Bank Clearing Member shall deliver to the Corporation one copy of the Capital Adequacy Return, as required by the Office of Superintendent of Financial Institutions, in the form prescribed by the Office of Superintendent of Financial Institutions and at the same time such documents are provided to the Office of Superintendent of Financial Institutions, and one copy of its annual financial statements, in the form prescribed by the Office of Superintendent of Financial Institutions and promptly after such documents are provided to the Office of Superintendent of Financial Institutions.
- 3) Each Financial Institution Clearing Member shall deliver to the Corporation one copy of such report as required and in the form prescribed by the Regulatory Body having jurisdiction over such Clearing Member demonstrating the Clearing Member's compliance with the capital adequacy requirement applicable to it and one copy of its annual financial statements, in the form prescribed by the Regulatory Body and promptly after such documents are provided to the Regulatory Body.
- 4) Each Limited Clearing Member shall deliver to the Corporation one copy of the annual audited financial statements prescribed by the governmental agency or the pension regulator having jurisdiction promptly after such documents are provided to such agency or regulator. In the case of a Limited Clearing Member which is a pension plan board, it shall additionally deliver to the Corporation one copy of the annual information return prescribed by its pension regulator promptly after such return is provided to its pension regulator.

SECTION A-306 SPECIAL EXAMINATIONS

- 1) The Corporation may at any time require the Corporation's auditor to make any general or special examination of the financial affairs of any Clearing Member or to report upon the whole or any aspect of the business or affairs thereof.
- 2) The Corporation's auditor for the purpose of this special examination shall be entitled to request from the Clearing Member, or its auditors, any information or items which the auditors believe to be relevant to any transactions directly or indirectly related to the business of the Corporation and no person or Clearing Member shall withhold, conceal, destroy or refuse to give any such information or items reasonably required by the Corporation's auditors for the purpose of this examination. A Clearing Member must provide any information or items within a reasonable time following a reasonable request by the Corporation's auditor.

**SECTION A-307 BOARD ACTION RELATING TO FINANCIAL RESILIENCE DEFICIENCY
CONCERNS**

- 1) If the Board determines as a result of any early warning notice under Section A-303, filing under Section A-304 or A-305, general or special examination under Section A-306, or from any other information given to or obtained by it, including from an appropriate self-regulatory organization or regulatory agency, that a Clearing Member to which Section A-301 applies does not have minimum capital satisfying the requirements referred to in Section A-301, that a Limited Clearing Member does not meet the ongoing financial resilience requirements prescribed in Section A-1B05, or that a Clearing Member otherwise is in or is believed by the Board in its sole discretion to be in, such financial condition that the Board in its sole discretion deems it is undesirable in the public interest or in the interest of the Corporation that the Corporation continue to accept and/or clear such Clearing Member's Transactions, the Board pursuant to Rule A-1A may at any time suspend such Clearing Member concerned for such period and on such terms and conditions as the Board may determine and notice thereof shall be issued promptly to other Clearing Members in accordance with Section A-1A06.
- 2) The Board may as an alternative determine that it is in the interest of the public or in the interest of the Corporation that the Corporation continue to accept and/or clear such Clearing Member's Transactions but that the Corporation's auditors should regulate and generally supervise the operations of the Clearing Member, as they relate to its activities or performance as a Clearing Member, for such period and in such manner as the Corporation may direct. Notice thereof shall be issued promptly to other Clearing Members.
- 3) Any examination, report or supervision required by the Corporation pursuant to this Rule A-3 shall be conducted at the expense of the Clearing Member involved.

RULE A-4 ENFORCEMENT

SECTION A-401 ACTION AGAINST A NON-CONFORMING OR SUSPENDED MEMBER

- 1) The actions contemplated by the Rules in respect of a Non-Conforming Member or suspended Clearing Member may be taken in any sequence the Corporation deems appropriate.
- 2) In addition to a measure made available to the Corporation under the Rules and the Application for Membership to remedy a specific or general default of a Clearing Member, where a Clearing Member is a Non-Conforming Member, 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;
 - b) increasing the Margin Requirements for such Clearing Member or requiring additional Margin Deposits;
 - c) requiring such Clearing Member to reduce or close out (or closing out on behalf of such Clearing Member) existing Transactions in such Clearing Member's accounts with the Corporation and, upon such close out, converting all amounts into Canadian currency and calculating one net amount (taking into account the Corporation's rights with respect to the Margin Deposit of such Clearing Member) owing to such Clearing Member by the Corporation or by such Clearing Member to the Corporation;
 - d) transferring, whether by way of transfer, by way of assignment, by way of termination, close-out and re-establishment or otherwise, any Client Account maintained by such Clearing Member with the Corporation, any position maintained in such account and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member;
 - e) sanctioning, reprimanding, fining or imposing a penalty on the Clearing Member;
 - f) preventing or restricting the Clearing Member's right to withdraw any excess in Margin Deposits pursuant to Section A-607 or Section A-704; and
 - g) suspending the Non-Conforming Member.
- 3) Upon the suspension of the Clearing Member and in addition to a measure made available to the Corporation under Subsection A-401 (2) or other provisions under the Rules, 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) applying the Margin Deposit (including, without limitation, Margin and Clearing Fund) of the suspended Clearing Member against the obligations of such Member to the Corporation, subject to Subsection A-402(3) and, for such purpose, selling, transferring, using or otherwise dealing or disposing of, or terminating under an Account Control Agreement authorizations to deal with, any property deposited as Margin Deposit at any time, without prior notice to the Clearing Member;
 - b) transferring, terminating, closing out or liquidating any or all of the Clearing Member Transactions or Open Positions, and upon such close out, converting all amounts into Canadian currency and calculating one net amount (taking into account the Corporation's rights with

respect to the Margin Deposit of such Clearing Member) owing to such Clearing Member by the Corporation or by such Clearing Member to the Corporation.

- 4) Before exercising any actions contemplated under this Section A-401, however, the Corporation will enter into consultations with the Bank of Canada and specify the actions it considers exercising with respect to the Non-Conforming Member or suspended Clearing Member who may be affected by an order under subsection 39.13(1) of the Canada Deposit Insurance Corporation Act or the Affiliates of such Clearing Member.

SECTION A-402 CREATION OF LIQUIDATING SETTLEMENT ACCOUNT

- 1) Upon the suspension of a Clearing Member, the Corporation may convert to cash all Margin Deposits with the Corporation by such Clearing Member in all accounts (including Securities held in bulk deposit but excluding Securities held in specific deposit) including all of such Clearing Member's contributions to Clearing Funds. For purposes of making any such conversion to cash of Margin Deposits, the Corporation may sell, transfer, use or otherwise deal or dispose of any property deposited as Margin Deposit at any time, without prior notice to such Clearing Member. These and all other funds of the suspended Clearing Member subject to the control of the Corporation shall be placed by the Corporation in a special account, to be known as the Liquidating Settlement Account, for the purposes hereinafter specified.
- 2) Notwithstanding the provisions of Subsection A-402(1), if the Corporation shall determine in its sole discretion, taking into account the size and nature of a suspended Clearing Member's Margin Deposits, the market condition prevailing at the time, the potential market effects of liquidating transactions that might be directed by the Corporation, and such other circumstances that the Corporation deems relevant, that the conversion to cash of some or all of the suspended Clearing Member's Margin Deposits would not be in the best interest of the Corporation, other Clearing Members or the general public, such deposits need not be converted to cash, provided that any determination made pursuant to this Subsection shall be reported to the Board within 24 hours.
- 3) Notwithstanding the provisions of Subsection A-402(1) and Subsection A-402(2), 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; provided, however, that if the Clearing Member does not identify its Deposits with respect to each of its accounts, the Corporation shall use Margin Deposits without distinction as securing all the obligations of the Clearing Member in respect of all its accounts.

SECTION A-403 PENDING TRANSACTIONS

- 1) Transactions submitted by a Clearing Member after it has been suspended shall be accepted or rejected by the Corporation in accordance with the regulations, rules and policies of the Exchange or Acceptable Marketplace on which they took place, and in the event that an Exchange Transaction is rejected, it shall be closed by the Clearing Member thereto in accordance with the Rules or in accordance with the regulations, rules and policies of the Exchange or Acceptable Marketplace on which the transaction was effected.
- 2) With respect to Open Positions and accepted Transactions:

- a) monies payable to the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-to-Market Valuation in the Client Account shall be deposited by the Corporation in a Clients Settlement Account for remittance to the suspended Clearing Member or its representative for distribution to the persons entitled thereto in accordance with applicable law;
- b) monies payable to the suspended Clearing Member in Settlement of Gains and Losses in the respective Market Maker Accounts shall be held in such accounts pending the closing of all Open Positions and transactions in such accounts for application in accordance with the applicable Market Maker Account agreement;
- c) monies payable to the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-To-Market Valuation in the Firm Account shall be credited by the Corporation to the Liquidating Settlement Account;
- d) monies owed to the Corporation in Settlement of Gains and Losses and/or Mark-To-Market Valuation in any account shall be withdrawn by the Corporation from the Liquidating Settlement Account;
- e) monies owed to the Corporation in Settlement Amounts for settlements not yet paid, will remain in the Liquidating Settlement Account in the form of Margin Deposits until the next available Settlement Time consistent with the Transaction from which the Settlement Amounts were derived;
- f) monies payable to the suspended Clearing Member in Settlement Amounts for settlements not yet paid, will remain in the Liquidating Settlement Account in the form of Margin Deposits until the next available Settlement Time consistent with the Transaction from which the Settlement Amounts were derived.

SECTION A-404 OPEN POSITIONS

- 1) Open Positions of a suspended Clearing Member, may, in the Corporation's sole discretion, be closed by the Corporation at such price as the Corporation deems reasonable, transferred to another Clearing Member in accordance with the auction process set forth in the Operations Manual, or maintained by the Corporation. Amounts payable to the Corporation in Settlement of Gains and Losses and/or Mark-to-Market Valuation, as a result of closing transactions effected by the Corporation shall be withdrawn from the suspended Clearing Member's Liquidating Settlement Account; provided, however, that amounts payable to the Corporation in Settlement of Gains and Losses in a Market Maker Account shall first be withdrawn from the funds available in such account and only the amount of any deficit therein shall be withdrawn from the Liquidating Settlement Account. Amounts receivable by the suspended Clearing Member in Settlement of Gains and Losses and/or Mark-to-Market Valuation as a result of a closing transaction effected by the Corporation or the transfer of an Open Position shall be credited to the suspended Clearing Member's Liquidating Settlement Account. Clients affected by any closing or transfer of an Open Position shall be notified as promptly as possible.
- 2) With respect to Options:
 - a) Open Long Positions in the Client Account of a suspended Clearing Member shall be maintained by the Corporation. The Corporation shall promptly use its best efforts to identify each Client having a Long Position in such account, to transfer each such Client's Long Position to another Clearing Member, and to notify each such Client of such transfer; in the event that notwithstanding the best efforts of the Corporation any Long Position in a Client

Account of a suspended Clearing Member cannot promptly be transferred to another Clearing Member, such Long Position may be closed by the Corporation in the most orderly manner practicable and the proceeds shall be deposited in a Clients Settlement Account;

- b) Open Long Positions in any Market Maker Account of a suspended Clearing Member shall be closed by the Corporation in the most orderly manner practicable and the proceeds of such closing transactions shall be held in such account pending the closing out of all Open Positions and transactions for application in accordance with the applicable Market Maker Account agreement;
 - c) Open Long Positions in a suspended Clearing Member's Firm Account shall be closed by the Corporation in the most orderly manner practicable, and the proceeds of such closing transactions shall be credited by the Corporation to the suspended Clearing Member's Liquidating Settlement Account; and
 - d) Open Short Positions in any account of a suspended Clearing Member may, in the Corporation's sole discretion, be closed by the Corporation at such price as the Corporation deems reasonable, transferred to another Clearing Member, or maintained by the Corporation. Amounts payable to the suspended Clearing Member in settlement of Closing Purchase Transactions effected by the Corporation shall be withdrawn from the suspended Clearing Member's Liquidating Settlement Account; provided, however, that amounts payable to the suspended Clearing Member in settlement of Closing Purchase Transactions in a Market Maker Account shall first be withdrawn from the funds available in such account and only the amount of any deficit therein shall be withdrawn from the Liquidating Settlement Account. Clients affected by any closing or transfer of a Short Position, if known to the Corporation, shall be notified as promptly as possible.
- 3) If the Corporation elects or is required pursuant to this Section A-404 to close both Long Positions and Short Positions in the same series of Options or Futures or Fixed Income Transactions with respect to the same Acceptable Security or OTCI options carried by a suspended Clearing Member, the Corporation may, close such positions through closing transactions on an Exchange (in the case of Options and Futures only) or offset such positions against each other, reducing the Open, Long and Short Positions of the Clearing Member in such series by the same number of Option contracts or Futures contracts or reducing the open position of the Clearing Member in Fixed Income Transactions with respect to the same Acceptable Security or in OTCI options. If the Corporation closes positions in any series of Options or Futures or Fixed Income Transactions with respect to the same Acceptable Security or OTCI options by offset pursuant to the foregoing sentence, the Corporation shall notify the suspended Clearing Member or its representative thereof, and such positions shall be deemed to have been closed at a price equal to the closing Market Price as determined by the Exchange involved for such series on the date when the positions were offset in the case of Options or Futures or at a price determined by the Corporation in the case of Fixed Income Transactions with respect to the same Acceptable Security or OTCI options.
- 4) Notwithstanding the provisions of Subsection A-404(3), if the Corporation, through an officer or designated representative, shall determine in its sole discretion, taking into account the size and nature of a suspended Clearing Member's positions, the market conditions prevailing at the time, the potential market effects of liquidating Transactions that might be directed by the Corporation, and such other circumstances as the Corporation deems relevant, that the closing out of some or all of the suspended Clearing Member's Transactions would not be in the best interests of the Corporation, other Clearing Members or the general public, such positions need not be closed out, provided that any determination made pursuant to this Subsection shall be reported to the Board within 24 hours.
- 5) If the Corporation, through an officer or its other designated representative shall:

- a) determine that the Corporation is unable, for any reason, to close out in a prompt and orderly fashion, any Transactions or to convert to cash any Margin Deposits of a suspended Clearing Member, or
- b) elect pursuant to Subsection A-404(4) not to close out any such Transactions or pursuant to Subsection A-402(2) not to convert to cash any such Margin Deposits, the Corporation may authorize the execution from time to time for the account of the Corporation, solely for the purpose of reducing the risk to the Corporation resulting from the continued maintenance of such positions or the continued holding of such Margin Deposits, of hedging transactions, including, without limitation, the purchase or sale of Underlying Interests or interests deemed similar thereto or Transactions on any such Underlying Interests or similar interests. The Corporation may delegate to specified officers or agents of the Corporation the authority to determine, within such guidelines, if any, as the Corporation may prescribe, the nature and timing of such hedging transactions. Any authorizing of hedging transactions shall be reported to the Board within 24 hours, and any such transactions that are executed shall be reported to the Board on a daily basis. Hedging transactions effected for the account of the Corporation pursuant to this Paragraph shall be closed out or exercised promptly as the positions to which they relate are eliminated, whether by expiration, transfer, close out or assignment. Any cost or expenses, including losses sustained by the Corporation in connection with Transactions effected for its account pursuant to this Paragraph shall be charged to the Liquidating Settlement Account of the suspended Clearing Member, and any gains realized on such Transaction shall be credited to such Liquidating Settlement Account; provided, however, that costs, expenses and gains related to the hedging of positions in a Market Maker Account or a Client Account shall be charged or credited, as the case may be, to that account, and only the excess, if any, of such costs and expenses over the funds available in that account shall be charged to the Liquidating Settlement Account. Reasonable allocations of costs, expenses and gains among accounts made by the Corporation for the purpose of implementing the proviso to the preceding sentence shall be binding on the Clearing Member and any persons claiming through the Clearing Member and the respective successors and assigns.

SECTION A-405 EXERCISED OPTIONS AND TENDER NOTICES

Unless the Corporation stipulates otherwise in a particular case, exercised Options to which a suspended Clearing Member is a party or Futures which have been the subject of Tender Notice to which a suspended Clearing Member is a party shall be closed through the procedures set forth in Sections B-404, B-405, C-510 and C-511, respectively, except that the Corporation may decide not to buy-in or sell-out, as the case may be, in the event that the Corporation is informed that the Underlying Interest is in transit or transfer. All losses and gains on such buy-ins and sell-outs shall be paid from or credited to, as the case may be, the Liquidating Settlement Account of the suspended Clearing Member; provided, however, that all losses on such buy-ins and sell-outs in a Market Maker Account shall first be paid from such account to the extent there are funds available in such account and only the amount of any deficit therein shall be paid from the Liquidating Settlement Account.

SECTION A-406 AMOUNTS PAYABLE TO THE CORPORATION

The Corporation shall be entitled promptly to recover from a suspended Clearing Member, any amount payable to the Corporation in accordance with these Rules, including all costs and expenses, including legal expenses, incurred by the Corporation, from such Clearing Member's Liquidating Settlement Account with the Corporation upon completion of the liquidation of such Clearing Member's positions in accordance with this Rule A-4.

SECTION A-407 MEMBER CLAIMS

All claims upon the Liquidating Settlement Account of a suspended Clearing Member by other Clearing Members resulting from losses incurred when closing pending transactions, or closing Open Positions or in the delivery of Underlying Interests or buying in or selling out exercised Options in accordance with this Rule A-4 shall be filed with the Corporation in the form prescribed. Such claims shall be paid as follows:

- 1) Claims for losses incurred when closing pending transactions with a suspended Clearing Member that are rejected for clearance shall be subordinate to all other claims upon the Liquidating Settlement Account. The Corporation shall pay such claims, to the extent funds are available, from the Liquidating Settlement Account of the suspended Clearing Member only after payment of all other applicable claims, and such claims shall not constitute a claim upon the Clearing Fund contributions of other Clearing Members; and
- 2) Claims for losses incurred on buy-ins and sell-outs, and the closing of Open Positions, shall be senior to all other claims upon the Liquidating Settlement Account. If a buy-in, sell-out or closing transaction does not occur by the close of the first full Business Day immediately following the issuance of the notice of suspension, the claim thereon shall be limited to the amount that would have been recoverable if, in the case of a buy-in or sell-out, the buy-in had been made at the highest price or the sell-out at the lowest price at which the Underlying Interest traded in the market in which it trades, on the first full Business Day or, in the case of the closing of Open Positions, if the positions had been closed by the close of the first full Business Day.

SECTION A-408 NO WAIVERS

No failure by the Corporation to exercise, nor any delay on its part in exercising, any of its rights (in whole or in part) under these Rules shall operate as a waiver of the Corporation's rights or remedies upon that or any subsequent occasion, nor shall any single or partial exercise of any right or remedy prevent any further exercise thereon or any other right or remedy.

SECTION A-409 CLEARING MEMBER CLOSE-OUT RIGHTS

- 1) The provisions of this Section A-409 apply to all Transactions. In the event of any inconsistency between the provisions of this Section A-409 and the other provisions of the Rules, the provisions of this Section A-409 will prevail.
- 2) The occurrence of either of the following events in respect of CDCC will constitute an event of default (an "Event of Default"):
 - a) an Insolvency Event within the meaning of Paragraph A-409(3)(a); and
 - b) a Failure to Pay within the meaning of Subsection A-409(4).
- 3)
 - a) An "Insolvency Event" occurs if:
 - i) CDCC commences an Insolvency Proceeding with respect to it or an Insolvency Proceeding is commenced with respect to CDCC; provided, however, that an "Insolvency

Event” will not occur if a Clearing Member institutes any action as a result of a Failure to Pay by CDCC which results in the commencement of an Insolvency Proceeding;

- ii) any regulatory or governmental authority having jurisdiction over CDCC in Canada (a “Competent Authority”) institutes any action which results in the commencement of an Insolvency Proceeding; or
 - iii) a Competent Authority takes any action under any derivatives, securities, payment or clearing or similar law of Canada (or any province or territory thereof) which prevents CDCC from performing when due its payment or delivery obligations to Clearing Members under the Rules.
- b) Each Clearing Member agrees to not institute any action as a result of a Failure to Pay by CDCC which may result in the commencement of an Insolvency Proceeding with respect to CDCC.
- c) “Insolvency Proceedings” means proceedings for the purpose of liquidating, restructuring or reorganizing the assets and liabilities of CDCC under the Bankruptcy and Insolvency Act (Canada) (“BIA”), under the Companies’ Creditors Arrangement Act (Canada) (“CCAA”), under a court-supervised interim receivership under the BIA, or under a court-supervised receivership in accordance with rules of the common law or other laws of general application relative to the powers of the courts.
- d) For the purposes of the Rules, Insolvency Proceedings shall be deemed to commence at the following times:
- i) bankruptcy proceedings under the BIA commence on the day that (A) CDCC files an assignment in bankruptcy; (B) a bankruptcy order is made in respect of CDCC; or (C) in connection with proposal proceedings, CDCC is deemed to have made an assignment in bankruptcy, including (x) if CDCC gives notice of intention to file a proposal but no cash flow statement as required by the BIA or no proposal is filed within the applicable time period allowed following the notice of intention to file a proposal, which is the date that the applicable time period expires, (y) if a filed proposal is rejected by creditors, which is the date that the creditors refuse the proposal, or (z) if an approved proposal is later annulled by the court, which is the date of the annulment order;
 - ii) proposal proceedings under the BIA commence on the day the notice of intention to file a proposal is made or, if no notice is made, on the day the proposal is filed;
 - iii) proceedings under the CCAA commence on the day that a court makes an order under the CCAA with respect to the affairs of CDCC; and
 - iv) court-supervised receivership proceedings commence on the day that the court makes an order placing the assets of CDCC under the control of its interim receiver, receiver or receiver-manager.
- 4) A “Failure to Pay” means:
- a) a Payment Default within the meaning of Subsection A-409(5); or
 - b) a Non-Payment of the Cash Settlement Amount following a Delivery Default within the meaning of Subsection A-409(6).
- 5) A “Payment Default” occurs if:

- a) CDCC fails to make when due any payment (including a payment under Subsection A-804(5) but excluding a payment of a Cash Settlement Amount following a Delivery Default under Subsection A-409(6)) in respect of a payment claim of a Clearing Member against CDCC under a Transaction;
 - b) such Clearing Member notifies CDCC in writing of such failure (a “Payment Request”);
 - c) CDCC’s failure to make such payment to such Clearing Member continues for a period of more than 30 days after the date of the Payment Request; and
 - d) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.
- 6)
- a) A “Non-Payment of the Cash Settlement Amount following a Delivery Default” occurs if a Delivery Default occurs within the meaning of paragraph A-409(6)(b) and a Cash Settlement Payment Default also occurs within the meaning of paragraph A-409(6)(c).
 - b) A “Delivery Default” occurs if:
 - i) CDCC fails to perform, when due, any delivery obligation to a Clearing Member arising from any Transaction other than a Failed Delivery pursuant to Subsection A-804(2);
 - ii) such Clearing Member has requested CDCC in writing to fulfill such delivery obligation (a “Delivery Request”);
 - iii) after the expiry of a period of not less than 30 days following the date of the Delivery Request, if CDCC’s failure to perform is continuing, the affected Clearing Member requests in writing a cash settlement amount determination of the unsatisfied delivery obligation from the Calculation Agent (a “Cash Settlement Amount Calculation Request”); and
 - iv) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.

From the date of a Cash Settlement Amount Calculation Request (a “Cash Settlement Amount Calculation Request Date”), CDCC will no longer be obliged to make any delivery under the relevant Transaction. This obligation will be replaced by an obligation of CDCC to pay the Clearing Member the Cash Settlement Amount.

- c) A “Cash Settlement Payment Default” occurs if:
 - i) after the expiry of a period of not less than five Business Days following the Cash Settlement Amount Calculation Request Date, the Clearing Member which made such request has requested CDCC in writing to pay the Cash Settlement Amount (a “Cash Settlement Payment Request”);
 - ii) after the expiry of a period ending on a Business Day which is not less than two days after the date of the Cash Settlement Payment Request, CDCC fails to pay such Clearing Member the Cash Settlement Amount; and
 - iii) such Clearing Member is neither a Non-Conforming Member nor a suspended Clearing Member.

- d) Upon the Cash Settlement Amount Calculation Request Date, the Calculation Agent will calculate the cash settlement amount (“Cash Settlement Amount”) within five Business Days of the Cash Settlement Amount Calculation Request as follows:
 - i) the Default Value of the assets which are the subject of the Delivery Default (the “Non-delivered Assets”) will be determined by the Calculation Agent;
 - ii) the Default Value of Non-delivered Assets will be set-off against the amount of the corresponding payment obligation of the Clearing Member under the relevant Transaction, such that the Cash Settlement Amount shall be equal to any such net amount which is owed by CDCC or the Clearing Member, whichever has the claim valued at the lowest amount; and
 - iii) “Default Value” means with respect to any Non-delivered Assets, the value of such assets determined by the Calculation Agent using the following method:

The basis of the calculation will be the price for the Non-delivered Assets on the Business Day prior to the Cash Settlement Amount Calculation Request Date. To determine such price, the Calculation Agent will use the average of three quoted prices from Clearing Members other than the affected Clearing Member which participate in the relevant market and which shall quote a market price of the Non-delivered Assets as of the Business Day preceding the Cash Settlement Amount Calculation Request Date. The average of the quoted prices will be the Default Value of the Non-delivered Assets. If less than three quotations are provided as requested or the resulting price does not accurately reflect the value of the Non-delivered Assets because the relevant market is not operating normally, the Calculation Agent will determine the Default Value for the Non-delivered Assets acting in good faith and by using commercially reasonable procedures expected to produce a commercially reasonable result.

- e) When the Calculation Agent determines a Cash Settlement Amount for Non-delivered Assets, it will be entitled to terminate, on a pro rata basis, Transactions with the affected Clearing Member from which CDCC has a claim to receive assets of the same kind up to the same quantity of assets to offset the original Transaction in respect of which CDCC would otherwise be required to pay a Cash Settlement Amount to the affected Clearing Member. With respect to any such terminated Transaction, the affected Clearing Member shall not be required to perform its obligation to deliver the relevant assets to CDCC and the Calculation Agent will determine the Cash Settlement Amount by offsetting the corresponding payment obligation of CDCC under any such terminated Transaction against the corresponding payment obligation of the affected Clearing Member under the original Transaction and such net amount shall be owed by CDCC or the Clearing Member, whichever has the claim valued at the lowest amount.
- 7) If at any time an Event of Default has occurred and is then continuing, the affected Clearing Member, in the case of an Event of Default which stems from a Failure to Pay, or any Clearing Member, in the case of an Event of Default which stems from an Insolvency Event, may by giving no less than two and not more than five Business Days’ written notice to CDCC, designate an early termination date (“Early Termination Date”) in respect of all Transactions to which such Clearing Member is a party.
 - 8) Upon the effective designation of an Early Termination Date pursuant to Subsection A-409(7), neither CDCC nor the relevant Clearing Member will be obliged to make any further payment or delivery under the applicable Transactions which would have become due thereafter. These obligations will be replaced by an obligation of either CDCC or the relevant Clearing Member, as applicable, to pay a Final Settlement Amount for all Transactions entered into in respect of Client Accounts, a Final Settlement Amount for all Transactions entered into in respect of Market Maker

Accounts and a Final Settlement Amount for all Transactions entered into in respect of Firm Accounts, all in accordance with Subsection A-409(10).

- 9) The Calculation Agent is CDCC which will be responsible for calculating any Cash Settlement Amount under Subsection A-409(6) and any Final Settlement Amount under Subsection A-409(10).
- 10) Upon the effective designation of an Early Termination Date pursuant to Subsection A-409(7), the Calculation Agent will as soon as practicable calculate the final settlement amount as follows:
 - a) “Final Settlement Amount” means the amount determined by the Calculation Agent to be equal to, as of the Early Termination Date, (a) the sum of all Transaction Values which are positive for CDCC and the Amounts Due owed to CDCC less (b) the absolute value of the sum of the amounts of all Transaction Values which are negative for CDCC and the Amounts Due owed by CDCC. When determining the Final Settlement Amount, the Calculation Agent shall act in good faith and by using commercially reasonable procedures expected to produce a commercially reasonable result. The Calculation Agent will calculate a Final Settlement Amount for all Transactions entered into in respect of Client Accounts, a Final Settlement Amount for all Transactions entered into in respect of Market Maker Accounts and a Final Settlement Amount for all Transactions entered into in respect of Firm Accounts. The Final Settlement Amount in respect of Client Accounts and that in respect of Firm Accounts will not be netted or set-off.
 - b) “Transaction Value” means, with respect to any Transaction or group of Transactions, an amount equal to the loss incurred (expressed as a positive number) or gain realized (expressed as a negative number) by CDCC as a result of the designation of the Early Termination Date in respect of such Transaction(s), determined by calculating the arithmetic mean of the quotations for replacement or hedge transactions on the Quotation Date obtained by the Calculation Agent from not less than two leading market participants, including Clearing Members other than the affected Clearing Member. Each such quotation shall be expressed as the amount which the market participant would pay or receive on the Quotation Date if such market participant were to assume, as from the Quotation Date, the rights and obligations of CDCC (or their economic equivalent) under the relevant Transaction(s). The resulting amount shall be expressed as a positive number if it would be payable to the market participant, and shall otherwise be expressed as a negative number.
 - c) “Quotation Date” means the Early Termination Date.
 - d) “Amounts Due” owed by a party means the sum of (i) any amounts that were required to be paid by such party or would have been required to be paid by such party but for the designation of the Early Termination Date under any Transaction on or prior to the Early Termination Date, but not paid, (ii) the Termination Value, as of the agreed delivery date, of each asset that was required to be delivered by such party on or prior to the Early Termination Date under any Transaction, but not delivered (in either case regardless of whether or not the party was entitled to withhold such payment or delivery), and (iii) interest calculated daily based on the applicable CORRA Rate (provided, however, that for any day which is not a Business Day, the CORRA Rate applicable on the immediately preceding Business Day shall be used for such purpose) on the amounts specified in (i) and (ii) from (and including) the due date of the relevant payment or delivery to (but excluding) the Early Termination Date.
 - e) “Termination Value” means, in respect of any assets on any given date, an amount equal to the market price (including fees and expenses) which such party would have reasonably incurred in purchasing assets of the same kind and quantity in the market on such date;

provided, however, that if a market price for such assets cannot be determined, an amount which the Calculation Agent determines in good faith to be the total losses and costs (or gains, as applicable) in connection with such assets.

- 11) The Final Settlement Amount in respect of Client Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount. The Final Settlement Amount in respect of Market Maker Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount. The Final Settlement Amount in respect of Firm Accounts, as calculated by the Calculation Agent, will be payable (i) to CDCC by the Clearing Member if it is a positive number and (ii) by CDCC to the Clearing Member if it is a negative number; in the latter case the amount payable shall be the absolute value of such Final Settlement Amount.
- 12) The Calculation Agent will notify the affected Clearing Member in writing as soon as practicable of the Final Settlement Amount calculated by it and provide a statement setting forth in reasonable detail the basis on which the Final Settlement Amount was determined. The Final Settlement Amount is payable by CDCC or the Clearing Member, as applicable, immediately upon receipt of such notice.
- 13) The affected Clearing Member may set off its obligation (if any) to pay the Final Settlement Amount against any actual or contingent claims (“Counterclaims”) which it has against CDCC arising from CDCC’s obligations to that Clearing Member under any other contractual arrangement, as applicable. For the purpose of calculating the value of the Counterclaims, the Clearing Member shall (i) to the extent that they are contingent or unascertained, take into account for such calculation their potential amount, if ascertainable, or otherwise a reasonable estimate thereof, (ii) to the extent that they are claims other than for the payment of money, determine their value in money and convert them into a money claim and (iii) to the extent that they are not yet due and payable, determine their present value (also having regard to interest claims).
- 14)
 - a) A Clearing Member’s close-out rights under this Section A-409 supersede its right to voluntarily withdraw as a Clearing Member set out in Section A-1A09. For greater certainty, an affected Clearing Member cannot exercise its right to withdraw from its membership if an Event of Default has occurred or any circumstance or event has occurred which, with the giving of notice or the lapse of time or both, would constitute an Event of Default.
 - b) A Failure to Pay will be deemed not to have occurred if the Failure to Pay occurs as a result of a circumstance within the meaning of clause i) of the definition of an Emergency in Section A-102 or which is otherwise a force majeure.

SECTION A-410 – ELIGIBLE FINANCIAL CONTRACTS

- 1) CDCC and each Clearing Member acknowledge that:
 - a) the payment and delivery obligations of a Clearing Member and of CDCC arising from a Transaction constitute an eligible financial contract between CDCC and the Clearing Member;

- b) each of the Membership Agreement and the Rules constitute master agreements in respect of such eligible financial contracts and accordingly are also eligible financial contracts between CDCC and each Clearing Members; and
 - c) the provisions of the Membership Agreement and the Rules which are of the type described in section 11.1 of the Derivatives Act (Québec) constitute an instrument contemplated by such section 11.1 and are considered to have been reiterated immediately after the coming into effect on November 30, 2011 of said section, and CDCC and each Clearing Member therefore benefit from the provisions of sections 11.1 and 11.2 of the Derivatives Act (Québec).
- 2) The Rules and the Membership Agreement shall be interpreted so as to ensure that CDCC or a Clearing Member, as the case may be, is accorded the rights and powers of a party to an eligible financial contract pursuant to the *Bankruptcy and Insolvency Act* (Canada), the *Companies' Creditors Arrangement Act* (Canada), the *Winding-Up and Restructuring Act* (Canada), the *Canada Deposit Insurance Corporation Act* or any similar legislation.
- 3) With respect to the *Payment Clearing and Settlement Act* (Canada), the provisions of the Membership Agreement and the Rules constitute (i) settlement rules of a designated clearing and settlement system within the meaning of section 8 of that Act, effective as of CDCC's designation under subsection 4 (1) of that Act; (ii) a netting agreement between two or more financial institutions within the meaning of section 13 of that Act; and (iii) a netting agreement between a securities and derivatives clearing house and a clearing member within the meaning of section 13.1 of that Act.

SECTION A- 411 -DEFAULT MANAGEMENT PERIOD

- 1) A Default Management Period means the period:
- a) commencing on the day that the Corporation declares the suspension of a Clearing Member, and
 - b) concluding on the Default Management Period End Date;
- provided however, that if the Corporation declares the suspension of a Clearing Member when a Default Management Period is ongoing due to the prior suspension of another Clearing Member, multiple Clearing Members' suspensions will be processed in a single Default Management Period.
- 2) The Default Management Period End Date shall occur on the Business Day following the declaration by the Corporation that:
- a) the obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension(s) of Non-Conforming Member(s) are known, or can reasonably be determined, and have been satisfied or otherwise settled; or
 - b) any of the actions, rights or remedies available to the Corporation with respect to the suspension of any Clearing Member that were deemed necessary by the Corporation have been taken; and
 - c) the Default Management Period with respect to the suspended Clearing Member(s) has been completed.

RULE A-5 DISCIPLINARY PROCEEDINGS

SECTION A-501 SANCTIONS

- 1) The Corporation may in addition to or in lieu of other measures, impose a fine or a penalty, not to exceed \$250,000, on, and assess any reasonable costs, including legal fees, incurred by the Corporation against any Non-Conforming Member for any violation of any provision of the Application for Membership, or for any neglect or refusal by such Non-Conforming Member to comply with any applicable order or direction of the Corporation, or for any error, delay or other conduct embarrassing to the operations of the Corporation or for failure to provide adequate personnel or facilities for its transactions with the Corporation.
- 2) The Corporation shall be entitled to recover from any Non-Conforming Member the amount of any fines or penalties or sanctions assessed against it, plus the Corporation's reasonable costs and expenses, including legal expenses, incurred in connection with the matter giving rise to the fine or penalty or sanction.

SECTION A-502 PROCEDURES

- 1) Except as provided for in Subsection A-502(4) and in Section 7 of the Operations Manual with respect to late payments, the nature and quantum of any fine or penalty or sanction shall be determined and imposed by the Board. Before any sanction and/or fine and/or penalty is imposed by the Board, the Corporation shall furnish the Non-Conforming Member with a concise written statement of the charges. The written statement of charges shall contain any provision of the Application for Membership which is alleged to have been violated, the facts alleged and intended to be relied upon by the Corporation and the penalty or remedy recommended by the Corporation for each violation.
- 2) In the event that a Non-Conforming Member commits a breach contemplated under any provision of the Application for Membership, that Non-Conforming Member is subject to the penalties provided for in respect of such provisions. Said penalties shall not be imposed against such Non-Conforming Member until a hearing is held pursuant to Subsection A-502(3).
- 3) The Non-Conforming Member shall have 10 days after the delivery of a statement under Subsection 502(1) to file a written answer thereto. The answer shall admit or deny each allegation contained in the statement of charges and may also contain any defence which the Non-Conforming Member wishes to submit. The Board shall schedule a hearing as soon as reasonably practicable. The Non-Conforming Member shall be given not less than 10 days' advance notice of the place and time of such hearing. The notice of hearing shall contain a statement of the date, time and place of the hearing; a reference to the authority under which the hearing is being held; and the facts alleged and intended to be relied upon by the Corporation and the conclusions drawn by the Corporation based on the alleged facts. At the hearing, the Non-Conforming Member shall be afforded the opportunity to be heard and may be represented by counsel. A Non-Conforming Member shall be deemed to have waived its right to contest the imposition of any sanctions and/or fines and/or penalties if it fails to file a defence and shall be deemed to have accepted any allegations and/or fines and/or penalties contained in the statement of charges which are not denied. As soon as practicable after the conclusion of the hearing, the Board shall furnish the Non-Conforming Member with a written statement of its decision, which shall be final, conclusive and binding on the Non-Conforming Member.

- 4) Any action required to be taken under this Rule A-5 by the Board may be delegated to a committee (the “Disciplinary Committee”), which shall consist of not less than three directors and may include such officers as the Board may delegate. In the event an action is taken by the Disciplinary Committee, the Board shall be advised and such action may be reviewed by the Board, either upon its own motion made at or before its next regular meeting or upon a motion filed by any person directly affected within seven days after the Disciplinary Committee has rendered its final decision. The Board may, in its sole discretion, afford the Non-Conforming Member a further opportunity to be heard or to present evidence as stipulated in the By-laws of the Corporation. A majority of the members of the Disciplinary Committee shall be Resident Canadians.
- 5) Any time limit set forth in this Section may be extended by the Board, the Disciplinary Committee, or by any officer acting pursuant to authorization of the Board.
- 6) Nothing contained herein shall be construed as derogating or attempting to derogate from the right of any Non-Conforming Member who has been the subject of disciplinary action pursuant hereto to avail itself of any right of appeal which is provided to such Non-Conforming Member by applicable law.

SECTION A-503 DISCIPLINE BY EXCHANGES

Nothing in this Rule A-5 shall affect the right of any Exchange to discipline its members pursuant to the provisions of the by-laws, rules, directions or orders of such Exchange for a violation of the by-laws, rules, orders or directions of such Exchange, or of its application for membership.

RULE A-6 CLEARING FUND DEPOSITS

SECTION A-601 CLEARING FUND MAINTENANCE AND PURPOSE

- 1) The Corporation shall establish a Clearing Fund relating to all Transactions cleared by the Corporation. Each Clearing Member, except Limited Clearing Members, admitted to clear Transactions at the Corporation shall maintain a deposit in the Clearing Fund of the amounts from time to time required by the Rules. The Clearing Fund shall be used for the purposes set out in Section A-609 and Subsection A-701(2).
- 2) The Clearing Fund Base Deposits are as follows:
 - a) Options Clearing Base Deposit - \$25,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.
 - b) Futures Clearing Base Deposit - \$75,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.
 - c) OTCI Clearing Base Deposit(other than Fixed Income Transactions) - \$100,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.
 - d) Fixed Income Transactions Clearing Base Deposit - \$1,000,000 Cash or equivalent value (as set out in Section A-608) of Acceptable Treasury Bills.
- 3) This Rule A-6 is not applicable to Limited Clearing Members.

SECTION A-602 AMOUNT OF CLEARING FUNDS

The Clearing Fund is constituted of the aggregate amount of the Clearing Fund deposits required by each Clearing Member at the close of each calendar month as Base Deposit and Variable Deposit. The amount required to be deposited by each Clearing Member to the Clearing Fund shall be calculated according to Section A-603. Unless otherwise specified, the Clearing Fund shall not include any deposit made in excess of the amount of the Clearing Fund deposits required by each Clearing Member.

SECTION A-603 AMOUNT OF DEPOSIT

- 1) The required deposit of each Clearing Member to the Clearing Fund shall be an amount equal to the total of:
 - a) an Options Clearing Base Deposit, if the Clearing Member has been accepted to clear Options;
 - b) a Futures Clearing Base Deposit, if the Clearing Member has been accepted to clear Futures;

- c) an OTCI Clearing Base Deposit, if the Clearing Member has been accepted to clear OTCI transactions other than Fixed Income Transactions;
 - d) a Fixed Income Transactions Clearing Base Deposit, if the Clearing Member has been accepted to clear Fixed Income Transactions; and
 - e) a Variable Deposit equal to the amount by which (i) the Clearing Member's contribution, in accordance with the methodology set out in the Risk Manual, to the Corporation's Uncovered Residual Risk exceeds (ii) such Clearing Member's Base Deposits.
- 2) Within a calendar month, if the Corporation determines that an increase to the Variable Deposit is necessary to protect its financial integrity, the Corporation will notify with a Clearing Fund statement the concerned Clearing Member(s) which shall increase in the determined amount and approved form its contribution to the Clearing Fund no later than 2:00 p.m. on the following Business Day.

SECTION A-604 CHANGES IN REQUIREMENT

The amount of Base and Variable Deposits required to be made by Clearing Members may be modified from time to time by the Corporation. If the deposit to the Clearing Fund required to be made by a Clearing Member is thereby increased, the increase shall not become effective until the Clearing Member is given 3 Business Days prior written notice of such modification. Unless a Clearing Member notifies the Corporation in writing that it wishes to withdraw its membership and closes out or transfers all of its aggregate positions in the relevant instrument before the effective date of such amendment, such Clearing Member shall be liable to make the increased deposit.

SECTION A-605 CLEARING FUND STATEMENT

On the first Business Day of each calendar month, the Corporation shall issue to each Clearing Member 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 required of such Clearing Member. Any surplus over and above the amount required or any deficit to be satisfied will also be shown. A Clearing Fund statement will also be issued intra-monthly if an increase to the Variable Deposit is necessary. The concerned Clearing Member will have until no later than 2:00 p.m. on the next Business Day to remediate any deficit.

SECTION A-606 ADDITIONAL CLEARING FUND DEPOSIT

Whenever a Clearing Member's Clearing Fund statement shows a deficit, such Clearing Member shall satisfy the deficit by a deposit in a form approved by the Corporation no later than 2:00 p.m. on the Business Day following the issuance of the Clearing Fund statement.

SECTION A-607 WITHDRAWALS

In the event that the Clearing Fund statement of a Clearing Member shows a surplus, the Clearing Member may request the withdrawal of such surplus by submitting a withdrawal request in the form and time prescribed by the Corporation.

SECTION A-608 FORM OF DEPOSITS

- 1) In addition to Base Deposits made pursuant to the requirements of Subsection A-601(2), Variable Deposits to the Clearing Fund shall also be in the form of Cash and/or in Acceptable Treasury Bills valued at a discounted rate, as determined by the Corporation from time to time in accordance with the methodology set out in the Risk Manual, of their market value; if no market value is generally available for such Acceptable Treasury Bills, they shall be valued at an amount determined by the Corporation. Substitutions may be made with the prior approval of the Corporation. Deposits in Cash shall be transferred by irrevocable funds transfer to the Corporation and may, from time to time, be partially or wholly invested by the Corporation for its account. To the extent not so invested, they shall be deposited to the credit of the Corporation in such financial institutions as the Board may select. Deposits in Cash shall not be used by the Corporation as working capital but any interest or gain received or accrued on the investment of such funds shall belong to the Corporation.
- 2) Any Clearing Fund deposit shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Cash and/or Acceptable Treasury Bills. All interest or gain received or accrued on any Acceptable Treasury Bills, prior to any sale, negotiation or pledge thereof, shall belong to the depositing Clearing Member.

SECTION A-609 APPLICATION OF CLEARING FUND

- 1) The Corporation shall apply a suspended Clearing Member's Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund deposits), as well as the Clearing Fund deposits required of all other Clearing Members in accordance with Subsection A-609(2), as set out in Subsection A-701(2) and in accordance with the methodology set out in the Default Manual.
- 2) If the amount of the obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension of a Clearing Member exceeds the total amount of the suspended Clearing Member's Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund), and if such Clearing Member fails to pay the Corporation the amount of the deficiency on demand, the Corporation shall apply its own capital resources specifically set aside for such purpose up to the maximum amount set out in the Default Manual for a single Default Management Period, and if the amount of the deficiency exceeds such amount, the remaining deficiency shall be paid out of the Clearing Fund and charged based on the bidding behaviour of each Clearing Member in good standing in the course of the auction conducted in the course of the Default Management Period ("Default Auction") but, subject to and in accordance with the methodology set out in the Default Manual. In the event no Default Auction is conducted in the course of the Default Management Period, any deficiency shall be charged to the Clearing Members other than the suspended Clearing Member(s), pro rata, based on the quotient obtained by dividing the amount of such Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period by the aggregate amount of Clearing Fund deposits required at the beginning of the Default Management Period by all Clearing Members other than the suspended Clearing Member(s). Notwithstanding any such charges made against the Clearing Fund deposits of each of the Clearing Members, the suspended Clearing Member which failed to pay the deficiency shall remain liable to the Corporation for the full amount of such deficiency until its repayment.
- 3) Whenever any such charges are made against Clearing Members' deposits to the Clearing Fund, the Corporation shall promptly notify each Clearing Member of the amount of the charge and the reasons therefor. For the purposes of this Section A-609, the amount of any claim of the Corporation for deficiencies against a Clearing Member shall be determined without reference to the possibility of any subsequent recovery in respect thereof, through insolvency proceedings or otherwise, but the net amount of any such recovery shall be applied in accordance with Section A-612.

- 4) Without limiting the rights of the parties under Section A-607 and Subsections A-609(1) and (2), at the sole discretion of the Corporation, all property deposited with the Corporation as a Clearing Fund deposit by any and all Clearing Members may be pledged, repledged, hypothecated, rehypothecated or transferred by the Corporation as security for, or in connection with, the Corporation's own obligations to any person incurred in order (a) 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 a Clearing Member as being a Non-Conforming Member, or (b) to fund a payment obligation of the Corporation which arises pursuant to a Failed Delivery under Subsection A-804(1) by any Clearing Member, and any such security or transfer will be effective without the holder or recipient thereof being required to make any enquiry as to whether the applicable obligations have been incurred for the purposes set out in this Subsection A-609(4) or whether the funds so obtained are being used for such purposes. Without limiting the rights of the Corporation under Subsection A-701(2), at the sole discretion of the Corporation, in the case of the situation described in (a) above, the Corporation shall pledge the Non-Conforming Member's Margin Deposits (including, without limitation, Margin and Clearing Fund), in accordance with Subsection A-701(5), before pledging the Clearing Fund deposits of other Clearing Members. In the case of the situation described in (b) above, the Corporation shall pledge the Clearing Fund deposits of the Provider of Securities responsible for the Failed Delivery before pledging the Clearing Fund deposits of other Clearing Members. The Corporation shall be deemed to continue to hold all property deposited with the Corporation as Clearing Fund deposits, regardless of whether the Corporation has exercised its rights under this Subsection A-609(4).
- 5) Without limiting the rights of the Corporation under Subsections A-609(1) and A-609(4), during a single Default Management Period, the Corporation shall not, with respect to each Clearing Member that has not been suspended, apply more than 200 % of the Clearing Fund deposit required by such Clearing Member as of the date of the commencement of the Default Management Period to satisfy or otherwise settle any obligations, losses or expenses incurred or sustained by the Corporation in connection with the suspension(s) of Clearing Member(s).

SECTION A-610 MAKING GOOD ON CHARGES TO CLEARING FUND

Whenever an amount is paid out of the Clearing Fund deposits of the Clearing Members that have not been suspended, in accordance with Subsection A-609(2), such Clearing Members shall be liable to make good the deficiency if any in their deposits resulting from such payment no later than 2:00 p.m. on the Business Day following the date that the amount is paid out unless the Corporation issues a notice specifying a later date. Notwithstanding the foregoing, Clearing Members will not be liable to make good during a single Default Management Period more than an additional 200% of the amount of their Clearing Fund deposits required at the beginning of the Default Management Period as prescribed by the Rules.

SECTION A-611 DEPOSIT REFUND

- 1) Whenever a Clearing Member ceases to be a Clearing Member in accordance with Section A-1A09, the amount of its Clearing Fund deposit shall be returned, subject to the time limit specified in Subsection A-611(2). All outstanding amounts chargeable against a Clearing Member's deposit in connection with its activities while a Clearing Member, shall be deducted from the amount to be returned.
- 2) Thirty days after a Clearing Member has ceased to be a member of the Corporation in accordance with Section A-1A09, the Corporation shall authorize such former member to withdraw its Clearing Fund deposit.

SECTION A-612 RECOVERY OF LOSS

- 1) Subject to Section A-1013, if an amount charged against the deposits of Clearing Members in the Clearing Fund is subsequently recovered by the Corporation from the Clearing Member whose failure to pay led to the amount being charged, in whole or in part, the net amount of such recovery shall be paid or credited to the Clearing Members against whose deposit the loss was charged in proportion to the amount charged against their respective deposits, whether or not they remain Clearing Members.
- 2) Any Clearing Member that has had an amount charged against its deposit under Subsection A-609(2), shall have the right to claim from the Clearing Member whose failure to pay a deficiency led to the amount being charged and the Clearing Member shall be obliged to reimburse such other Clearing Member the amount so charged against the Clearing Member's deposit to the extent that such amount has not been recovered by the Corporation pursuant to Subsection A-612(1).

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-706 UNDERLYING INTEREST AND UNDERLYING INTEREST EQUIVALENT

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 or Underlying Interest Equivalent as herein defined.

- 1) For CALL **OPTIONS** the Underlying Interest or Underlying Interest Equivalent shall mean:
- a) Equity Options –
 - b) the underlying Security or any Security exchangeable or convertible without restriction, other than the payment of Cash, into the underlying Security shall be acceptable, provided that neither the Security nor the right to exchange or convert lapses throughout the life of the Option. Where the payment of money is a condition of conversion such Cash shall be deposited with the Corporation at the same time as the convertible Security. This provision applies to warrants, rights, and convertible Securities.
 - c) a Call Underlying Interest Deposit issued by an Approved Depository in favour of the Corporation.
 - d) Bond Options – Government of Canada Bonds (excluding Canada Savings Bonds) which:
 - i) are the underlying bond; or
 - ii) have been determined by the Corporation as acceptable on the basis that they:
 - have higher coupon rates;
 - have an aggregate face value at maturity of at least \$1,000,000,000;
 - trade at a premium of \$5 greater than the underlying bond; and
 - mature no sooner than 2 years prior to the underlying bond.
 - e) Silver Options – silver certificates issued by organizations acceptable to the Corporation.
 - f) Cash Settlement Options –
 - g) Government Securities as specified in Section A-707 equal in value to the aggregate current value (which for the purposes of this Section A-706 have the meaning attributed thereto in

Section B-1001 as the context requires) of the Option at the close of trading on the Business Day prior to the deposit.

- h) If the value of the government Securities deposited for each contract falls below the value of the aggregate current value on any Business Day the Corporation may call for an additional deposit or Margin.
- i) Options on short term money-market instruments expiring in one year or less.

The Underlying Interest or any other instrument acceptable to the Corporation.

- j) Futures Options – Government of Canada Bonds (excluding Canada Savings Bonds) which:
 - i) are the underlying bond; or
 - ii) have been determined by the Corporation as acceptable.
 - k) Gold Options – gold certificates issued by organizations acceptable to the Corporation.
- 2) For **PUT OPTIONS** Underlying Interest and Underlying Interest Equivalent shall mean:
- a) Cash deposited at the Corporation in the amount of the relevant Exercise Price;
 - b) a Put Escrow Receipt issued by an Approved Depository in favour of the Corporation.
- 3) For **FUTURES** Underlying Interest and Underlying Interest Equivalent shall mean:
- a) any Underlying Interest which would be considered to be in Good Deliverable Form on the corresponding Futures contracts;
 - b) a Futures Underlying Interest Deposit issued by an Approved Depository in favour of the Corporation.

For cash settlement Futures, the Corporation may impose from time to time at its sole discretion Margin requirements on the Underlying Interest or Underlying Interest Equivalent as determined by the Corporation.

SECTION A-707 ELIGIBLE COLLATERAL

Margin requirements may be fulfilled by depositing, subject to Section A-212, one or more of the following forms of eligible collateral which meet certain criteria as described in the Risk Manual:

- 1) Cash – Clearing Members may deposit Cash by way of an irrevocable funds transfer to the Corporation. Funds so deposited may, from time to time, be partially or wholly invested by the Corporation for its account and, to the extent not so invested, shall be deposited to the credit of the Corporation in such financial institutions as the Board may select. Any interest or gain received or accrued on the investment of such funds shall belong to the Corporation. Such funds shall not be used by the Corporation as working capital.
- 2) Debt – Clearing Members may deposit with the Corporation debt Securities which respect certain eligibility criteria determined by the Corporation in the Risk Manual (“Debt Securities”). The

Corporation establishes, reviews on a regular basis and publishes the list of eligible Debt Securities on its web site.

Debt Securities shall be freely negotiable and shall be valued at a discounted rate to their market value, as determined by the Corporation from time to time in accordance with the methodology set forth in the Risk Manual. Such valuation rate shall be applied to the market value of the relevant Securities. "Market value" as used in this Subsection A-707(2) shall be determined on the close of each Business Day by the Corporation through reference to one or more data supply services retained by the Corporation for such purpose. If a market value is required to be determined on a non-Business Day, and the data supply service does not provide a market value for such day, the market value on the immediately preceding Business Day shall be used. If no market value is generally available for any Debt Securities accepted by the Corporation as eligible collateral, such Securities shall be valued at an amount determined by the Corporation.

The Debt Securities shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Debt Securities as Margin. All interest or gain received or accrued on such Debt Securities prior to any sale or negotiation thereof shall belong to the depositing Clearing Member and such interest will be paid to such depositing Clearing Member by the relevant issuer.

- 3) Valued Securities – In addition to the Underlying Interest and Underlying Interest Equivalent which may be deposited under Section A-706, Clearing Members may deposit with the Corporation certain Securities which respect certain eligibility criteria determined by the Corporation in the Risk Manual ("Valued Securities"). The Valued Securities shall be deemed to be deposited with the Corporation at the time the Corporation accepts the Valued Securities as Margin.

The Corporation may, on an exceptional and temporary basis at its sole discretion, accept other forms of eligible collateral or cease accepting any form of eligible collateral and require, if applicable, the replacement of such collateral. When the Corporation ceases to accept a form of eligible collateral, the Corporation shall notify all Clearing Members who, where required, shall promptly replace all unacceptable forms of collateral deposited with the Corporation with eligible collateral.

RULE A-8 DAILY SETTLEMENT

SECTION A-801 DAILY SETTLEMENT SUMMARY

- 1) Each Business Day the Corporation shall issue or make available to each Clearing Member in accordance with the Operations Manual, the reports, notice, instruction, data or other information summarizing each Clearing Member's activities, including the payments, deposits, transfer, delivery, Margin and Clearing Fund obligations required in connection with such activities.
- 2) For greater certainty, subject to any Rule which expressly prohibits netting, on each Business Day:
 - a) the Corporation shall have the right to net all payments owing to a Clearing Member on such Business Day, other than payments owing to a Clearing Member which are settled through a Central Securities Depository, against all payments owing by a Clearing Member on such Business Day, other than payments owing by a Clearing Member which are settled through a Central Securities Depository, such that one net amount shall be payable to or from such Clearing Member by the Settlement Time;
 - b) subject to Subsection A-704(2), the Corporation shall have the right to net Margin requirements, other than the Net Variation Margin Requirement under Section D-607, owing by a Clearing Member in respect of one product on such Business Day against excess Margin delivered by such Clearing Member and available in respect of another product on such Business Day such that Margin in one net amount is required to be delivered by the Clearing Member on such Business Day or one net amount is available for withdrawal by such Clearing Member on such Business Day under Section A-704;
 - c) in respect of the delivery versus payment settlement of Acceptable Securities through a Central Securities Depository, subject to Subsection D-606(6), the Corporation shall have the right to net all payments owing to a Clearing Member on such Business Day, including without limitation, any due and payable Postponed Payment Obligation, against all payments owing by a Clearing Member on such Business Day, including without limitation, any due and payable Postponed Payment Obligation, such that one Net Payment Against Delivery Requirement shall be payable to or from such Clearing Member for settlement at such Central Securities Depository by the End of Day DVP Settlement Time;
 - d) in respect of the delivery versus payment settlement of Acceptable Securities through a Central Securities Depository, subject to Subsection D-606(6), the Corporation shall have the right to net all settlement obligations for the same CUSIP/ISIN number for an Acceptable Security owing to a Clearing Member on such Business Day, including without limitation, any Rolling Delivery Obligation in respect of such Acceptable Security, against all settlement obligations for such Acceptable Security owing by a Clearing Member on such Business Day, including without limitation, any Rolling Delivery Obligation in respect of such Acceptable Security, such that one Net Delivery Requirement in respect of such Acceptable Security is owing to or from such Clearing Member by the End of Day DVP Settlement Time.
- 3) Notwithstanding Paragraph A-801(2)(c), as of the Morning Netting Cycle Timeframe on each Business Day, the Corporation shall net all Pending Payment Against Delivery Requirements owing to a Clearing Member against all Pending Payment Against Delivery Requirements owing by a Clearing Member, such that one Morning Net Payment Against Delivery Requirement shall be payable to or from such Clearing Member at the Morning Net DVP Settlement Timeframe; provided, however, that if the Morning Net Payment Against Delivery Requirement payable from a Clearing

Member exceeds the amount of the CDCC Daylight Credit Facility, such Clearing Member shall be required to have available funds in its CDS Funds Account in the amount of the CDCC Daylight Credit Facility only.

- 4) In respect of the Variation Margin Requirements, subject to Section D-607, the Corporation shall have the right to net the Variation Margin Requirements owing by a Clearing Member in respect of Fixed Income Transactions to which such Clearing Member is a party on such Business Day against any Variation Margin Requirements owing to such Clearing Member and available in respect of the Fixed Income Transactions to which such Clearing Member is a party on such Business Day such that a Net Variation Margin Requirement in one net amount is required to be delivered by the Clearing Member on such Business Day or one net amount is required to be delivered to the Clearing Member on such Business Day.
- 5) Notwithstanding Paragraphs A-801(2)(c) and A-801(2)(d), as of the Afternoon Netting Cycle Timeframe on each Business Day, the Corporation shall (i) net all Pending Delivery Requirements owing to a Clearing Member against all Pending Delivery Requirements owing by a Clearing Member with respect to each Acceptable Security, such that one Afternoon Net DVP Settlement Requirement in respect of such Acceptable Security shall be deliverable to or from such Clearing Member by the End of Day DVP Settlement Time; and (ii) net all Pending Payment Against Delivery Requirements owing to a Clearing Member against all Pending Payment Against Delivery Requirements owing by a Clearing Member, such that one Afternoon Net DVP Settlement Requirement shall be payable to or from such Clearing Member by the End of Day DVP Settlement Time.

SECTION A-802 DAILY SETTLEMENT

- 1) On or before Settlement Time on each Business Day, as determined by the Bank of Canada to be a settlement day, each Clearing Member shall be obligated to pay the Corporation, in Cash, by irrevocable funds transfer or any other method as may be approved by the Corporation from time to time, the amount of any Net Daily Settlement shown to be due to the Corporation on the Daily Settlement Summary Report (notwithstanding any error in such report).
- 2) If for any reason the Daily Settlement Summary Report is not available to the Clearing Member, it shall be the responsibility of that Clearing Member to ascertain from the Corporation the amount of any Net Daily Settlement, so that payment may be made before Settlement Time each Business Day.
- 3) Provided all applicable conditions precedent have been satisfied, one hour after Settlement Time on each Business Day the Corporation shall be obligated to pay a Clearing Member the amount of any Net Daily Settlement shown to be due from the Corporation to such Clearing Member on the Daily Settlement Summary Report for such account for such day. The Corporation may make such payment to the Clearing Member by uncertified cheque or electronic funds transfer in the amount of such Net Daily Settlement.
- 4) When the banks in a city where the Corporation has an office are closed on a Business Day, settlement shall nevertheless occur through the method of irrevocable funds transfer or any other method as may be approved by the Corporation from time to time on such Business Day if it has been determined by the Bank of Canada to be a settlement day.
- 5) If the Corporation does not have sufficient liquidity to pay all the Net Daily Settlements it owes to Clearing Members on a given Business Day, the Corporation shall fail to pay *pro rata* among such

Clearing Members and that event shall constitute a Payment Default trigger under Paragraph A-409(5)(a) in respect of the affected Clearing Members.

SECTION A-803 PHYSICAL SETTLEMENT

Where the Corporation will effect the transfer of Acceptable Securities through a Central Securities Depository, the Corporation shall be exclusively responsible for the communication of Net Delivery Requirements, Gross Delivery Requirements and Afternoon Net DVP Settlement Requirements consisting of obligations to deliver Acceptable Securities to such Central Securities Depository and will bear no responsibility for the replacement of the Acceptable Securities in the event that the Clearing Member fails to perform on the physical delivery obligation. The Corporation will, however, bear the responsibility of guaranteeing the Settlement Amounts derived from the physical delivery process up to the time a CSD Confirmation is issued, and, for greater certainty, has no liability in respect of such Settlement Amounts at any time after the issuance of such CSD Confirmation in respect of such Settlement Amounts. A “CSD Confirmation” means in respect of settlement instructions relating to a Net Delivery Requirement, a Gross Delivery Requirement or an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities, as the case may be, a trade confirmation issued by the applicable Central Securities Depository confirming that the applicable Provider of Securities’ securities account with such Central Securities Depository has been debited with Acceptable Securities in accordance with such settlement instructions; and in respect of settlement instructions relating to a Net Payment Against Delivery Requirement, a Gross Payment Against Delivery Requirement, a Morning Net Payment Against Delivery Requirement or an Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against the delivery of Acceptable Securities, as the case may be, a trade confirmation issued by the applicable Central Securities Depository confirming that the applicable Clearing Member’s CDS Funds Account has been debited in accordance with such settlement instructions.

SECTION A-804 FAILED AND PARTIAL DELIVERIES

- 1) If a Clearing Member who is a Provider of Securities does not deliver Acceptable Securities pursuant to a Net Delivery Requirement, an Afternoon Net DVP Settlement Requirement consisting of an obligation to deliver Acceptable Securities or a Gross Delivery Requirement resulting from a Same Day Transaction submitted after the Afternoon Netting Cycle Timeframe as it is required to do under these Rules, or only partially delivers such Acceptable Securities required to be delivered by it pursuant to these Rules, by the End of Day DVP Settlement Time (in all cases, a “Failed Delivery”), the reciprocal payment obligation of the Corporation in favour of that Clearing Member shall be reduced accordingly. For the avoidance of doubt, a Failed Delivery hereunder shall not constitute a breach of the Rules under Paragraph A-1A04(3)(a) or an event otherwise in and of itself constituting a reasonable ground for the Corporation to determine that a Clearing Member is a Non-Conforming Member. The quantity of such Acceptable Securities that has not been delivered shall constitute a Rolling Delivery Obligation of the failing Clearing Member for purposes of calculating the next Business Day’s Net Delivery Requirement under Section A-801(2)(d), and the Net Delivery Requirement of each subsequent Business Day, until the quantity of such Acceptable Securities due are delivered in full, at which time the Corporation’s Postponed Payment Obligation shall become due and payable. Notwithstanding the foregoing, a Failed Delivery will not be rolled beyond the maturity date of the relevant Acceptable Security. On the maturity date of the relevant Acceptable Security, the Rolling Delivery Obligation of the Provider of Securities will be converted into a cash settlement obligation at the Acceptable Security’s principal value at maturity, which amount shall be netted against the Corporation’s Postponed Payment Obligation. For the avoidance of doubt, the value of any Coupon Income payable with respect to an Acceptable Security that is the object of a

Rolling Delivery Obligation and the value of any final Coupon Income payable on the maturity date of the relevant Acceptable Security shall be paid by the Provider of Securities to the Corporation.

- 2) As a direct consequence of a Clearing Member's Failed Delivery, the Corporation will fail or partially deliver for the same quantity of Acceptable Securities *pro rata*, in accordance with the Operations Manual, among Clearing Members who are Receivers of Securities with respect to such Acceptable Securities on the relevant Business Day from the Corporation. In the case of a Failed Delivery with respect to a Gross Delivery Requirement, the Corporation 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. The reciprocal Net Payment Against Delivery Requirement, Afternoon Net DVP Settlement Requirement consisting of an obligation to pay against the delivery of Acceptable Securities or Gross Payment Against Delivery Requirement, as the case may be, of such Receivers of Securities in favour of the Corporation shall be reduced accordingly and the quantity of such Acceptable Securities that has not been delivered shall constitute a Rolling Delivery Obligation of the Corporation for purposes of calculating the next Business Day's Net Delivery Requirement, and the Net Delivery Requirement of each subsequent Business Day, until the quantity of Acceptable Securities due are delivered in full, at which time the Receiver of Securities' Postponed Payment Obligation shall become due and payable. Notwithstanding the foregoing, on the maturity date of the relevant Acceptable Security, the Rolling Delivery Obligation of the Corporation will be converted into a cash settlement obligation at the Acceptable Security's principal value at maturity, which amount shall be netted against the Receiver of Securities' Postponed Payment Obligation. For the avoidance of doubt, the value of any Coupon Income payable with respect to an Acceptable Security that is the object of a Rolling Delivery Obligation and the value of any final Coupon Income payable on the maturity date of the relevant Acceptable Security shall be paid by the Corporation to the Receiver of Securities.
- 3) Notwithstanding any other provision of this Section A-804, the Corporation may, on its own initiative, and shall, pursuant to a formal request by a Receiver of Securities affected by a Failed Delivery as set forth in Subsection A-804(2), terminate the daily roll mechanic set out under Subsection A-804(1) and Subsection A-804(2) and effect a buy-in transaction under Subsection A-804(4), in addition to the exercise of any other remedies under the Rules.
- 4) Upon termination of the daily roll mechanic set out under Subsection A-804(1) and A-804(2) pursuant to Subsection A-804(3), the Corporation shall satisfy its Net Delivery Requirement, its obligation to deliver Acceptable Securities against an Afternoon Net DVP Settlement Requirement consisting of a payment obligation of the Clearing Member or Gross Delivery Requirement (in all cases, the "Corresponding CDCC Delivery Requirement"), as the case may be, to Receivers of Securities with respect to such Acceptable Securities, notwithstanding any Failed Delivery by any Provider of Securities, by purchasing the missing quantity of such Acceptable Securities on the open market on such terms as the Corporation deems commercially reasonable in the circumstances. The difference between the price paid by the Corporation to purchase the missing quantity on the open market (including associated costs incurred) and the Purchase Price (or Repurchase Price, as the case may be) of the relevant Transaction(s) shall be charged to the Provider of Securities who was responsible for a Failed Delivery of such Acceptable Securities.
- 5) If the Corporation is unable to satisfy its Corresponding CDCC Delivery Requirement to the Receiver(s) of Securities of such Acceptable Securities under Subsection A-804(4) because they are unavailable on the open market or the Corporation determines in its sole discretion, taking into account the size and nature of the Failed Delivery, the market conditions prevailing at the time, the potential market effects of purchasing the missing quantity on the open market and associated costs, and such other circumstances that the Corporation, in its sole discretion, deems relevant, that such buy-in transaction would not be in the best interest of the Corporation, other Clearing Members or

the general public, the Corporation will fail to satisfy its Corresponding CDCC Delivery Requirement to such Receiver(s) of Securities and will convert the relevant Failed Delivery into a cash settlement obligation at the Acceptable Security's fair market value, as determined by the Corporation in a commercially reasonable manner, netted against the Receiver(s) of Securities' Postponed Payment Obligation. Such cash settlement amount shall be determined by the Corporation within five Business Days of the termination of the daily roll mechanic pursuant to Subsection A-804(3) and shall be immediately credited (or charged, as the case may be) by the Corporation to the relevant Receiver(s) of Security and simultaneously charged (or credited, as the case may be) by the Corporation to the Provider of Securities responsible for such Failed Delivery. Failure by the Provider of Securities responsible for the Failed Delivery, or by the relevant Receiver(s) of Securities, as the case may be, to pay such cash settlement amount to the Corporation shall constitute a payment default, upon which the Corporation may determine that the Clearing Member is a Non-Conforming Member and take such actions and remedies provided under these Rules against such Non-Conforming Member.

SECTION A-805 FINAL AND IRREVOCABLE PAYMENT

When the settlement of a payment obligation of a Clearing Member or the Corporation is made through an entry to or a payment out of an account as provided in Section A-802 or through an entry to or a payment out of an account as provided in Section A-803, such settlement of the payment obligation of a Clearing Member or the Corporation shall be final and irrevocable.

SECTION A-806 FAILED AND PARTIAL PAYMENTS AGAINST DELIVERY

- 1) If a Clearing Member does not have sufficient funds in its CDS Funds Account to satisfy its payment against delivery obligation pursuant to Subsection A-801(3), or only partially settles such payment against delivery obligation (in either case, a "Failed Payment Against Delivery") at the Morning Net DVP Settlement Timeframe, the Corporation shall impose a fine and may determine that the Clearing Member is a Non-Conforming Member, in accordance with Section 6 of the Operations Manual. In addition, the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.
- 2) If a Clearing Member does not have sufficient funds in its CDS Funds Account to satisfy its Afternoon Net DVP Settlement Requirement pursuant to Subsection A-801(4)(ii) or any Gross Payment Against Delivery Requirement by the End of Day DVP Settlement Time or only partially settles such payment against delivery obligation (also, in either case, a Failed Payment Against Delivery), the Clearing Member shall automatically be determined by the Corporation to be a Non-Conforming Member in accordance with Section 6 of the Operations Manual and the Board may take disciplinary measures set forth in Rule A-5 against the Non-Conforming Member.
- 3) If the Corporation does not have sufficient funds in its CDS Funds Account to satisfy all its Afternoon Net DVP Settlement Requirements pursuant to Subsection A-801(4)(ii) and all its Gross Payment Against Delivery Requirements in favour of Clearing Members by the End of Day DVP Settlement Time, it shall fail to settle its payment against delivery obligations at the Central Securities Depository *prorata* among such Clearing Members and that event shall constitute a Payment Default trigger under Paragraph A-409(5)(a) in respect of the affected Clearing Members.

RULE A-9 ADJUSTMENTS IN CONTRACT TERMS

SECTION A-901 APPLICATION

This Rule A-9 is applicable to Transactions where the Underlying Interest is a Security.

SECTION A-902 ADJUSTMENTS IN TERMS

- 1) Whenever there is a dividend, stock dividend, stock distribution, stock split, trust unit split, reverse stock split, reverse trust unit split, rights offering, distribution, reorganization, recapitalization, reclassification or similar event in respect of any Underlying Interest, or a merger, consolidation, dissolution or liquidation of the issuer of any Underlying Interest, the number of Derivative Instruments, the Unit of Trading, the Exercise Price, and the Underlying Interest, or any of them, with respect to all outstanding Derivative Instruments open for trading in that Underlying Interest may be adjusted in accordance with this Section A-902.
- 2) Subject to Subsection (13) of this Section A-902, all adjustments made pursuant to this Section A-902 shall be made by a committee ("Adjustments Committee"). The Adjustments Committee shall determine whether to make adjustments to reflect particular events in respect of an Underlying Interest, and the nature and extent of any such adjustment, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to Clearing Members and the Corporation, the maintenance of a fair and orderly market in Derivative Instruments on the Underlying Interest, consistency of interpretation and practice, efficiency of exercise settlement procedures, and the coordination with other clearing agencies of the clearance and settlement of transactions in the Underlying Interest. The Adjustments Committee may, in addition to determining adjustments on a case-by-case basis, adopt statements of policy or interpretation having general application to specified types of events. Any such statements of policy or interpretation shall be disseminated to all Clearing Members, Exchanges and securities and/or derivative instruments regulatory authorities having jurisdiction over the Corporation. Every determination by the Adjustments Committee pursuant to this Section A-902 shall be within the sole discretion of the Adjustments Committee and shall be conclusive and binding on all Clearing Members and not subject to review, other than review by securities and/or derivative instruments regulatory authorities having jurisdiction over the Corporation pursuant to applicable provisions of the respective statutes.
- 3) It shall be the general rule that there will be no adjustments of Options and similar instruments to reflect ordinary cash dividends or distributions, or ordinary stock dividends or distributions, or ordinary trust unit dividends or distributions declared by the issuer of the Underlying Interest, or any cash dividend or distribution declared by the issuer of the Underlying Interest if such dividend or distribution is less than \$12.50 per contract.
- 4) It shall be the general rule that there will be no adjustments of Transactions other than Options and similar instruments to reflect ordinary cash dividends or distributions, or ordinary stock dividends or distributions, or ordinary trust unit dividends or distributions declared by the issuer of the Underlying Interest if such dividend or distribution is less than \$12.50 per contract.
- 5)
 - a) For all Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit

split or similar event whereby one or more whole number of additional shares of the Underlying Interest are issued with respect to each outstanding share, each Option or similar instrument covering that Underlying Interest shall be increased by the same number of additional contracts as the number of additional shares issued with respect to each share of the Underlying Interest, and the Exercise Price per share in effect immediately prior to such event shall be proportionately reduced, and the Unit of Trading shall remain the same.

- b) For all Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby other than a whole number of shares of the Underlying Interest is issued in respect of each outstanding share, the Exercise Price in effect immediately prior to such event shall be proportionately reduced, and the Unit of Trading shall be proportionately increased.
- c) For all Options and similar instruments it shall be the general rule that in the case of a reverse stock split, consolidation or combination of shares, or similar event, each Option and similar instrument covering the affected Underlying Interest shall be adjusted, solely for purposes of determining the property deliverable upon exercise of the Option or similar instrument, by decreasing the Unit of Trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the Unit of Trading for all such adjusted series of Options or similar instruments shall remain unchanged for purposes of determining the aggregate Exercise Price of the Option or similar instrument and for purposes of determining the premium for any such instrument purchased and sold.
- d) For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby one or more whole number of additional shares of the Underlying Interest are issued with respect to each outstanding share, each Derivative Instrument covering that Underlying Interest shall be increased by the same number of additional contracts as the number of additional shares issued with respect to each share of the Underlying Interest, the last Settlement Price established immediately before such event shall be proportionately reduced, and the Unit of Trading shall remain the same.
- e) For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a stock dividend, stock distribution, stock split, trust unit dividend, trust unit distribution, trust unit split or similar event whereby other than a whole number of shares of the Underlying Interest is issued in respect of each outstanding share, the last Settlement Price established immediately before such event shall be proportionately reduced, and the Unit of Trading shall be proportionately increased.
- f) For all Transactions other than those covering Options and similar instruments it shall be the general rule that in the case of a reverse stock split, consolidation or combination of shares, or similar event, each Derivative Instrument covering the affected Underlying Interest shall be adjusted, solely for purposes of determining the property deliverable upon exercise of the instrument, by decreasing the Unit of Trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the Unit of Trading for all such adjusted series of Derivatives Instruments shall remain unchanged for purposes of determining the aggregate Settlement Price of the Derivatives Instrument and for purposes of determining the premium for any such instrument purchased and sold.

- 6) It shall be the general rule that in the case of any distribution made with respect to shares of an Underlying Interest, other than ordinary dividends or distributions subject to Subsection (3) and (4) of this Section A-902 and other than dividends or distributions for which adjustments are provided in Subsection (5) of this Section A-902, if an adjustment is determined by the Adjustments Committee to be appropriate, for Options and similar instruments:
- i) the Exercise Price in effect immediately prior to such event shall be reduced by the value per share of the distributed property, in which event the Unit of Trading shall not be adjusted, or
 - ii) the Unit of Trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the Underlying Interest represented by the Unit of Trading in effect prior to such adjustment, in which event the Exercise Price shall not be adjusted;

for all other Transactions for which an Exercise Price is not available:

- i) the last Settlement Price established immediately before such event shall be reduced by the value per share of the distributed property, in which event the Unit of Trading shall not be adjusted, or
 - ii) the Unit of Trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the Underlying Interest represented by the Unit of Trading in effect prior to such adjustment, in which event the Settlement Price shall not be adjusted.
 - iii) The Adjustments Committee shall, with respect to adjustments under this Subsection or any other Subsection of this Section A-902, have the authority to determine the value of distributed property.
- 7) In the case of any event for which adjustments are not provided in any of the foregoing Subsections of this Section A-902, the Adjustments Committee may make such adjustments, if any, with respect to the characteristics of the Derivative Instrument affected by such event as the Adjustments Committee determines.
- 8) Adjustments pursuant to this Section A-902 as a general rule shall become effective in respect of Transactions outstanding on the “ex-dividend date” established by the exchange or exchanges on which the Underlying Interest is traded. In the event that the “ex-dividend date” for an Underlying Interest traded on exchanges differs from one exchange to another, the Corporation shall deem the earliest date to be the “ex-dividend date” for the purposes of this Section A-902. “Ex-dividend dates” established by any other exchange or exchanges on which an Underlying Interest may be traded shall be disregarded.
- 9) It shall be the general rule that (i) all adjustments of the Exercise Price of an outstanding Option or similar instrument shall be rounded to the nearest adjustment increment, (ii) when an adjustment causes an Exercise Price to be equidistant between two adjustment increments, the Exercise Price shall be rounded up to the next highest adjustment increment, (iii) all adjustments of the Unit of Trading shall be rounded down to eliminate any fraction, and (iv) if the adjustment is made pursuant to subparagraph (5)(iii) above, the value of the fractional share so eliminated as determined by the Corporation shall be added to the Unit of Trading, or if the adjustment is made pursuant to subparagraph (5)(ii) above, if the Unit of Trading is rounded down to eliminate a fraction, the adjusted Exercise Price may be further adjusted, to the nearest adjustment increment, to reflect any

diminution in the value of the Option or similar instrument resulting from the elimination of the fraction.

- 10) It shall be the general rule that (i) all adjustments of the Settlement Price of an outstanding transaction other than those covering an Option or similar instrument shall be rounded to the nearest adjustment increment, (ii) when an adjustment causes a Settlement Price to be equidistant between two adjustment increments, the settlement price shall be rounded up to the next highest adjustment increment, (iii) all adjustments of the Unit of Trading shall be rounded down to eliminate any fraction, and (iv) if the adjustment is made pursuant to subparagraph (5)(v) above, the value of the fractional share so eliminated as determined by the Corporation shall be added to the Unit of Trading, or if the adjustment is made pursuant to subparagraph (5)(iv) above, if the Unit of Trading is rounded down to eliminate a fraction, the adjusted Settlement Price may be further adjusted, to the nearest adjustment increment, to reflect any diminution in the value of the Derivative Instrument resulting from the elimination of the fraction.
- 11) Notwithstanding the general rules set forth in Subsections (3) through (9) of this Section A-902 or which may be set forth as interpretations and policies under this Section A-902, the Adjustments Committee shall have the power to make exceptions in those cases or groups of cases in which, in applying the standards set forth in Subsection (2) thereof the Adjustments Committee shall determine such exceptions to be appropriate. However, the general rules shall be applied unless the Adjustments Committee affirmatively determines to make an exception in a particular case or group of cases.
- 12) For Exchange Transactions, the Adjustments Committee shall consist of two designated representatives of the exchange that lists the Derivative Instrument that the adjustments apply to, and one representative designated by the Corporation; and the quorum for transacting exchange transactions business at any meeting of the Adjustments Committee shall be two from the exchange and one from the Corporation. For OTCI, the Adjustments Committee will consist of three designated representatives of the Corporation; and the quorum for transacting OTCI business at any meeting of the Adjustments Committee is three designated representatives of the Corporation. The vote of a majority of the members of the Adjustments Committee in attendance at any meeting shall constitute the determination of the Adjustments Committee. The Adjustments Committee may transact its business by means of a telephonic, electronic or other communication facility that permits all participants to communicate appropriately with each other during the meeting. Notwithstanding the foregoing provisions of this Subsection, any representative of the Corporation or of an Exchange may designate any other representative of the Corporation or of the exchange, respectively, to serve in his place at any meeting of the Adjustments Committee. In the event of such designation, the designee, for the purposes of such meeting, shall have all of the powers and duties under this Section A-902 of the person designating him. Any representative designated by the Corporation or the Exchange, or any other representative designated by such a representative, cannot serve on the Adjustments Committee if such person, is the beneficial holder of a long or short position in the Derivative Instrument or OTCI as to which the Adjustments Committee is to make a determination. As stipulated in the By-laws of the Corporation, a majority of the members of the Adjustments Committee shall be resident Canadians.
- 13) In the event that the Adjustments Committee is unable to determine whether to make adjustments in any particular case, the matter shall be referred to the Board for a determination.

INTERPRETATIONS AND POLICIES

- 1)

- a) Cash dividends or distributions (regardless of size) declared by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis, as well as resumption of dividends or distributions will, as a general rule, be deemed to be “ordinary cash dividends or distributions” within the meaning of Subsection A-902(3). Cash dividends or distributions declared by the issuer of the Underlying Interest which are declared outside of a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis will be deemed to be “special cash dividends or distributions” if they exceed the threshold of \$12.50 per contract.
- b) Stock dividends or distributions, or trust unit dividends or distributions declared by the issuer of the Underlying Interest in an aggregate amount that per dividend or distribution does not exceed 10% of the number of shares of the Underlying Interest outstanding as of the close of trading on the declaration date, and which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis will, as a general rule, be deemed to be “ordinary stock dividends or distributions” or “ordinary trust unit dividends or distributions” within the meaning of Subsection A-902(3).
- c) Cash dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared outside of a regular policy or practice of paying such dividends or distributions and that exceeds \$12.50 per contract will be deemed to be “special cash dividends or distributions” within the meaning of Subsection A-902(3).
- d) Stock dividends or distributions, or trust unit dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared outside of a regular policy and that exceeds 10% of the number of shares of the Underlying Interest will be deemed to be “special stock dividends or distributions” or “special trust unit dividends or distributions” within the meaning of Subsection A-902(3).
- e) Cash dividends or distributions declared by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis or other regular basis, as well as resumption of dividends or distributions will, as a general rule, be deemed to be “ordinary distributions” within the meaning of Subsection A-902(4). The Corporation will determine on a case-by-case basis whether other dividends or distributions are “ordinary distributions” or whether they are dividends or distributions for which an adjustment should be made.
- f) Stock dividends or distributions or trust unit dividends or distributions by the issuer of the Underlying Interest which the Corporation considers to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis will, as a general rule, be deemed to be “ordinary distributions” within the meaning of Subsection A-902(4). The Corporation will ordinarily adjust for other stock dividends and distributions.

Nevertheless, the Adjustments Committee will determine, on its sole discretion, on a case-by-case basis whether other dividends or distributions are “ordinary dividends or distributions” or whether they are dividends or distributions for which adjustments should be made, regardless of the threshold of \$12.50 per contract applied to “special dividends or distributions”.

Normally, the Adjustments Committee shall classify a cash dividend or cash distribution as non-ordinary when it believes that similar cash dividends or cash distributions will not be paid on a quarterly or other regular basis. Notwithstanding that the Adjustments Committee has classified a cash dividend or cash distribution as non-ordinary, it may, with respect to events announced on or after February 1, 2012, classify

subsequent cash dividends or cash distributions of a similar nature as ordinary if (i) the issuer discloses that it intends to pay such dividends or distributions on a quarterly or other regular basis, (ii) the issuer has paid such dividends or distributions for four or more consecutive months or quarters or two or more years after the initial payment, whether or not the amounts paid were the same from period to period, or (iii) the Adjustments Committee determines for other reasons that the issuer has a policy or practice of paying such dividends or distributions on a quarterly or other regular basis.

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- a) Adjustments will not ordinarily be made to reflect the issuance of so-called “poison pill” rights that are not immediately exercisable, trade as a unit or automatically with the Underlying Interest, and may be redeemed by the issuer. In the event such rights become exercisable, begin to trade separately from the Underlying Interest, or are redeemed, the Adjustments Committee will determine whether adjustments are appropriate.
- b) Except as provided above in the case of certain “poison pill” rights, adjustments for rights distributions will ordinarily be made to Transactions other than those covering Options and similar instruments. When an adjustment is made for a rights distribution, the Unit of Trading in effect immediately prior to the distribution will ordinarily be adjusted to include the number of rights distributed with respect to the number of shares of the Underlying Interest comprising the Unit of Trading. If, however, the Corporation determines that the rights are due to expire before the time they could be exercised upon delivery under the contract, then delivery of the rights will not be required. Instead, the Corporation will ordinarily adjust the last Settlement Price established before the rights expire to reflect the value, if any, of the rights as determined by the Corporation in its sole discretion.
- c) Adjustments will not be made to reflect a take-over bid or issuer bid made for the Underlying Interest, whether such offer is for cash, Securities or other property. This policy will apply without regard to whether the price of the Underlying Interest may be favourably or adversely affected by the offer or whether the offer may be deemed to be “coercive”. Outstanding Transactions ordinarily will be adjusted to reflect a merger, amalgamation, arrangement or similar event that becomes effective following the completion of a take-over bid.
- d) Adjustments will not be made to reflect changes in the capital structure of an issuer where all of the Underlying Interest in the hands of the public (other than dissenters' shares) are not changed into another Security, cash or other property. For example, adjustments will not be made merely to reflect the issuance (except as a distribution on an Underlying Interest) of new or additional debt, stock, trust units, or options, warrants or other securities convertible into or exercisable for the Underlying Interest, the refinancing of the issuer's outstanding debt, the repurchase by the issuer of less than all of the Underlying Interest outstanding or the sale by the issuer of significant capital assets.
- e) When an Underlying Interest is converted into a right to receive a fixed amount of cash, such as in a merger, amalgamation, arrangement or similar event, outstanding Options or similar instruments will be adjusted to require the delivery upon exercise of cash in an amount per share equal to the conversion price. As a result of such adjustments, the value of all outstanding In-the-money Options or similar instruments will become fixed, and all At-the-money and Out-of-the-money Options or similar instruments will become worthless. Outstanding transactions other than those covering Options or similar instruments will be adjusted to replace such Underlying Interest with such fixed amount of cash as the Underlying Interest, and the Unit of Trading shall remain unchanged.

- f) In the case of a spin off or similar event by the issuer of an Underlying Interest which results in a property distribution, Derivatives Instruments will be adjusted to reflect such distribution. The value of the property distributed shall be reflected in the shares deliverable.
- g) In the case of a corporate reorganization or similar occurrence by the issuer of an Underlying Interest which results in an automatic share-for-share exchange of the Underlying Interest for shares of another class in the capital of the issuer or in the resulting company, the Transactions on the Underlying Interest will ordinarily be adjusted to require delivery upon exercise of a like number of units of the shares of such other class or of the resulting company. Because the Securities are generally exchanged only on the books of the issuer and/or the resulting company, as the case may be, and are generally not exchanged physically, deliverable shares will ordinarily include certificates that are denominated on their face as shares in the original class of shares of the original issuer, but which, as a result of the corporate transaction, represent shares in the other class or in the resulting company, as the case may be.
- h) When an Underlying Interest is converted in whole or in part into a debt security and/or a preferred stock, as in a merger, and interest or dividends on such debt security or preferred stock are payable in the form of additional units thereof, outstanding Transactions that have been adjusted to call for delivery of such debt security or preferred stock shall be further adjusted, effective as of the ex-date for each payment of interest or dividends thereon, to call for delivery of the securities distributed as interest or dividends thereon.
- i) Notwithstanding Interpretation and Policy (1) under Section A-902, (i) "ordinary cash dividends or distributions" within the meaning of paragraph (3) of Section A-902 shall not, as a general rule, be deemed to include distributions of short-term or long-term capital gains by the issuer of the Underlying Interest, and (ii) "ordinary cash dividends or distributions" within the meaning of paragraph (3) of Section A-902 shall not, as a general rule, be deemed to include other distributions by the issuer of the Underlying Interest, provided that (a) the issuer is an entity that holds securities or replicates holding of securities that track the performance of an index that underlies a class of index Options or index Futures, and the distribution on the Underlying Interest includes or reflects a dividend or other distribution on a security part of the index that resulted in an adjustment of the index divisor; or (b) the distribution on the Underlying Interest includes or reflects a dividend or other distribution on a security part of the index (I) that results in an adjustment of Options and similar instruments on other Underlying Interest pursuant to clause (ii)(a), or (II) that is not deemed an ordinary dividend or distribution under Interpretation (1) above.

Adjustments of the terms of Options and similar instruments on such Underlying Interest for distributions described in clause (i) or (ii) above shall be made in accordance with paragraph (6) of Section A-902, unless the Adjustments Committee determines, on a case-by-case basis, not to adjust for such a distribution; provided, however, that no adjustment shall be made for any such distribution where the amount of the adjustment would be less than \$.125 per Underlying Interest.

RULE A-10 –RECOVERY PROCESS

SECTION A- 1001- RECOVERY POWERS

- 1) Upon the declaration by the Corporation of the beginning of a Recovery Process in accordance with Section A-1002, the Corporation may exercise against any Clearing Member which is not a Limited Clearing Member any of its rights and remedies set out in this Rule A-10 and the related provisions of the Default Manual (each of which rights and remedies, a “**Recovery Power**”).
- 2) Upon the declaration by the Corporation of the beginning of a Recovery Process in accordance with Section A-1002, the Corporation may exercise a Reduced Amounts Distribution against a Limited Clearing Member subject to and in accordance with Section A-1005 and the related provisions of the Default Manual; provided, however, that the Corporation shall not have the right to exercise any other Recovery Power against any Limited Clearing Member without the Limited Clearing Member’s consent.

SECTION A- 1002—DECLARATION OF RECOVERY PROCESS

- 1) During a Default Management Period, the Corporation may declare the commencement of a Recovery Process, subject to approval by the Board, upon the occurrence of either of the following events (each, “**Recovery Event**”):
 - a) the Corporation, acting reasonably, determines that its Recovery Losses in connection with the suspension of the applicable Clearing Member may exceed the sum of the following amounts (which shall collectively be referred to as the “**Default Waterfall**”):
 - i) the suspended Clearing Member’s Margin Deposit (including, without limitation, deposits required or made as Margin and Clearing Fund);
 - ii) the Corporation’s own capital resources specifically set aside for such purpose; and
 - iii) 200% of the aggregate value of all Clearing Fund deposits required at the beginning of the Default Management Period of the Clearing Members which have not been suspended during the Default Management Period; or
 - b) after the exercise by the Corporation of its rights and remedies set out in Rule A-4 in connection with the suspension of the applicable Clearing Member, the Corporation reasonably determines that it has been, or will likely be, unable to close-out all the positions of the suspended Clearing Member.
- 2) Upon the declaration of the commencement of a Recovery Process, the Corporation will notify all Clearing Members, the Exchanges, any regulatory agency having oversight over the Corporation, the Bank of Canada and any such other Entities as the Corporation may consider appropriate.

SECTION A- 1003- RECOVERY PROCESS

“**Recovery Process**” means any of the rights and remedies of the Corporation set out in this Rule and the related provisions of the Default Manual.

SECTION A- 1004- RECOVERY LOSSES

“**Recovery Losses**” means any obligations, losses or expenses incurred or sustained by the Corporation as a result of, or in connection with, the suspension of a Clearing Member.

SECTION A-1005 REDUCED AMOUNTS DISTRIBUTION

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process, if, in the reasonable opinion of the Corporation, the Recovery Event may result in the Corporation incurring Recovery Losses in excess of the amounts available to it as part of the Default Waterfall, the Corporation may on any Business Day during the Reduced Amounts Distribution Period (as defined below) withhold the payment or transfer of all or a portion of the amounts owed by the Corporation and which are Qualified Amounts (as defined below) to a Clearing Member that has not been suspended. The exercise of such power to withhold payment or transfer shall constitute a Recovery Power referred to as the “**Reduced Amounts Distribution**”.
 - 2) Before exercising the Reduced Amounts Distribution, the Corporation shall notify all Clearing Members of the date of the commencement of a period during which such power will be exercised (the “**Reduced Amounts Distribution Period**”). There shall be no more than one Reduced Amounts Distribution Period during any given Default Management Period and no Reduced Amounts Distribution Period may be in effect for more than four (4) consecutive Business Days during any given Default Management Period¹. The Corporation shall notify all Clearing Members of the date of the termination of the Reduced Amounts Distribution Period. The amounts retained by the Corporation in the exercise of the Reduced Amounts Distribution, whether converted into cash or otherwise (the “**Retained Amounts**”), may be used by the Corporation during or after the Reduced Amounts Distribution Period, in accordance with paragraph A-1005(6). The Corporation shall resume the payment or transfer of the Qualified Amounts becoming due after the termination of the Reduced Amounts Distribution Period.
 - 3) On each Business Day of the Reduced Amounts Distribution Period (for the purpose of this Section A-1005, each, a “**Calculation Date**”), the Corporation shall exercise a Reduced Amounts Distribution to any of the following (each, a “**Qualified Amount**”) subject to the provisions of paragraph A-1005(5) below:
 - a) In respect of all Futures and Options to which a Clearing Member is a party on a Calculation Date, the net amount owed by the Corporation to such Clearing Member in respect of:
 - i) The net value of the Gains and Losses for that day in respect of all such Clearing Member’s Open Positions in Futures;
 - ii) The Net Daily Premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation and purchased or sold on the Exchange; and
 - iii) The net agreed premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation, bilaterally negotiated, or entered into on any Acceptable Marketplaces.
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- b) In respect of all Fixed Income Transactions to which a Clearing Member, other than a Limited Clearing Member, is a party on the Calculation Date (excluding, for the avoidance of doubt, any Repurchase Transaction for which the Repurchase Date is the Calculation Date, and any Cash Buy Sell Trade for which the Purchase Date is the Calculation Date), the Corporation shall determine the amount that would otherwise be owed by the Corporation to the Clearing Member (the “**RAD Net Gain**”) which shall be determined based on the aggregate net sum of the differences, in respect of each of those Transactions, between (i) the Variation Margin Requirement which was required in respect of a Transaction on the Calculation Date and (ii) the Variation Margin Requirement which was required for the same Transaction on the last Business Day prior to the commencement of the Reduced Amounts Distribution Period. On each Business Day of the Reduced Amounts Distribution Period, the Qualified Amount shall equal the difference between the RAD Net Gain calculated for such Clearing Member and the sum of Retained Amounts retained by the Corporation on each previous Business Day of the Reduced Amounts Distribution Period for the same Transactions.
 - c) In respect of all Fixed Income Transactions to which a Limited Clearing Member is a party on a Calculation Date (excluding, for the avoidance of doubt, any Repurchase Transaction for which the Repurchase Date is the Calculation Date, and any Cash Buy Sell Trade for which the Purchase Date is the Calculation Date) and that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member, the Corporation shall calculate the amount that would otherwise be owed by the Corporation to the Limited Clearing Member (the “**LCM RAD Net Gain**”) which shall be determined based on the aggregate net sum of the differences, in respect of each of those Transactions, between (i) the Variation Margin Requirement which was required in respect of a Transaction on the Calculation Date and (ii) the Variation Margin Requirement which was required for the same Transaction on the last Business Day prior to the commencement of the Reduced Amounts Distribution Period. On each Business Day of the Reduced Amounts Distribution Period, the Qualified Amount shall be equal to the difference between the LCM RAD Net Gain calculated for such Limited Clearing Member and the sum of Retained Amounts retained by the Corporation on each previous Business Day of the Reduced Amounts Distribution Period for the same Transactions.
- 4) The notification by the Corporation to a Clearing Member of the value of the Retained Amount shall extinguish the Corporation’s obligation to pay or transfer any such amount to the Clearing Member.
- 5) At the end of each Business Day of the Reduced Amounts Distribution Period, the Corporation shall notify each Clearing Member of the Retained Amount relating to it as follows:
- a) For each Clearing Member, other than a Limited Clearing Member, the Corporation shall calculate a net Retained Amount by aggregating the Qualified Amount in respect of all Futures and Options Transactions to which the Clearing Member is a party on such Business Day and the net Qualified Amount in respect of all Fixed Income Transactions to which the Clearing Member is a party on such Business Day.
 - b) Notwithstanding Section D-607, for each Limited Clearing Member, the Corporation shall calculate a net Retained Amount by determining the net Qualified Amount in respect of all Transactions to which the Limited Clearing Member is a party on such Business Day and that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member. During the Reduced Amount Distribution Period, the Corporation shall calculate separately (i) the aggregate Variation Margin Requirement in respect of all Transactions to which the Clearing Member is a party that were, before submission for clearing with the Corporation, entered into by the Limited

Clearing Member and the suspended Clearing Member, and (ii) the aggregate Variation Margin Requirement in respect of all the Transactions to which the Limited Clearing Member is a party, excluding those Transactions that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and the suspended Clearing Member.

- 6) The Corporation shall only use the Retained Amounts for the purpose of satisfying or otherwise settling Recovery Losses, after exhausting the Default Waterfall, all in accordance with the provisions set out in the Default Manual.
- 7) In the case of the suspension of multiple Clearing Members, the Corporation shall only use the Retained Amounts withheld in connection with Fixed Income Transactions that were, before submission for clearing with the Corporation, entered into by the Limited Clearing Member and a suspended Clearing Member, for the purpose of satisfying or otherwise settling Recovery Losses incurred in connection with the suspension of such Clearing Member.
- 8) Except as otherwise specified in this Section A-1005, the implementation of the Reduced Amounts Distribution does not affect the calculation and determination by the Corporation of amounts otherwise owed.

SECTION A- 1006- RECOVERY LOSS CASH PAYMENT

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the exercise of the Corporation's Reduced Amounts Distribution power in accordance with Section A-1005, if, in the reasonable opinion of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses or expenses in an amount in excess of the sum of the resources constituting the Default Waterfall and the Retained Amounts, and such amount is known or can reasonably be determined, the Corporation may require each Clearing Member which has not been suspended during the Default Management Period to pay to the Corporation its pro rata proportion of the Recovery Loss Cash Payment.
- 2) The Corporation shall determine the total amount of the Recovery Loss Cash Payment and calculate the proportion to be paid by each Clearing Member that is not a suspended Clearing Member, pro rata, based on the quotient obtained by dividing the amount of each Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period by the aggregate amount of Clearing Fund deposits required at the beginning of the Default Management Period of all Clearing Members other than the suspended Clearing Members.
- 3) The Corporation shall notify each Clearing Member that is not a suspended Clearing Member of the amount payable by such Clearing Member as Recovery Loss Cash Payment.
- 4) The aggregate amounts payable in Recovery Loss Cash Payments by a Clearing Member during a Default Management Period shall not exceed the value of such Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period.
- 5) The Recovery Loss Cash Payment shall be paid by each Clearing Member no later than the first Settlement Time on the Business Day following the date the Corporation notifies Clearing Members in writing that the Recovery Loss Payment is due, unless any other date is specified in the Corporation's notice.

- 6) A Recovery Loss Cash Payment must be paid to the Corporation in Cash and, once received, will belong to the Corporation. The Corporation shall not be required to pay any interest in respect of any Recovery Loss Cash Payment.
- 7) The Corporation shall use the Recovery Loss Cash Payment after exhausting the funds available to the Corporation as part of the Default Waterfall and the Retained Amounts for the sole purpose of satisfying or otherwise settling Recovery Losses.

SECTION A- 1007- RECOVERY AUCTION

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the determination by the Corporation that it has been unable to transfer, close-out, or otherwise liquidate all the positions of the suspended Clearing Member(s), following the exercise of the rights and remedies set out in Rule A-4, the Corporation may hold a Recovery Auction with respect to the Fixed Income Transactions.
- 2) All Clearing Members (including Limited Clearing Members) will be entitled to participate to the Recovery Auction, in accordance with the methodology set forth in the Default Manual.

SECTION A- 1008- VOLUNTARY CONTRACT TEAR-UP

- 1) At any time during a Default Management Period, after a declaration by the Corporation of the commencement of a Recovery Process and the determination by the Corporation that it has been unable to transfer, close-out, or otherwise liquidate all the positions of the suspended Clearing Members, following the exercise of the rights and remedies set out in Rule A-4, and, in respect of the Fixed Income Transactions, following the holding of the Recovery Auction, the Corporation may implement voluntary contract tear-up (“Voluntary Contract Tear-Up”), on the conditions and in the manner set forth in this Section A-1008.
- 2) The Corporation may implement Voluntary Contract Tear-Up for any Futures, Options or Over-the-Counter Instruments cleared by the Corporation.
- 3) On the Business Day the Corporation determines to implement the Voluntary Contract Tear-Up, the Corporation shall notify, before the Close of Business, all Clearing Members of its intention to implement Voluntary Contract Tear-up on that same Business Day in respect of any of the suspended Clearing Member Open Positions which have not been terminated. At the end of that same Business Day, the Corporation shall determine the opposite Open Positions which could be terminated. In making this determination, the Corporation shall use all commercially reasonable efforts to allocate all such terminable Open Positions pro-rata on the basis of the net opposite Open Positions of each Clearing Member which has not been suspended. At the Close of Business on that same Business Day, after the notification to the Clearing Members of the Retained Amounts, if applicable, the Corporation shall notify each Clearing Member of the terminable Open Positions allocated to it and the termination value of such Open Positions (the “Tear-Up Value”) as determined in accordance with this Section A-1008, and each Clearing Member will be prompted to confirm or decline, to the Corporation, within the time period specified in the notice, the Voluntary Contract Tear-Up for each of the terminable Open Positions allocated to it by the Corporation. The Corporation shall then automatically terminate all the Open Positions which a Clearing Member has consented to terminate.
- 4) Tear-Up Value Determination

- a) In respect of each Future Open Position, the Corporation shall determine the Tear-Up Value of each terminable Open Position using the last Settlement Price reported by the Exchange on the same Business Day, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall fix the last Settlement Price in accordance with the best information available as to market price.
 - b) In respect each Option Open Position, the Corporation shall determine the Tear-Up Value of each terminable Open Position using the Option Price reported by the Exchange, or the last OTCI Option Price, as the case may be, and, in the event of the unavailability or inaccuracy of such price, the Corporation shall fix such closing price in accordance with the best information available as to market price.
 - c) In respect of Fixed Income Transactions, the Corporation shall determine the Tear-Up Value in accordance with the usual pricing mechanism used to calculate the Net Variation Margin Requirement in accordance with Rule D-6. The Corporation shall terminate any other outstanding payment or transfer obligations in respect of all the Fixed Income Transactions which a Clearing Member has consented to terminate.
- 5) Tear-Up Amount and Settlement
- a) The Corporation shall then calculate for each Clearing Member, in respect of all Futures Open Positions which the Clearing Member has agreed to terminate, an amount (the "Future Tear-Up Amount"), representing the aggregate net sum of Tear-Up Values that is payable by the Corporation to the Clearing Member or by the Clearing Member to the Corporation. The Future Tear-Up Amounts shall be paid no later than the First Settlement Time on the Business Day following the date the Clearing Member has agreed to the Voluntary Contract Tear-Up subject to Section A-801(2)(a).
 - b) The Corporation shall then calculate for each Clearing Member, in respect of all Options Open Positions which the Clearing Member has agreed to terminate, an amount (the "Option Tear-Up Amount"), representing the aggregate net sum of Tear-Up Values that is payable by the Corporation to the Clearing Member or by the Clearing Member to the Corporation. The Option Tear-Up Amounts shall be paid no later than the First Settlement Time on the Business Day following the date the Clearing Member has agreed to the Voluntary Contract Tear-Up subject to Section A-801(2)(a).
 - c) The Corporation shall then calculate for each Clearing Member, in respect of all Fixed Income Transactions which the Clearing Member has agreed to terminate, the Clearing Member's final Variation Margin Requirement associated with the Open Positions which have been terminated. Such Variation Margin Requirement shall be required to be deposited by the usual Settlement Time for the Net Variation Margin Requirement.

SECTION A- 1009- NO LIMITED RECOURSE

Nothing in this Rule shall limit the actions that may be taken by the Corporation pursuant to Rule A-4 against a Non-Conforming Clearing Member or a suspended Clearing Member.

SECTION A- 1010- NO EVENT OF DEFAULT

No action or omission of the Corporation as part of the implementation of the Recovery Process in accordance with Rule A-10 and the related provisions of the Default Manual shall constitute an Event of Default. For further clarity, each Clearing Member retains its close-out rights pursuant to Section A-409 in connection with any Event of Default which is not arising in connection or as a result of the Recovery Process.

SECTION A-1011 NO ADJUSTMENT OF PAYMENT

Nothing in this Rule shall affect a Clearing Member's obligation to satisfy any other obligation under the Rules.

SECTION A-1012 APPLICATION OF PAYMENTS

No amount paid or deposited by a Clearing Member in connection with a Recovery Event shall be applied by the Corporation to satisfy or to compensate the Corporation for obligations other than those arising in connection with such Recovery Event.

SECTION A-1013 RECOVERY OF LOSS

- 1) Notwithstanding the remedies available to the Corporation under the Rules and to the extent that a Recovery Loss has been sustained by the Corporation, the suspended Clearing Member shall remain liable to the Corporation for the full amount of such Recovery Loss until its repayment.
- 2) After the end of the Default Management Period, if the amount of Recovery Loss Cash Payments and Retained Amounts levied on Clearing Members as part of the Recovery Process is in excess of the total amount of Recovery Loss incurred by the Corporation, the Corporation shall pay or credit an amount equal to such excess to each Clearing Member to whom the amount was charged in proportion to the amount paid by such Clearing Member in Recovery Loss Cash Payments and Retained Amounts determined in accordance with the provisions set out in the Default Manual, so long as such Clearing Member is not itself a suspended Clearing Member.
- 3) Notwithstanding the extinguishment of the Corporation's obligation to pay the value of the Retained Amount set out in subsection A-1005(4) and the provisions of subsection A-1013(2), if, after the end of a Default Management Period, any Retained Amounts levied on a Limited Clearing Member in connection with Fixed Income Transactions that were, before submission for clearing with the Corporation, entered into by such Limited Clearing Member and a suspended Clearing Member, are in excess of the Limited Clearing Member's share of the total amount of Recovery Loss determined in accordance with the provisions set out in the Default Manual and incurred by the Corporation in connection with the suspension of such suspended Clearing Member, the Corporation shall pay or credit to such Limited Clearing Member, an amount equal to such excess so long as the Limited Clearing Member is not itself a suspended Clearing Member.
- 4) If a Recovery Loss that has been satisfied with an amount levied from a Clearing Member as part of the Recovery Process is subsequently recovered by the Corporation from the Clearing Member whose suspension led to the Recovery Loss, or otherwise, in whole or in part, the net amount of such recovery shall be paid or credited to the Clearing Members to whom the amount was charged in proportion to the amount paid by each of them in Recovery Loss Cash Payments and Retained Amounts whether or not they remain Clearing Members. If, after paying or crediting all Clearing Members for all their Recovery Loss Cash Payments and Retained Amounts a net balance remains,

the Corporation shall pay or credit the Clearing Members with the net balance, in accordance with Section A-612.

- 5) Any Clearing Member that has been charged a Recovery Loss Cash Payment or Retained Amounts under Sections A-1005 or A-1006, shall have the right to claim from the Clearing Member whose suspension led to the Recovery Losses being charged to it and the suspended Clearing Member shall be obliged to reimburse such other Clearing Member the amount paid by the Clearing Member to the extent such amount has not already been recovered by the Corporation pursuant to Subsections A-1013(2), (3) or (4).

RULE D-6 CLEARING OF FIXED INCOME TRANSACTIONS

The Sections of this Rule D-6 are applicable only to the clearing of Fixed Income Transactions by the Corporation, to the Limited Clearing Members and to those Clearing Members who are required to make a base deposit to the Clearing Fund for Fixed Income Clearing as set out in Paragraph A-601(2)(d).

SECTION D-601 DEFINITIONS

Notwithstanding Section A-102, for the purposes of Fixed Income Clearing, the following terms are defined as follows:

“Accrued Coupon Income” – means, with respect to a Repurchase Transaction, the Coupon Income paid by an issuer of Purchased Securities and held by a Net Buyer under Paragraph D-606(5)(b) plus the accrued interest on such Coupon Income calculated at the Repo Rate for such Repurchase Transaction for the period from and including the date such Coupon Income was paid by such issuer up to and excluding the Repurchase Date.

“Accrued Coupon Value” – means, with respect to any Purchased Security, the proportion of the Coupon Income payable by the issuer of the relevant Security on the next Coupon Payment Date corresponding to the number of days that have elapsed since the immediately preceding Coupon Payment Date up to the applicable calculation date, calculated based on a calendar year of 365 days.

“Afternoon Net DVP Settlement Requirement” – means a settlement instruction sent to the Central Securities Depository at the Afternoon Netting Cycle Timeframe netting all then Pending Settlement Requirements between a Clearing Member and the Corporation, in accordance with Paragraph D-606(7)(b).

“Afternoon Netting Cycle Timeframe” – means the time specified in the Operations Manual at which the Corporation nets all then Pending Settlement Requirements into Afternoon Net DVP Settlement Requirements, in accordance with Paragraph D-606(7)(b).

“Cash Buy or Sell Trade” – means a transaction by which a Fixed Income Clearing Member buys (Cash Buy Trade) or sells (Cash Sell Trade) an Acceptable Security.

“Close Leg” – means, with respect to a Repurchase Transaction, the second part of a Repurchase Transaction where either (i) a Repo Party agrees to buy back Acceptable Securities from a Reverse Repo Party at a Repurchase Price to be paid by the Repo Party to the Reverse Repo Party, or (ii) a Reverse Repo Party agrees to sell back Acceptable Securities to a Repo Party at a Repurchase Price to be paid to the Reverse Repo Party by the Repo Party.

“CORRA Rate” – means the compounded daily Canadian Overnight Repo Rate Average, as determined by the appointed CORRA benchmark administrator, currently Thomson Reuters.

“Coupon Income” – means the interest amount payable to the holder of a Security by its issuer on a Coupon Payment Date.

“Coupon Payment Date” – means a date on which the issuer of a Security pays Coupon Income to the holder of the Security.

“Economic Terms” – means the transactional details of a Fixed Income Transaction as set out in Subsection D-603(1).

“End of Day DVP Settlement Time” – means the time specified in the Operations Manual at which the Fixed Income Clearing Member must have satisfied all its Afternoon Net DVP Settlement Requirements and any Gross Delivery Requirements and Gross Payment Against Delivery Requirements resulting from Same Day Transactions submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, in accordance with Paragraph D-606(7)(c).

“Equivalent Security” – means an Acceptable Security that is equivalent to the Purchased Security in that it is of the same issuer, part of the same issue and of an identical type, nominal value, description and (except where otherwise specified by the Corporation) amount as the Purchased Security.

“Expected Novation Date” – means the date on which a Fixed Income Transaction is submitted by the Fixed Income Clearing Members and on which they wish that the Corporation will accept it for clearance.

“Fixed Income Clearing” – means the provision of clearing services by the Corporation of Fixed Income Transactions.

“Fixed Income Clearing Member” – means an applicant which meets the criteria set out in Section A – 1A01 and Subsection A-301(4) and is approved by the Corporation for Fixed Income Clearing, or a Limited Clearing Member.

“Fixed Income Transaction(s)” – means Repurchase Transaction(s) and/or Cash Buy or Sell Trade(s).

“Floating Price Rate” – means, in respect of a Repurchase Transaction, the overnight index swap (“OIS”) rate for a term that is the same as the Term of such Repurchase Transaction (and if an OIS rate is not available for the applicable Term, such Floating Price Rate will be determined by interpolating the OIS rate between the two terms that are closest to the applicable Term), as determined by the Corporation in accordance with its customary practices for purposes of calculating mark-to-market payments and margin payments. For the purposes of this definition, “Term” shall mean the remaining number of days between the applicable calculation date and the Repurchase Date of the relevant Repurchase Transaction.

“Forward Settlement Transaction” – means a Cash Buy or Sell Trade or an Open Leg of a Repurchase Transaction, in each case, having a Purchase Date later than the Novation Date, or a Close Leg of a Repurchase Transaction.

“Market Value” – means, with respect to any Purchased Securities as of any time on any date, the current price as of such date for the relevant Purchased Securities as determined by the Corporation on the basis of then available price source quotations or alternative market information, as determined by the Corporation plus the Accrued Coupon Value in respect of such Purchased Securities to the extent not included in such current price.

“Morning Net DVP Settlement Timeframe” – means the timeframe specified in the Operations Manual during which there must be available funds in the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent to settle the lesser of (i) its Morning Net Payment Against Delivery Requirement, and (ii) the amount of the CDCC Daylight Credit Facility, in accordance with Paragraph D-606(7)(c).

“Morning Net Payment Against Delivery Requirement” – means a settlement instruction sent to the Central Securities Depository at the Morning Netting Cycle Timeframe netting all then Pending Payment Against Delivery Requirements between a Clearing Member and the Corporation, in accordance with Paragraph D-606(7)(a).

“Morning Netting Cycle Timeframe” – means the timeframe specified in the Operations Manual during which the Corporation nets all then Pending Payment Against Delivery Requirements into Morning Net Payment Against Delivery Requirements, in accordance with Paragraph D-606(7)(a).

“N-Day Term Repurchase Transaction” – means a Repurchase Transaction with a term longer than one Business Day.

“Net Buyer” – means a Fixed Income Clearing Member whose aggregate net sum of Net Funds Transfer Requirement, Net Funds Reversal Requirement, any applicable Postponed Payment Obligation(s) and any other payment obligation against delivery of an Acceptable Security due by such Fixed Income Clearing Member to the Corporation on a given Business Day are greater than the aggregate net sum of Net Funds Transfer Requirement, Net Funds Reversal Requirement, any applicable Postponed Payment Obligation(s) and any other payment obligation against delivery of an Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Business Day, as determined by the Corporation pursuant to Paragraph A-801(2)(c).

“Net Delivery Obligation” – means, in respect of a Fixed Income Clearing Member, the quantity of a given Acceptable Security which is the aggregate net quantity of any Net Securities Transfer Requirement deliverable by or to such Fixed Income Clearing Member to or by the Corporation and any Net Securities Reversal Requirement deliverable by or to such Fixed Income Clearing Member to or by the Corporation, and any Rolling Delivery Obligation deliverable by or to such Fixed Income Clearing Member to or by the Corporation, as the case may be, with respect to such Acceptable Security, on a given Business Day, calculated in accordance with Subsection D-606(3).

“Net Funds Reversal Requirement” – means the amount which is the aggregate net sum of Repurchase Prices payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(2).

“Net Funds Transfer Requirement” – means the amount which is the aggregate net sum of Purchase Prices payable by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(1).

“Net Payment Obligation” – means, in respect of a Fixed Income Clearing Member, the amount which is the aggregate net sum of any Net Funds Transfer Requirement payable by or to such Fixed Income Clearing Member to or by the Corporation and any Net Funds Reversal Requirement payable by or to such Fixed Income Clearing Member to or by the Corporation, and any Postponed Payment Obligation due and payable by or to such Fixed Income Clearing Member to or by the Corporation, as the case may be, on a given Business Day, calculated in accordance with Subsection D-606(3).

“Net Price Valuation Requirement” – means, on any Business Day, the amount which is the aggregate net sum of all Price Valuation Requirements owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(2).

“Net Repo Rate Requirement” – means, on any Business Day, the amount which is the aggregate net sum of all Repo Rate Requirements owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(1).

“Net Securities Reversal Requirement” – means the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(2).

“Net Securities Transfer Requirement” – means the aggregate net quantity of an Acceptable Security due by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-606(1).

“Net Seller” – means a Fixed Income Clearing Member whose aggregate net quantity of Net Securities Transfer Requirement, Net Securities Reversal Requirement, any applicable Rolling Delivery Obligation(s) and any other delivery obligation in respect of a given Acceptable Security due by such Fixed Income Clearing Member to the Corporation on a given Business Day are greater than the aggregate net quantity of Net Securities Transfer Requirement, Net Securities Reversal Requirement, any applicable Rolling Delivery Obligation(s) and any other delivery obligation in respect of a given Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Business Day, as determined by the Corporation pursuant to Paragraph A-801(2)(d).

“Net Variation Margin Requirement”- means, on any Business Day, the amount which is the aggregate net sum of all Net Repo Rate Requirements and all Net Price Valuation Requirements owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member, as the case may be, calculated in accordance with Subsection D-607(3).

“Novation Date” – means the date on which a Fixed Income Transaction is accepted by the Corporation for clearance subject to conditions set forth herein, provided that (i) for a Forward Settlement Transaction, if the Expected Novation Date is not a Business Day or the Fixed Income Transaction is submitted after the Netting Cut-Off Time on that Business Day, the Novation Date shall be deemed to be the immediately following Business Day; and (ii) for a Same Day Transaction, if the Expected Novation Date is not a Business Day or the Same Day Transaction is submitted after the Submission Cut-Off Time on a date that is a Business Day, the Corporation will not accept the Same Day Transaction for clearing.

“Open Leg” – means, with respect to a Repurchase Transaction, the first part of a Repurchase Transaction where either (i) a Repo Party agrees to sell Acceptable Securities to a Reverse Repo Party at a Purchase Price to be paid by the Reverse Repo Party to the Repo Party, or (ii) a Reverse Repo Party agrees to buy Acceptable Securities from a Repo Party at a Purchase Price to be paid to the Repo Party by the Reverse Repo Party.

“OTCI Clearing Platform” – means the dedicated trade input screens for clearing and settlement of OTCI operated and/or used by the Corporation.

“Pending Delivery Requirements” – means, in respect of a given Business Day, any Gross Delivery Requirements and/or any Net Delivery Requirements which are due on such Business Day and have not yet settled at the Afternoon Netting Cycle Timeframe.

“Pending Payment Against Delivery Requirements” – means, in respect of a given Business Day, any Net Payment Against Delivery Requirements and/or any Gross Payment Against Delivery Requirements which are due on such Business Day and have not yet settled at the Morning Netting Cycle Timeframe, or any Morning Net Payment Against Delivery Requirements and/or Gross Payment Against Delivery Requirements which are due on such Business Day and have not yet settled at the Afternoon Netting Cycle Timeframe, as the case may be.

“Pending Settlement Requirements” – means, collectively, any Pending Delivery Requirements and/or any Pending Payment Against Delivery Requirements at the Afternoon Netting Cycle Timeframe.

“Price Differential” – means, with respect to any Repurchase Transaction, an amount payable by the Repo Party equal to an amount obtained by application of the Repo Rate for such Repurchase Transaction to the

Purchase Price for such Repurchase Transaction (on a 365 day basis), for the actual number of days of the term of such Repurchase Transaction.

“Price Valuation Requirement” – means, 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 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.

“Purchase Date” – means, with respect to any Repurchase Transaction, the date on which Purchased Securities are sold by the Repo Party to the Corporation and by the Corporation to the Reverse Repo Party; and with respect to any Cash Buy or Sell Trade, the date on which it settles, provided that if such date is not a Business Day, the Purchase Date shall be the immediately following Business Day.

“Purchase Price” – means, with respect to any Fixed Income Transaction, the amount at which the Purchased Securities are sold or to be sold by the Seller to the Corporation and by the Corporation to the Buyer.

“Purchased Securities” – means, with respect to any Fixed Income Transaction, the Acceptable Securities sold or to be sold by the Seller to the Corporation and by the Corporation to the Buyer.

“Quantity of Purchased Securities” – means, with respect to a Fixed Income Transaction, an amount equal to the Purchase Price for such Fixed Income Transaction on the Novation Date of such Fixed Income Transaction divided by the Market Value per dollar of the Specified Denomination of the relevant Purchased Securities, rounded up to the nearest whole number.

“Repo Party” or **“Seller”** – means, in respect of a Fixed Income Clearing Member, such Fixed Income Clearing Member who is the seller under a Fixed Income Transaction and who becomes the seller to the Corporation upon acceptance of the Fixed Income Transaction by the Corporation, and in respect of the Corporation, the Corporation when it has assumed the position of the seller under a Fixed Income Transaction pursuant to Section D-605. The term “Repo Party” will be used when referring specifically to a Repurchase Transaction, whereas the term “Seller” will be used when referring to a Cash Buy or Sell Trade or to Fixed Income Transactions generally.

“Repo Rate” – means, with respect to any Repurchase Transaction, the per annum fixed pricing rate agreed by the Repo Party and the Reverse Repo Party.

“Repo Rate Requirement” – represents a change in the current Floating Price Rate and means, in respect of a Repurchase Transaction, an amount 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.

“Repo Style” – means, in respect of Coupon Income payments of any Repurchase Transaction, either the US convention that applies as set forth in Paragraph D-606(5)(a), or the Canadian convention that applies as set forth in Paragraph D-606(5)(b).

“Repurchase Date” – means, with respect to any Repurchase Transaction, a day on which Equivalent Securities are to be sold by a Reverse Repo Party to the Corporation and by the Corporation to a Repo

Party, in accordance with Section D-606; provided that if such date is not a Business Day, the Repurchase Date shall be the immediately following Business Day.

“Repurchase Price” – means, with respect to any Repurchase Transaction, the sum of the Purchase Price and the Price Differential.

“Repurchase Transaction” – means A) a trade originally entered into between two Fixed Income Clearing Members which is submitted to the Corporation for clearing in which either (i) a Repo Party agrees to sell Acceptable Securities to a Reverse Repo Party at a Purchase Price to be paid by the Reverse Repo Party to the Repo Party, with a simultaneous agreement by the Repo Party to purchase Equivalent Securities from the Reverse Repo Party at a future date at a Repurchase Price to be paid to the Reverse Repo Party by the Repo Party, or (ii) a Reverse Repo Party agrees to buy Acceptable Securities from a Repo Party at a Purchase Price to be paid to the Repo Party by the Reverse Repo Party, with a simultaneous agreement by the Reverse Repo Party to sell Equivalent Securities to the Repo Party at a future date at a Repurchase Price to be paid by the Repo Party to the Reverse Repo Party, and, as appropriate in the circumstances, B) the Transaction resulting from the novation of the trade described in A) pursuant to Section D-605 of the Rules.

“Reverse Repo Party” or **“Buyer”** – means, in respect of a Fixed Income Clearing Member, such Fixed Income Clearing Member who is the buyer of a Fixed Income Transaction and who becomes the buyer to the Corporation upon acceptance of the Fixed Income Transaction by the Corporation, and in respect of the Corporation, the Corporation when it has assumed the position of the buyer under a Fixed Income Transaction pursuant to Section D-605. The term “Reverse Repo Party” will be used when referring specifically to a Repurchase Transaction, whereas the term “Buyer” will be used when referring to a Cash Buy or Sell Trade or to Fixed Income Transactions generally.

“Same Day Transaction” – means a Cash Buy or Sell Trade or an Open Leg of a Repurchase Transaction, in each case, having the same Novation Date and Purchase Date.

“Specified Denomination” – means, with respect to an Acceptable Security, the denomination in which it was issued.

“Submission Cut-Off Time” – means a time specified in the Operations Manual as the deadline on any Business Day for submitting Same-Day Transactions for clearance to the Corporation.

“Variation Margin Requirement” - means, in respect of a Fixed Income Transaction, an amount which is the aggregate net sum of the Repo Rate Requirement and the Price Valuation Requirement owed by a Fixed Income Clearing Member to the Corporation or by the Corporation to a Fixed Income Clearing Member.

Any capitalized term used in this Rule D-6 that is not defined in this Section D-601 shall have the meaning assigned to it in Section A-102.

SECTION D-602 PARAMOUNTCY

In the event of any inconsistency between the provisions of this Rule D-6 and the other provisions of the Rules, the provisions of this Rule D-6 will prevail.

SECTION D-603 ESSENTIAL TERMS OF FIXED INCOME TRANSACTIONS

- 1) In addition to and not in lieu of the Acceptance Criteria set forth in Section D-104, the following Economic Terms of a Fixed Income Transaction shall be required to be submitted to the Corporation:

Seller

Buyer

Purchased Securities (CUSIP/ISIN)

Quantity of Purchased Securities

Expected Novation Date

Purchase Price

Purchase Date

Repurchase Date (as applicable)

Repo Rate (as applicable)

Repo Style (indicate whether it is a US or Canadian style Repurchase Transaction, as applicable).

- 2) Subject to conditions set forth herein, once a Trade Confirmation has been issued by the Corporation, the Corporation shall assume the position of the Seller and become a seller to Buyer and shall assume the position of the Buyer and become the buyer to Seller under all Fixed Income Transactions in each case, as principal to such Fixed Income Transactions, as a result of the novation process set forth in Subsection D-605(3).
- 3) On the Purchase Date of each Fixed Income Transaction, the Seller shall transfer the Purchased Securities on such Purchase Date against payment of the Purchase Price by the Buyer. On the Repurchase Date of each Repurchase Transaction, the Reverse Repo Party shall transfer the Equivalent Securities against payment of the Repurchase Price by the Repo Party. The transfer and payment obligations referred to in this provision shall be subject to netting and settlement processes set forth in Section D-606.
- 4) Notwithstanding the use of expressions such as “Repurchase Date”, “Repurchase Price” and “margin” or any other Rule, all right, title and interest (free from liens, claims, charges, encumbrances) in and to the Purchased Securities and Equivalent Securities and money transferred or paid under these Rules shall pass to the party receiving such Purchased Securities, Equivalent Securities and money upon transfer or payment, and no security interest or hypothec is created in the Purchased Securities and Equivalent Securities and money transferred or paid. Each Fixed Income Clearing Member shall execute and deliver all necessary documents and take all necessary steps to procure that all right, title and interest in any Purchased Securities and in any Equivalent Securities shall pass to the party to which transfer is being made upon transfer of the same in accordance with these Rules, free from all liens, claims, charges and encumbrances, and such transfer will not violate any agreement to which such Fixed Income Clearing Member may be a party or by which such Fixed Income Clearing Member’s property may be bound.
- 5) For purposes of the *Interest Act* (Canada), if any rate of interest payable under any Fixed Income Transaction is expressed to be calculated on the basis of a period less than a full calendar year, the yearly rate of interest to which such rate is equivalent is the product obtained by multiplying such

rate by a fraction, the numerator of which is the actual number of days in the calendar year and the denominator of which is the number of days comprising such other basis.

SECTION D-604 TRADE RECEPTION AND VALIDATION

- 1) Any Repurchase Transaction or Cash Buy or Sell Trade must be submitted for clearing to the Corporation through an Acceptable Marketplace (whether bilateral or multilateral) or through the CDS trade matching facility. The Corporation may require evidence as it deems reasonably acceptable that a Fixed Income Clearing Member is a duly authorized participant of any multilateral Acceptable Marketplace. The Corporation shall not bear any responsibility or liability for any error, delay, misconduct, negligence, or any other act or omission, by the multilateral Acceptable Marketplace or the CDS trade matching facility, as applicable.
- 2) Once a Repurchase Transaction or Cash Buy or Sell Trade is received by the Corporation, a variety of validations will occur in accordance with the OTCI Clearing Platform procedure. These validations are designed to ensure that all Economic Terms match and all Acceptance Criteria set forth in Section D-104 are satisfied, and the Corporation does not accept any Repurchase Transaction or Cash Buy or Sell Trade bearing attributes that are determined by the Corporation as not acceptable for clearing. The Corporation will not accept a Repurchase Transaction with a Repurchase Date later than the maturity date of the applicable Purchased Securities.
- 3) Any Same Day Transaction submitted after the Submission Cut-Off Time specified in the Operations Manual shall not be accepted by the Corporation for clearance and may be submitted by Fixed Income Clearing Members to the Central Securities Depository independently without being novated to the Corporation. Any Forward Settlement Transaction submitted after the Netting Cut-Off Time specified in the Operations Manual shall be deemed received by the Corporation for clearance on the following Business Day.
- 4) If the Acceptable Marketplace used for submitting a Repurchase Transaction or Cash Buy or Sell Trade for clearing is a multilateral facility, each Fixed Income Clearing Member transacting as Buyer or Seller shall be responsible for timely affirming the Fixed Income Transactions on the OTCI Clearing Platform, as directed by the Corporation.

SECTION D-605 CONFIRMATION AND NOVATION

- 1) Once all validations have occurred and the Fixed Income Transactions are either (i) duly affirmed by the Fixed Income Clearing Members on the OTCI Clearing Platform or (ii) received for clearing by the Corporation from the CDS trade matching facility, the Corporation shall issue a Trade Confirmation with respect to each individual Fixed Income Transaction and send it to the transacting Fixed Income Clearing Members. A Fixed Income Clearing Member shall be bound by the terms of a Fixed Income Transaction for which the Corporation has issued a Trade Confirmation in its name. The Corporation shall not bear any responsibility or liability for any error, delay, misconduct, negligence or other act or omission by the CDS trade matching facility.
- 2) The Corporation shall reject the Repurchase Transaction or Cash Buy or Sell Trade if (i) Economic Terms listed in Section D-603 are determined by the Corporation in its sole discretion as incorrect or incomplete when the Repurchase Transaction or Cash Buy or Sell Trade is submitted to the Corporation by or on behalf of a Fixed Income Clearing Member, or (ii) the Economic Terms submitted by or on behalf of the two Fixed Income Clearing Members that are parties to a Repurchase Transaction or Cash Buy or Sell Trade do not match, or (iii) any other Acceptance Criteria set forth

in Section D-104 is not met. Such Repurchase Transaction or Cash Buy or Sell Trade will remain in effect solely between the persons party thereto in accordance with any terms agreed between them, and the Corporation shall have no further obligation or liability with respect to such Repurchase Transaction or Cash Buy or Sell Trade.

- 3) Upon the issuance of a Trade Confirmation by the Corporation under Subsection D-605(1) and notwithstanding the fact that the transacting Fixed Income Clearing Members may not have received such Trade Confirmation, the Repurchase Transaction or Cash Buy or Sell Trade shall be automatically novated to the Corporation, such that the original Repurchase Transaction 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 the Corporation where the Corporation is substituted as the Buyer, and one between the Buyer and the Corporation where the Corporation is substituted as the Seller. In respect of the Economic Terms, the Fixed Income Clearing Member acting as a Seller or a Buyer under such original Repurchase Transaction or Cash Buy or Sell Trade shall have the same rights against, and owe the same obligations to, the Corporation under such Repurchase Transaction or such Cash Buy or Sell Trade to which it is a party as it had and owed in respect of its counterparty under the original Repurchase Transaction or Cash Buy or Sell Trade, as the case may be. For purposes hereof, a reference to the “same” rights or obligations is a reference to rights or obligations falling due for exercise or performance after the time at which a Trade Confirmation is issued in respect of a Fixed Income Transaction, and which are the same in nature and character as the rights or obligations arising from the Economic Terms of the original Repurchase Transaction or Cash Buy or Sell Trade (it being assumed, for this purpose, that such Repurchase Transaction or Cash Buy or Sell Trade was a legal, valid, binding and enforceable obligation of the parties thereto and that the Economic Terms thereof were as presented to the Corporation for clearing), notwithstanding the substitution in the person entitled to them or obliged to perform them and subject to any changes thereto as a result of the operation of these Rules.
- 4) Fixed Income Clearing by the Corporation is subject to, and contingent upon, the occurrence of the novation described in Subsection D-605(3) above. Effective as at the time of such novation, Fixed Income Clearing Members that were parties to the original Repurchase Transaction or Cash Buy or Sell Trade shall be released and discharged from their respective obligations to each other and the resulting Fixed Income Transactions shall be governed by these Rules.
- 5) If a Repurchase Transaction or a Cash Buy or Sell Trade is revoked, voided or otherwise declared invalid for any reason after the Economic Terms of it have been accepted by the Corporation for clearing, that revocation, avoidance or invalidity shall not affect any Fixed Income Transaction arising out of this Section D-605.

SECTION D-606 TRANSFERS AND PAYMENTS

- 1) In respect of any Forward Settlement Transaction, excluding a Close Leg of a Repurchase Transaction, at the applicable Netting Cut Off Time on a Purchase Date, the Corporation shall calculate with respect to each Fixed Income Clearing Member (i) the Net Securities Transfer Requirement with respect to each Acceptable Security by aggregating the Purchased Securities of such Acceptable Security due by each Fixed Income Clearing Member on such Purchase Date and netting them against the Purchased Securities of such Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Purchase Date, and (ii) the Net Funds Transfer Requirement by aggregating all Purchase Prices due by each Fixed Income Clearing Member to the Corporation and netting them against all Purchase Prices due by the Corporation to such Fixed Income Clearing Member across all its Fixed Income Transactions.

- 2) In respect of any Close Leg of a Repurchase Transaction, at the applicable Netting Cut Off Time on each Repurchase Date, the Corporation shall calculate with respect to each Fixed Income Clearing Member (i) the Net Securities Reversal Requirement with respect to each Acceptable Security by aggregating the Equivalent Securities of such Acceptable Security due by each Fixed Income Clearing Member on such Repurchase Date and netting them against the Equivalent Securities of such Acceptable Security due by the Corporation to such Fixed Income Clearing Member on such Repurchase Date; and (ii) the Net Funds Reversal Requirement by aggregating all Repurchase Prices less all Accrued Coupon Income deductible pursuant to Paragraph D-606(5)(b), due by each Fixed Income Clearing Member to the Corporation and netting them against all Repurchase Prices less all Accrued Coupon Income deductible pursuant to Paragraph D-606(5)(b), due by the Corporation to such Fixed Income Clearing Member across all of its Repurchase Transactions.
- 3) At the applicable Netting Cut Off Time on each Business Day, for each Fixed Income Clearing Member, the Corporation shall calculate (i) the Net Delivery Obligation with respect to an Acceptable Security by aggregating and netting the Net Securities Transfer Requirement, the Net Securities Reversal Requirement, and any Rolling Delivery Obligation, as applicable, owing to or by the Fixed Income Clearing Member with respect to such Acceptable Security on such Business Day (which Net Delivery Obligation shall be subject to further netting pursuant to Paragraph A-801(2)(d) and the other provisions of Rule A-8 to determine the Net Delivery Requirement); and (ii) the Net Payment Obligation by aggregating and netting the Net Funds Transfer Requirement, the Net Funds Reversal Requirement, any Coupon Income payable pursuant to Paragraph D-606(5)(a), and any Postponed Payment Obligation, as applicable, owing to or by the Fixed Income Clearing Member, provided, however, these amounts shall not be netted against any other payment owing to or by a Fixed Income Clearing Member other than as prescribed under Paragraph A-801(2)(c) and the other provisions of Rule A-8 to determine the Net Payment Against Delivery Requirement.
- 4) At the applicable Netting Cut Off Time on each Business Day, the Net Delivery Obligations and the Net Payment Obligations will be netted against all other payment and delivery obligations with respect to Acceptable Securities to determine the Net Delivery Requirements and the Net Payment Against Delivery Requirements pursuant to Paragraphs (c) and (d) of Subsection A-801(2), and communicated by the Corporation to Fixed Income Clearing Members that are Net Sellers with respect to a given Acceptable Security and/or Net Buyers. Each Fixed Income Clearing Member is responsible for ensuring that there are sufficient funds and sufficient Equivalent Securities in respect of each Acceptable Security in the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent to satisfy its Net Delivery Requirement and/or Net Payment Against Delivery Requirement, as applicable, as they become due in accordance with the rules of the Central Securities Depository and subject to Subsection D-606(7).
- 5)
 - a) In respect of any Repurchase Transaction where the parties have agreed, as one of its Economic Terms, that Coupon Income will be paid to a Seller as it is received, known as a US style Repurchase Transaction, any Coupon Income paid by an issuer of Purchased Securities that has been transferred by a Net Seller to the Corporation and by the Corporation to a Net Buyer shall be paid on the Coupon Payment Date by the Net Buyer to the Corporation and by the Corporation to the Net Seller.
 - b) In respect of any Repurchase Transaction where the parties have agreed, as one of its Economic Terms, that Coupon Income will not be paid to a Seller as it is received, known as a Canadian style Repurchase Transaction, any Coupon Income paid by an issuer of Purchased Securities that has been transferred by a Net Seller to the Corporation, and by the Corporation to a Net Buyer, shall be held by the Net Buyer until the applicable Repurchase Date. On such Repurchase Date,

the Repurchase Price otherwise payable by a Net Seller to the Corporation and by the Corporation to a Net Buyer in respect of such Repurchase Transaction shall be reduced by the Accrued Coupon Income.

- 6) In respect of any Same Day Transaction, payment of the Purchase Price by the Buyer and delivery of the Quantity of Purchased Securities by the Seller will be settled on a gross basis immediately following the novation of each Same Day Transaction under Subsection D-605(3). Each Fixed Income Clearing Member who submits Same Day Transactions is responsible for ensuring that there are sufficient funds and sufficient Acceptable Securities in the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent to satisfy its Gross Delivery Requirement and/or Gross Payment Against Delivery Requirement, as applicable, as they become due in accordance with the rules of the Central Securities Depository and subject to Subsection D-606(7).
- 7)
 - a) Notwithstanding the foregoing, at the Morning Netting Cycle Timeframe, the Corporation shall net any Pending Payment Against Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Payment Against Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member to determine the Morning Net Payment Against Delivery Requirement payable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(3).
 - b) Notwithstanding the foregoing, at the Afternoon Netting Cycle Timeframe, the Corporation shall net any Pending Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member in respect of the same Acceptable Security to determine the Afternoon Net DVP Settlement Requirement deliverable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(4)(i), and/or net any Pending Payment Against Delivery Requirements of a Fixed Income Clearing Member in favour of the Corporation against any Pending Payment Against Delivery Requirements of the Corporation in favour of the same Fixed Income Clearing Member to determine the Afternoon Net DVP Settlement Requirement payable to or from such Fixed Income Clearing Member in accordance with Subsection A-801(4)(ii).
 - c) Each Fixed Income Clearing Member is responsible for ensuring that there are sufficient funds in the designated CDS Funds Account of the Clearing Member or its Settlement Agent, 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, and that there are sufficient funds and sufficient Acceptable Securities in the designated CDS Funds Account and CDS Securities Account of the Clearing Member or of its Settlement Agent, to settle its Afternoon Net DVP Settlement Requirements and any Gross Delivery Requirements and Gross Payment Against Delivery Requirements resulting from Same Day Transactions submitted after the Afternoon Netting Cycle Timeframe and before the Submission Cut-Off Time, by the End of Day DVP Settlement Time, and otherwise comply with the rules of the Central Securities Depository.

SECTION D-607 VARIATION MARGIN REQUIREMENT

- 1) At the end of each Business Day, the Corporation shall calculate, in accordance with the methodology set forth in the Risk Manual, in respect of all Repurchase Transactions to which a Fixed Income

Clearing Member is a party, the Net Repo Rate Requirement that is required to be transferred by such Fixed Income Clearing Member or by the Corporation, by Settlement Time on the following Business Day, by aggregating all Repo Rate Requirements due by each Fixed Income Clearing Member to the Corporation and netting them against all Repo Rate Requirements due by the Corporation to such Fixed Income Clearing Member across all its Repurchase Transactions, provided that a Repo Rate Requirement in respect of a Repurchase Transaction shall not be calculated where the Business Day is the Repurchase Date of such Repurchase Transaction.

- 2) At the end of each Business Day, the Corporation shall calculate, in accordance with the methodology set forth in the Risk Manual, in respect of all Fixed Income Transactions to which a Fixed Income Clearing Member is a party, the Net Price Valuation Requirement that is required to be transferred by such Fixed Income Clearing Member or by the Corporation, by the Settlement Time on the following Business Day, by aggregating all Price Valuation Requirements due by each Fixed Income Clearing Member to the Corporation and netting them against all Price Valuation Requirements due by the Corporation to such Fixed Income Clearing Member across all its Fixed Income Transactions, provided that a Price Valuation Requirement in respect of a Repurchase Transaction shall not be calculated where the Business Day is the Repurchase Date of such Repurchase Transaction and, that a Price Valuation Requirement in respect a Cash Buy or Sell Trade shall not be calculated where the Business Day is the Purchase Date of such Cash Buy or Sell Trade.
- 3) Notwithstanding anything to the contrary herein, all obligations of a Fixed Income Clearing Member or of the Corporation in respect of a Net Repo Rate Requirement and a Net Price Valuation Requirement which are required to be transferred at the same Settlement Time, shall be aggregated and netted against each other such that only one net amount in the form of eligible collateral described in the Risk Manual shall be transferred either to a Fixed Income Clearing Member by the Corporation or to the Corporation by a Fixed Income Clearing Member. The aggregate net amount shall be referred to as the “Net Variation Margin Requirement”. For further clarity, a negative Net Variation Margin Requirement shall represent the amount owed by the Corporation to the Clearing Member and a positive Net Variation Margin Requirement shall represent an amount owed by a Clearing Member to the Corporation.
- 4) On any Business Day, if there is a decrease in a Net Variation Margin Requirement of a Fixed Income Clearing Member, the Corporation shall transfer, in accordance with and subject to the conditions set forth in Section 8 of the Operations Manual, eligible collateral in an amount equal to the decrease and, if applicable, comprised of the same CUSIP/ISIN securities which were previously pledged by the Fixed Income Clearing Member to the Corporation for the purpose of satisfying the Net Variation Margin Requirement.
- 5) On any Business Day, if there is an increase in a Net Variation Margin Requirement of a Fixed Income Clearing Member, the Fixed Income Clearing Member shall transfer, in accordance with and subject to the conditions set forth in Section 8 of the Operations Manual, eligible collateral in an amount equal to the increase and, if applicable, comprised of the same CUSIP/ISIN securities which were previously pledged by the Corporation to the Fixed Income Clearing Member for the purpose of satisfying the Net Variation Margin Requirement.

APPENDIX 2



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

OPERATIONS MANUAL

~~VERSION OF JULY 11, 30 AUGUST~~ 2017



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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

~~“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~~ [CDCS](#) will exercise In-the-Money Options at a pre-determined threshold.

“CDCC Clearing Application” – CDCC 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.

PREAMBLE AND DEFINITIONS

“Difference Fund” ~~any and all deposits from a Account~~ – the CDCC record provided to each Clearing Member containing any Additional Margin deposited by such Clearing Member to the CDCC ~~as additional Margin, in respect of any of the following: (1) Unsettled Item, (2) Additional Capital Margin, (3) Advance Calls for Settlement of Losses, (4) OTCI Additional Margin, (5) Discretionary Margin, (6) Additional Margin for Intra-Day Variation Margin Risk, (7) Additional Margin for Mismatched Settlement Risk, (8) Additional Margin for Uncovered Risk of LCMs, and (9), Additional Margin for Variation Margin Delivery Risk; the whole~~ in accordance with ~~Sections A-702, A-705, A-710, B-412, C-303, C-517 or D-307 of the Rules, the Risk Manual~~ or otherwise as set forth in Section 8-24 hereof.

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

“FTP Downloads” – Clearing ~~Members~~ 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.

~~“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.~~ **Limited Clearing Member (LCM)** – has the meaning given thereto in Section A-102 of the Rules.

“Margin Fund Account” – the CDCC 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 Concentration Risk, (3) Additional Margin for Specific Wrong-Way Risk, (4) Variation Margin for Options, and (5) Variation Margin for Unsettled Item; the whole in accordance with the Risk Manual, or otherwise as set forth in Section 8-1 hereof.

“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

PREAMBLE AND DEFINITIONS

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, ~~and in all cases that create or increase the Clearing Member’s Open Interest~~ 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*.

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

“Production Schedule” – ~~sum~~all of the 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~~the 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~~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.

~~“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.



Section: 1 - 4

PREAMBLE AND DEFINITIONS

“**Unsettled ~~Item~~Item**” – any delivery of the Underlying Interest ~~of an Option~~ 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 - 1

TIME FRAMES

ON-LINE ACCESS

Each Clearing ~~Members~~Member must be connected to the CDCC Clearing Application using ~~their~~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, 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.

The regular business hours of CDCC are 7:00 a.m. to 5:30 p.m. Eastern Time (ET) on every Business Day.

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~~forty-five (+~~5~~45) minutes after delivery of the Options Exercised and Assigned Report (MT02).

TIME FRAMES

SETTLEMENT TIME FRAMES FOR ON-LINE ACCESSION EVERY BUSINESS DAY

Activity Deadlines	<u>Time Frames</u>	<u>Activity Type</u>
<u>Start of Settlement Day at CDS and Clearing Day at CDCC</u>	<u>5:30 a.m.</u>	<u>System Activity</u>
<u>Assets Concentration Limits breach notification</u>	<u>7:30 a.m.</u>	<u>Notification</u>
<u>Deadline for Clearing Members (excluding LCMs) for Settlement Time with respect to payments for overnight settlement</u>	<u>7:45 a.m.</u>	
	<u>Obligation Deadline</u>	
Fixed Income Transactions – Netting Cycle Timeframe in respect of any Pending Settlement Requirements (Morning Net DVP Settlement Requirements sent to CDS for settlement)		8:30 to 8:45 a.m.
<u>15 minutes cycle</u>	<u>8:30 a.m.</u>	<u>System Activity</u>
<u>Deadline for Clearing Members (excluding LCMs) to receive EOD Amount due from CDCC</u>	<u>8:45 a.m.</u>	<u>Obligation Deadline</u>
<u>Deadline for LCMs for Settlement Time with respect to payments for overnight settlement</u>	<u>9:00 a.m.</u>	<u>Obligation Deadline</u>
<u>Additional Capital Margin: Notification to Clearing Members (excluding LCMs)</u>	<u>9:30 a.m.</u>	<u>Publication</u>
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) =		
<u>15 minutes cycle</u>	<u>10:00 to 10:15 a.m.</u>	<u>System Activity</u>
Morning Net DVP Settlement Timeframe <u>Calculation</u>		<u>10:15 to 10:30 a.m. System Activity</u>
<u>Deadline for Morning Net DVP Settlement</u>	<u>10:30 a.m.</u>	<u>Obligation Deadline</u>
<u>Clearing Member's (excluding LCMs) Morning Intra-Day Margin Calculation & Notification</u>	<u>10:30 a.m.</u>	<u>System Activity/Notification</u>

TIME FRAMES

<u>Morning Intra-Day Margin Call settle Morning Intra-Day Margin Call for Clearing Members (excluding LCMs)</u>	<u>1 hour after notification</u>	<u>10:30 a.m. Deadline to</u> <u>Obligation Deadline</u>
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<u>Assets Concentration Limit breach correction deadline</u>	<u>11:45 a.m.</u>	<u>Obligation Deadline</u>
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<u>Additional Capital Margin: Obligation to meet the Capital Requirement</u>	<u>12:00 p.m.</u>	<u>Obligation Deadline</u>
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SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

<u>Activity</u>	<u>Time Frames</u>	<u>Activity Type</u>
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Fixed Income Transactions – Netting Cycle Timeframe in respect of any Pending Settlement Requirements (Afternoon Net DVP Settlement Requirements – sent to CDS for settlement)		12:15 to 12:30 p.m.
<u>15 minutes cycle</u>	<u>12:15 p.m.</u>	<u>System Activity</u>

<u>Clearing Member's Afternoon Intra-Day Margin Calculation & Clearing Members (excluding LCMs) notification</u>	<u>12:45 p.m.</u>	<u>System Activity/Notification</u>
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<u>Deadline to settle Afternoon Intra-Day Margin Call for Clearing Members (excluding LCMs)</u>	<u>1 hour after notification</u>	12:45 p.m. <u>Obligation Deadline</u>
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Specific Deposits (same day withdrawal)	<u>12:45 p.m. Operational Deadline</u>	
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<u>Additional Margin Call for Mismatched Settlement Risk</u>	<u>1:30 p.m.</u>	<u>Publication</u>
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<u>Additional Margin Call for Intra-Day Variation Margin Risk</u>	<u>1:30 p.m.</u>	<u>Publication</u>
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<u>Additional Margin Call for Variation Margin Delivery Risk</u>	<u>1:30 p.m.</u>	<u>Publication</u>
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<u>Additional Margin Call for Uncovered Risk for LCMs</u>	<u>1:30 p.m.</u>	<u>Publication</u>
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<u>LCM Intra-Day Margin Call and Additional Margins Notification</u>	<u>1:30 p.m.</u>	<u>Notification</u>
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<u>Clearing Members (excluding LCMs) Additional Margins Notification</u>	<u>1:30 p.m.</u>	<u>Notification</u>
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<u>Deadline to settle Additional Margins for Clearing Members (excluding LCMs)</u>	<u>1 hour after notification</u>	<u>Obligation Deadline</u>
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<u>Deadline to settle Intra-Day Margin Call and Additional Margins for LCMs</u>	<u>The later of 3:30 p.m. or 2 hours after notification</u>	<u>Obligation Deadline</u>
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TIME FRAMES

Fixed Income Transactions – Netting Cycle Timeframe in respect of any Pending Settlement Requirements (Afternoon Net – DVP Settlement Requirements sent to CDS for settlement)	2:00 to 2:15
<u>15 minutes cycle</u>	<u>2:00 p.m. System Activity</u>
Cash Deposits (Margin Deposits deposits) – \$10,000,000 and under (same day deposit)	2:45 p.m. <u>Operational Deadline</u>
Cash Deposits (Margin Deposits deposits) – over \$10,000,000 (2 Business Days notice)	2:45 p.m. <u>Operational Deadline</u>

SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

<u>Activity</u>	<u>Time Frames</u>	<u>Activity Type</u>
Cash withdrawal requests (Margin Deposits deposits) – \$10,000,000 and under (same day withdrawal)	2:45 p.m. <u>Operational Deadline</u>	
Cash withdrawal requests (Margin Deposits deposits) – over \$10,000,000 (2 Business Days notice)	2:45 p.m. <u>Operational Deadline</u>	
Fixed Income Transactions – (Same Day Transactions) – Submission Cut-Off Time	3:30 p.m. <u>Operational Deadline</u>	
<u>Clearing Members (excluding LCMs) -</u> All assets deposits other than cash (Margin Deposits deposits)		3:30 p.m. <u>Operational Deadline</u>
All assets withdrawal requests other than cash (Margin Deposits) for same day withdrawal		3:30 p.m.
All assets substitution requests other than cash (Margin Deposits) for same day substitution		3:30 p.m.
Specific Deposits (overnight valuation)		3:30 p.m.
<u>Clearing Members - All assets withdrawal requests other than cash (Margin deposits) for same day withdrawal</u>	<u>3:30 p.m.</u>	<u>Operational Deadline</u>
<u>Clearing Members - All assets substitution requests other than cash (Margin deposits) for same day substitution</u>	<u>3:30 p.m.</u>	<u>Operational Deadline</u>
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)	3:35 to 3:40 p.m. –	
<u>5 minutes cycle</u>	<u>3:35 p.m.</u>	<u>System Activity</u>
<u>CDS Payment Exchange, Net Wire Payment</u>	<u>4:00 p.m.</u>	<u>System Activity</u>
End of Day DVP Settlement Time	4:00 p.m. <u>Obligation Deadline</u>	

TIME FRAMES

<u>Unsettled Item (Options Underlying deliveries only): Confirmation of settled items to be sent to CDCC</u>	<u>4:15 p.m.</u>	<u>Operational Deadline</u>
<u>Deadline for CDCC to respond to substitution or withdrawal request (other than (Fixed Income) Variation Margin)</u>	<u>4:30 p.m.</u>	<u>Obligation Deadline</u>
OTCI (other than Fixed Income Transactions) – Unmatched entry <u>Trade Submission Deadline</u>	<u>4:30 p.m.</u>	<u>Operational Deadline</u>
<u>Projected Margin Report Computation</u>	<u>4:30 p.m.</u>	<u>System Activity</u>
<u>Futures – Request for Standard vs Mini Offset</u>	<u>5:00 p.m.</u>	<u>Operational Deadline</u>
Position Transfers	<u>5:25 p.m.</u>	<u>Operational Deadline</u>
Same Day and T+1 Trade corrections	<u>5:30 p.m.</u>	<u>Operational Deadline</u>

SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

<u>Activity</u>	<u>Time Frames</u>	<u>Activity Type</u>
Open Position changes	<u>5:30 p.m.</u>	<u>Operational Deadline</u>
<u>Futures – Tender Notices submission</u>	<u>5:30 p.m.</u>	<u>Operational Deadline</u>
<u>Options – Exercise Notices submission</u>	<u>5:30 p.m.</u>	<u>Operational Deadline</u>
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)	<u>5:30 p.m.</u>	

TIME FRAMES FOR ON LINE ACCESS (continued)

TIME FRAMES

ON EVERY BUSINESS DAY (continued) <u>System</u> Activity		Deadlines
Futures—Request for Standard vs Mini Offset		5:00 p.m.
Futures—Tender Notices submission		5:30 p.m.
Options—Exercise Notices submission		5:30 p.m.
CDCC Clearing Application shutdown – Close of Business	5:30 p.m. <u>System Activity</u>	
<u>FIFO: Daily reporting by Clearing Members of the Long Positions in each of their accounts in chronological order</u>	<u>5:30 p.m.</u>	<u>Operational Deadline</u>
<u>FIFO: Submission of Tender Notices</u>	<u>5:30 p.m.</u>	<u>Operational Deadline</u>
<u>LCM Only - All assets deposits other than cash (in respect of all Margin requirements)</u>	<u>6:30 p.m.</u>	<u>Operational Deadline</u>
Fixed Income Transactions – available (next Business Day start)	7:00 p.m. <u>System Activity</u>	

TIME FRAMES

Unsettled Item

Confirmation of settled items to be sent to CDCC 4:15 p.m.

Daily Capital Margin Monitoring Calls

CDCC notifies Clearing Members of additional Margin required 9:30 a.m.

Clearing Member's obligation to cover any deficit 12:00 (noon)

Additional Margin for Intra-Day Variation Margin Risk

CDCC notifies Clearing Members of additional Margin required 1:30 p.m.

Clearing Member's obligation to cover any deficit 2:30 p.m.

Additional Charge for Mismatched Settlement Risk

CDCC notifies Clearing Members of additional Margin required 1:30 p.m.

Clearing Member's obligation to cover any deficit 2:30 p.m.

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

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



Section: 2 - 8

TIME FRAMES

<u>Deadline to deliver same day settlement substitution to CDCC</u>	<u>3:00 p.m.</u>	<u>Obligation Deadline</u>
<u>Deadline for CDCC to deliver same day substitutions For (Fixed Income) Variation Margin</u>	<u>4:00 p.m.</u>	<u>Obligation Deadline</u>
<u>EOD Net Variation Margin Requirement Computation</u>	<u>4:30 p.m.</u>	<u>System Activity</u>

~~TIME FRAMES FOR ON LINE ACCESS (continued on next page)~~

TIME FRAMES

~~TIME FRAMES FOR ON-LINE ACCESS (continued)~~

SETTLEMENT TIME FOR MONTHLY EXPIRY FRIDAY

Activity	Deadlines	<u>Time Frames</u>	<u>Activity Type</u>
Reports available (FTP Download): Expiry Report (MX01) Expiry Options Daily Transaction Report (MT01) List of Options/Cash Adjustments (MT03)		7:15 p.m.	<u>Publication</u>
CDCC Clearing Application available for: <u>Deadline</u> Trade corrections to 10:15 p.m. Open Position changes Position Transfers Changes to Automatic Exercises Exercise Notices input Cancel / correct Friday's exercises		7:15	<u>to 10:15</u> p.m. <u>Operational</u>
CDCC Clearing Application shutdown: CDCC processes expiry entries		10:15 p.m.	<u>Operational Deadline</u>
Reports available (FTP Download): List of Expiry Adjustments Report (MX02) Expiry Difference Report (MX03)		10:30 p.m.	<u>Publication</u>
CDCC Clearing Application available again for: <u>Deadline</u> Review of expiry entries Corrections to expiry entries		10:30	<u>to 10:45</u> p.m. <u>Operational</u> to 10:45 p.m.
CDCC Clearing Application shutdown Close of Business		10:45 p.m.	<u>Operational Deadline</u>
Reports available (FTP Download): Options Exercised and Assigned Report (MT02) Other reports and files also available		12:30 a.m.	<u>Publication</u>



TIME FRAMES

SETTLEMENT TIME FOR WEEKLY OPTIONS EXPIRY

<u>Activity</u>	<u>Time Frames</u>	<u>Activity Type</u>
CDCC Clearing Application available for: Trade corrections Open Position changes Position Transfers Changes to Automatic Exercises	7:00 to 8:00 p.m. <u>Operational Deadline</u> to 8:00 p.m.	
CDCC Clearing Application shutdown: Close of Business	08 :00 p.m. <u>Operational Deadline</u>	
Reports available (FTP Download): Options Exercised and Assigned Report (MT02) Other reports and files also available	09 :45 p.m. <u>Operational Deadline</u>	



Section: 2-9

TIME FRAMES

TIME FRAMES

~~TIME FRAMES FOR ON-LINE ACCESS (continued)~~

~~FIFO PERIOD~~

Activity	Deadlines
Daily reporting by Clearing Members of the Long Positions in each of their accounts in chronological order	5:30 p.m.
Submission of Tender Notices	5:30 p.m.

~~PLEDGING~~

~~Clearing Members must input requests for deposit or withdrawal of Acceptable Collateral on the pledging screen of the CDCC Clearing Application.~~

~~CDCC monitors the pledging screens between 9:00 a.m. and 3:30 p.m. on Business Days.~~

~~CDCC verifies the validity of each deposit made by Clearing Members and ensures that withdrawals do not create deficits in the Clearing Members' accounts (Margin, Clearing Fund or Difference Fund). Any request for the withdrawal of a Specific Deposit should be entered prior to when the intra-day margin call process runs as deposits are valued at this time. Any withdrawal of this type entered after such time will not be processed as such withdrawal cannot be properly valued.~~

~~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 Members (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 Members' deposits and/or withdrawals.~~

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

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
<i>Daily:</i>		
MA01	Deposits and Withdrawals Report	Details on Clearing Member's deposits and withdrawals for Margin <u>Fund Account</u> , Clearing Fund and , Difference Fund <u>Account and (Fixed Income) Variation Margin Account</u> . (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.
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 MTM Repo Rate Payments, OCF MTM Payments and Net MTM Reversal Requirement for that day . Requirements.

CDCC-REPORTS

MR05	<i>OTCI (Converge) Position Limits Usage Report</i>	Lists Clearing Member's percentage of <i>OTCI (Converge) Position Limits</i> used.
MR50	Daily Capital Margin Monitoring Report	Lists Clearing Member's <u>(excluding LCM)</u> Margin and capital requirements. Identifies if additional Margin is required.
MS01	Daily Settlement Summary Report	Lists assets balances with Margin requirements and cash settlement in Canadian and U.S. dollars.
MS03	Trading and Margin Summary Report	Lists Options Premiums, Settlement of Gains and Losses, Futures Premiums and Margin requirements for each sub-account. Note: Does not include trade adjustments (T+1)
MS05	SPAN Performance Bond Summary Report	The report shows the Performance Bond (Margin) requirements for each Clearing Member by type of account.
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.
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	Lists all Series of Futures and Options on Futures and prices, and

CDCC-REPORTS

	Report	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. Note: 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.
Monthly:		
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. "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.
FIFO Period:		
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.
Options on Futures Expiry:		

CDCC-REPORTS

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).
<i>Options Expiry (Friday Evening):</i>		
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.
<i>OTCI Expiry:</i>		
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.
<i>Business Day following Expiry:</i>		
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.

TRADE PROCESSING

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 ~~Members~~ 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 can be transmitted through Acceptable Marketplaces to CDCC through a number of methods. The Clearing Members must use one of the following methods:~~

- ~~1. use the trade capture screens of Converge~~
- ~~2. transmit trade legs through other electronic means for matching within Converge~~
- ~~3. transmit matched trades through other electronic means acceptable to CDCC~~
- ~~4. trade at an ATS which will transmit matched trades through acceptable electronic means to CDCC~~
- ~~5. trade at an IDB which will transmit matched trades through acceptable electronic means to CDCC~~

~~6. use~~ 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 ~~CDCC's~~ the Rules, Clearing Members must verify that such reports are correct.



Section: 4 - 2

TRADE PROCESSING

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 ~~designates~~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.



Section: 4 - 3

TRADE PROCESSING

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 ~~designates~~[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 ~~an Acceptable Marketplace or 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.
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.

OPEN POSITIONS

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 Futures Contract Long Position(s) against the equivalent number of existing Mini Futures Contract Short Positions (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 (ii) a number of existing Mini Futures Long Positions against one or more Standard Futures Short Position(s) (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, based on the instructions provided in the Request for Standard s 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.

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.



Section: 6 - 1

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 and LGB three Business Days prior to the first Business Day of the Delivery Month up to and including the fourth to last Business Day of the Delivery Month.

CGZ two Business Days prior to the first Business Day of the Delivery Month up to and including the third to 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 ONX, OIS are automatically tendered on the first Business Day following the contract month, 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.

EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES

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

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 ~~an Acceptable Marketplace or 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 ~~cash account at~~ 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. For Settlement Agents settling on behalf of multiple Clearing Members under the same CDS CUID, the Settlement Agent shall have sufficient funds and sufficient Acceptable Securities in its CDS Funds Accounts and CDS Securities Accounts to settle the lesser of (i) the sum of the Morning Net Payment Against Delivery Requirements of the Clearing Members under the same CDS CUID 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

EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES

Member. The Clearing Member or its Settlement Agent, shall have sufficient funds and sufficient Acceptable Securities in its ~~cash~~ CDS Funds Accounts and ~~securities accounts at~~ 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 ~~as such~~ “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 ~~failed~~ fail or partially deliver for the same quantity of Acceptable Securities ~~onto~~ 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 ~~cash account~~ 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.

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

EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES

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~~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~~Buy-in process shall be as ~~followed~~follows:

1. The Receiver of Securities who wants to initiate a ~~buy~~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~~Buy-in;
 - f. The ~~buy~~Buy-in delivery date, which shall be the current Business Day + not less ~~that~~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 ~~has~~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~~Buy-in transaction.
5. All fees incurred to CDCC, including all costs with respect to the ~~buy~~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~~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 Clearing Application~~ CDCCS 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 ~~from the~~ 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 ~~COMPUTATION~~ 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) ~~Total~~ The amount of Margin required ~~and any additional margin requirements for each account is for the~~ Margin Fund Account and Difference Fund Account are compared with Margin Deposits made by the Clearing Member for such accounts.
- (ii) The premiums, ~~gains~~ Futures Settlement of Gains and ~~losses~~ Losses, cash settled exercise/assignment Settlement Amounts, ~~Fixed Income Mark to Market Amounts~~ and cash ~~adjustment~~ 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.
- ~~(iii) If additional margin is required, CDCC will instruct the Clearing Member to facilitate payment to CDCC.~~
- ~~(iv) Miscellaneous charges such as clearing fees are also included on a monthly basis. In addition, applicable fines or any other amounts due would be collected on a monthly basis.~~

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 ~~discourage~~ deter Clearing Members from being late in the performance of their payment obligations.

SETTLEMENT

Overnight Settlement

Payments for overnight settlement (Futures mark-to-market, premiums, ~~margin~~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.

~~If the late payment is caused by an infrastructure problem, fines will not be imposed.~~

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 ~~has~~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~~Conforming Member.

On the second or more occurrences of a late payment:

- if CDCC ~~has~~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 ~~Non-conforming~~a Non-Conforming Member.

Intraday

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
- 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.

SETTLEMENT

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 CDCC 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 Concentration Risk, Additional Margin for Specific Wrong-Way Risk, Variation Margin for Options, and Variation Margin for Unsettled Item, in accordance with the Risk Manual and as set forth in Section 8-1 hereof.

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.

DIFFERENCE FUND ACCOUNT

The Difference Fund Account is a sub-Account of the Margin Fund Account.

The Difference Fund Account is a CDCC record provided to each Clearing Member containing any Additional Margin deposited by such Clearing Member to the CDCC, in respect of the following:

(1) Unsettled Item Margin (excluding CGB, CGF, CGZ, LGB)

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) Additional Capital Margin

The amount by which the Margin requirements of a Clearing Member (other than an LCM) exceed its capital, as described in the Risk Manual.

(3) Advance Calls for Settlement of Losses

An amount that CDCC estimates will be needed to meet losses resulting from particular market 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) Discretionary Margin

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.

(6) Additional Margin for Intra-Day Variation Margin Risk

MARGIN PROCESSING

Additional Margin for Intra-Day Variation Margin Risk may be requested from a Clearing Member, as described in the Risk Manual.

(7) Additional Margin for Mismatched Settlement Risk

Additional Margin for Mismatched Settlement Risk may be requested from a Clearing Member, as described in the Risk Manual.

(8) Additional Margin for Uncovered Risk of LCMs

Additional Margin for Uncovered Risk of LCMs may be requested from LCMs, as described in the Risk Manual.

(9) Additional Margin for Variation Margin Delivery Risk

Additional Margin for Variation Margin Delivery Risk may be requested from Clearing Members, as described in the Risk Manual.

Withdrawals

Clearing Members may request to withdraw any surplus amount from the Margin Fund Account and Difference 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 previously pledged in the Margin Fund Account and Difference Fund Account to the Corporation. The 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, 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 subject to substitution do not create deficits in the Clearing Member's Margin Fund Account or Difference 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.

Pledging (CDS)

Securities pledges in the Margin Fund Account and Difference 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.

MARGIN PROCESSING

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 (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.

MARGIN PROCESSING

Intra-Day Margin Calls

CDCC encourages its Clearing Members to cover ~~intraday~~Intra-Day Margin ~~calls~~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 ~~intraday~~Intra-Day Margin ~~call~~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 ~~later than 1 hour after but before~~by 1 hour and ~~15~~30 minutes from notification, CDCC will ~~impose a \$500 fine~~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 ~~later~~more than ~~1 hour~~2 hours after but less than 2 hours and 15 minutes ~~but before 1 hour and 30 minutes~~ from notification, CDCC will impose a ~~\$1,000~~500 fine.

if the payment or delivery is not received ~~by 1 hour~~more than 2 hours and 15 minutes but less than 2 hours and 30 minutes from notification, CDCC will ~~deem the Clearing Member Non-conforming~~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

(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

MARGIN PROCESSING

(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 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.

MARGIN PROCESSING

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 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").

MARGIN PROCESSING

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.
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 ~~the~~ 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 ~~at requirement~~ the deposit required to be made by a Clearing Member must be satisfied by 2:00 p.m. on the next Business Day.

Deposits

Deposits to the Clearing Fund shall be in ~~cash or in Government Securities, subject to the same criteria as the Margin, as set forth in Schedule A hereof;~~ 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. 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.

Substitutions

Substitutions of assets (other than cash) in the Clearing Fund are made in the same manner and subject to the same deadlines as Margin Fund Account substitutions of assets (other than cash), as set forth in Section 2 of this Operations Manual.-

MARGIN PROCESSING

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, (5) Intra-Day Margin, (6) Specific Wrong Way Risk for Unsettled Item, (7) Additional Margin for Intra-Day Variation Margin Risk, and (8) Additional Margin for the Mismatched Settlement Risk.~~ 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.~~

~~(7) Additional Margin for Intra-Day Variation Margin Risk~~

~~Additional margin will be applied for Futures contracts where Intra-Day Variation Margin Risk, as defined in the Risk Manual, arises.~~

~~(8) Additional Margin for the Mismatched Settlement Risk~~

~~Additional margin will be applied to fixed income transactions where Mismatch Settlement Risk, as defined in the Difference Fund section of the Risk Manual, arises.~~

MARGIN PROCESSING

~~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.~~

Pledges

Securities pledges 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.

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 each product type (Futures, Options, OTCI (other than Fixed Income Transactions), ~~and~~ 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. Notwithstanding the foregoing, with respect to Fixed Income Clearing, the applicable minimum monthly clearing fee shall be charged to the Fixed Income Clearing Member upon the request to use this clearing service being submitted by the Clearing Member in the form prescribed by CDCC and countersigned by CDCC. Clearing Members should refer to the CDCC website 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 2nd Business Day of each month and are available to Clearing Members on the morning of the 3rd 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 [SOLA/CDCS](#) Clearing – Security Officer Identification form, which form shall be renewed on an annual basis.

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



Section: 10-1

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: ~~edecops@cdcc~~-ea-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 PROCEDUREESCALATION 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 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 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.

ESCALATION PROCEDURE

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.



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

OPERATIONS MANUAL

30 AUGUST 2017



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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

“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 CDCC will exercise In-the-Money Options at a pre-determined threshold.

“CDCC Clearing Application” – CDCC 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 Account” – the CDCC record provided to each Clearing Member containing any Additional Margin deposited by such Clearing Member to the CDCC, in respect of any of the following: (1) Unsettled Item, (2) Additional Capital Margin, (3) Advance Calls for Settlement of Losses, (4) OTCI Additional Margin, (5) Discretionary Margin, (6) Additional Margin for Intra-Day Variation Margin Risk, (7) Additional Margin for Mismatched Settlement Risk, (8) Additional Margin for Uncovered Risk of LCMs, and (9), Additional Margin for Variation Margin Delivery Risk; the whole in accordance with the Risk Manual or otherwise as set forth in Section 8-4 hereof.



PREAMBLE AND DEFINITIONS

“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 CDCC 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 Concentration Risk, (3) Additional Margin for Specific Wrong-Way Risk, (4) Variation Margin for Options, and (5) Variation Margin for Unsettled Item; the whole in accordance with the Risk Manual, or otherwise as set forth in Section 8-1 hereof.

“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.

“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.



PREAMBLE AND DEFINITIONS

“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*.

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

“Production Schedule” – all of the 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 the form 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 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 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 Item” – any delivery of the Underlying Interest that has not been settled at the Central Securities Depository.

“(Fixed Income) Variation Margin Account” – the CDCC 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 - 1

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, 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.

The regular business hours of CDCC are 7:00 a.m. to 5:30 p.m. Eastern Time (ET) on every Business Day.

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 forty-five (45) minutes after delivery of the Options Exercised and Assigned Report (MT02).



TIME FRAMES

SETTLEMENT TIME FOR EVERY BUSINESS DAY

Activity	Time Frames	Activity Type
Start of Settlement Day at CDS and Clearing Day at CDCC	5:30 a.m.	System Activity
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
Additional Capital Margin: Notification to Clearing Members (excluding LCMs)	9:30 a.m.	Publication
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
Clearing Member's (excluding LCMs) Morning Intra-Day Margin Calculation & Notification	10:30 a.m.	System Activity/Notification
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
Additional Capital Margin: Obligation to meet the Capital Requirement	12:00 p.m.	Obligation Deadline



TIME FRAMES

SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

Activity	Time Frames	Activity Type
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 & Clearing Members (excluding LCMs) notification	12:45 p.m.	System Activity/Notification
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
Additional Margin Call for Mismatched Settlement Risk	1:30 p.m.	Publication
Additional Margin Call for Intra-Day Variation Margin Risk	1:30 p.m.	Publication
Additional Margin Call for Variation Margin Delivery Risk	1:30 p.m.	Publication
Additional Margin Call for Uncovered Risk for LCMs	1:30 p.m.	Publication
LCM Intra-Day Margin Call and Additional Margins Notification	1:30 p.m.	Notification
Clearing Members (excluding LCMs) Additional Margins Notification	1:30 p.m.	Notification
Deadline to settle Additional Margins for Clearing Members (excluding LCMs)	1 hour after notification	Obligation Deadline
Deadline to settle Intra-Day Margin Call and Additional Margins for LCMs	The later of 3:30 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
Cash Deposits (Margin deposits) – \$10,000,000 and under (same day deposit)	2:45 p.m.	Operational Deadline
Cash Deposits (Margin deposits) – over \$10,000,000 (2 Business Days notice)	2:45 p.m.	Operational Deadline



TIME FRAMES

SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

Activity	Time Frames	Activity Type
Cash withdrawal requests (Margin deposits) – \$10,000,000 and under (same day withdrawal)	2:45 p.m.	Operational Deadline
Cash withdrawal requests (Margin deposits) – 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
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
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
Futures – 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



TIME FRAMES

SETTLEMENT TIME FOR EVERY BUSINESS DAY (continued)

Activity	Time Frames	Activity Type
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
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): <ul style="list-style-type: none"> ➤ Expiry Report (MX01) ➤ Expiry Options Daily Transaction Report (MT01) ➤ List of Options/Cash Adjustments (MT03) 	7:15 p.m.	Publication
CDCC Clearing Application available for: <ul style="list-style-type: none"> ➤ Trade corrections ➤ Open Position changes ➤ Position Transfers ➤ Changes to Automatic Exercises ➤ Exercise Notices input ➤ Cancel / correct Friday's exercises 	7:15 to 10:15 p.m.	Operational Deadline
CDCC Clearing Application shutdown: <ul style="list-style-type: none"> ➤ CDCC processes expiry entries 	10:15 p.m.	Operational Deadline
Reports available (FTP Download): <ul style="list-style-type: none"> ➤ List of Expiry Adjustments Report (MX02) ➤ Expiry Difference Report (MX03) 	10:30 p.m.	Publication
CDCC Clearing Application available again for: <ul style="list-style-type: none"> ➤ Review of expiry entries ➤ Corrections to expiry entries 	10:30 to 10:45 p.m.	Operational Deadline
CDCC Clearing Application shutdown <ul style="list-style-type: none"> ➤ Close of Business 	10:45 p.m.	Operational Deadline
Reports available (FTP Download): <ul style="list-style-type: none"> ➤ Options Exercised and Assigned Report (MT02) ➤ Other reports and files also available 	12:30 a.m.	Publication



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TIME FRAMES

SETTLEMENT TIME FOR WEEKLY EXPIRY

Activity	Time Frames	Activity Type
CDCC Clearing Application available for: <ul style="list-style-type: none">➤ Trade corrections➤ Open Position changes➤ Position Transfers➤ Changes to Automatic Exercises	7:00 to 8:00 p.m.	Operational Deadline
CDCC Clearing Application shutdown: <ul style="list-style-type: none">➤ Close of Business	8:00 p.m.	Operational Deadline
Reports available (FTP Download): <ul style="list-style-type: none">➤ Options Exercised and Assigned Report (MT02)➤ Other reports and files also available	9:45 p.m.	Operational Deadline



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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
<i>Daily:</i>		
MA01	Deposits and Withdrawals Report	Details on Clearing Member's deposits and withdrawals for Margin Fund Account, Clearing Fund, Difference Fund Account 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.
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,
MR05	OTCI (Converge) Position	Lists Clearing Member's percentage of OTCI (Converge) Position

CDCC-REPORTS

	Limits Usage Report	Limits used.
MR50	Daily Capital Margin Monitoring Report	Lists Clearing Member's (excluding LCM) Margin and capital requirements. Identifies if additional Margin is required.
MS01	Daily Settlement Summary Report	Lists assets balances with Margin requirements and cash settlement in Canadian and U.S. dollars.
MS03	Trading and Margin Summary Report	Lists Options Premiums, Settlement of Gains and Losses, Futures Premiums and Margin requirements for each sub-account. Note: Does not include trade adjustments (T+1)
MS05	SPAN Performance Bond Summary Report	The report shows the Performance Bond (Margin) requirements for each Clearing Member by type of account.
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.
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

CDCC-REPORTS

		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. Note: 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.
Monthly:		
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. "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.
FIFO Period:		
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.
Options on Futures Expiry:		

CDCC-REPORTS

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).
<i>Options Expiry (Friday Evening):</i>		
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.
<i>OTCI Expiry:</i>		
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.
<i>Business Day following Expiry:</i>		
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.



Section: 4 - 1

TRADE PROCESSING

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.



Section: 4 - 2

TRADE PROCESSING

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.



Section: 4 - 3

TRADE PROCESSING

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.
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.

OPEN POSITIONS

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 Futures Contract Long Position(s) against the equivalent number of existing Mini Futures Contract Short Positions (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 (ii) a number of existing Mini Futures Long Positions against one or more Standard Futures Short Position(s) (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, 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.

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.



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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:

1. The proper CDCC Exercise Notice form must be used.



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EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES

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 and LGB three Business Days prior to the first Business Day of the Delivery Month up to and including the fourth to last Business Day of the Delivery Month.

CGZ two Business Days prior to the first Business Day of the Delivery Month up to and including the third to 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 ONX, OIS are automatically tendered on the first Business Day following the contract month, 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. For Settlement Agents settling on behalf of multiple Clearing Members under the same CDS CUID, the Settlement Agent shall have sufficient funds and sufficient Acceptable Securities in its CDS Funds Accounts and CDS Securities Accounts to settle the lesser of (i) the sum of the Morning Net Payment Against Delivery Requirements of the Clearing Members under the same CDS CUID 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 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

EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES

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.

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.

EXERCISES, TENDERS, ASSIGNMENTS AND DELIVERIES**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 and Difference 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

Overnight Settlement

Payments for overnight 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
- 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.



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SETTLEMENT

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 CDCC 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 Concentration Risk, Additional Margin for Specific Wrong-Way Risk, Variation Margin for Options, and Variation Margin for Unsettled Item, in accordance with the Risk Manual and as set forth in Section 8-1 hereof.

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.

DIFFERENCE FUND ACCOUNT

The **Difference Fund Account** is a sub-Account of the Margin Fund Account.

The Difference Fund Account is a CDCC record provided to each Clearing Member containing any Additional Margin deposited by such Clearing Member to the CDCC, in respect of the following:

(1) Unsettled Item Margin (excluding CGB, CGF, CGZ, LGB)

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) Additional Capital Margin

The amount by which the Margin requirements of a Clearing Member (other than an LCM) exceed its capital, as described in the Risk Manual.

(3) Advance Calls for Settlement of Losses

An amount that CDCC estimates will be needed to meet losses resulting from particular market 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) Discretionary Margin

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.

(6) Additional Margin for Intra-Day Variation Margin Risk

Additional Margin for Intra-Day Variation Margin Risk may be requested from a Clearing Member, as described in the Risk Manual.

MARGIN PROCESSING

(7) Additional Margin for Mismatched Settlement Risk

Additional Margin for Mismatched Settlement Risk may be requested from a Clearing Member, as described in the Risk Manual.

(8) Additional Margin for Uncovered Risk of LCMs

Additional Margin for Uncovered Risk of LCMs may be requested from LCMs, as described in the Risk Manual.

(9) Additional Margin for Variation Margin Delivery Risk

Additional Margin for Variation Margin Delivery Risk may be requested from Clearing Members, as described in the Risk Manual.

Withdrawals

Clearing Members may request to withdraw any surplus amount from the Margin Fund Account and Difference 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 previously pledged in the Margin Fund Account and Difference Fund Account to the Corporation. The 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, 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 subject to substitution do not create deficits in the Clearing Member's Margin Fund Account or Difference 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.

Pledging (CDS)

Securities pledges in the Margin Fund Account and Difference 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.



MARGIN PROCESSING

Pledging (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.



MARGIN PROCESSING

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

(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.

MARGIN PROCESSING

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 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.



MARGIN PROCESSING

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 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 by 2:00 p.m. on the next Business Day.

Deposits

Deposits to the Clearing Fund shall 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. 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.

Substitutions

Substitutions of assets (other than cash) in the Clearing Fund are made in the same manner and subject to the same deadlines as Margin Fund Account substitutions of assets (other than cash), as set forth in Section 2 of this Operations Manual.

Pledges

Securities pledges 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.



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 each product type (Futures, Options, OTCI (other than Fixed Income Transactions) and 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. Notwithstanding the foregoing, with respect to Fixed Income Clearing, the applicable minimum monthly clearing fee shall be charged to the Fixed Income Clearing Member upon the request to use this clearing service being submitted by the Clearing Member in the form prescribed by CDCC and countersigned by CDCC. Clearing Members should refer to the CDCC website 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 2nd Business Day of each month and are available to Clearing Members on the morning of the 3rd 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 CDCS Clearing – Security Officer Identification form, which form shall be renewed on an annual basis.

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



Section: 10- 1

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, 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

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 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 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.

ESCALATION PROCEDURE

- 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.

APPENDIX 3



Risk Manual



RISK MANUAL

30 AUGUST 2017

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Glossary

Close-out Period: ~~The required period the Corporation needs to unwind the positions in a particular contract without disrupting the market. This term is similar to the term “number of liquidation days”.~~

Concentration Risk: ~~This risk refers to the position concentration risk which is the risk of one Clearing Member having a large net position with respect to the total open position in any particular contract leading to a higher Close-out Period for that Clearing Member. The higher Close-out Period will drive an additional margin for concentration risk.~~

Margin Interval: ~~Parameter established by the Corporation which reflects the maximum price fluctuation that the Underlying Interest could be expected to have during the liquidation period. The Margin Interval (MI) calculations are based on the historical volatility of the Underlying Interest and these calculations are re-evaluated on a regular basis. If necessary, the Corporation may update the Margin Intervals more frequently. The Margin Interval is used to calculate the Initial Margin of every Derivative Instrument.~~

Haircut: ~~Percentage discounted from the market value of Securities pledged as collateral for Margin Deposit. The discount reflects the price movement volatility of the collateral pledged. Thus, this reduction assures that even if the collateral's market value declines, there is time to call for additional collateral to adjust its value to the required level.~~

Initial Margin: ~~The Initial Margin covers the potential losses that may occur over the next liquidation period as a result of market fluctuations. The Initial Margin amount is calculated using the historical volatility of the Underlying Interest return for Options contracts and Share Futures, futures prices for Futures contracts and yield to maturity (YTM) of the on the run security for Fixed Income Transactions.~~

Variation Margin: ~~The Variation Margin takes into account the portfolio's liquidating value (this is also known as the Replacement Cost or RC) which is managed through the Mark-to-Market daily process.~~

Price Scan Range: ~~The maximum price movement reasonably likely to occur, for each Derivative Instrument or, for Options, their Underlying Interest. The term PSR is used by the Risk Engine to represent the potential variation of the product value and it is calculated through the following formula:~~

$$\text{PSR} = \text{Underlying Interest Price} \times \text{MI} \times \text{Contract Size}$$

Volatility Scan Range: ~~The maximum change reasonably likely to occur for the volatility of each Option's Underlying Interest price.~~

Risk Array: ~~A Risk Array (RA) is a set of 16 scenarios defined for a particular contract specifying how a hypothetical single position will lose or gain value if the corresponding risk scenario occurs from the current situation to the near future (usually next day).~~

~~**Combined Commodity:** The Risk Engine divides the positions in each portfolio into groupings called Combined Commodities. Each Combined Commodity may represents all positions on the same ultimate Underlying Interest for example, all Futures contracts and all Options contracts ultimately related to the S&P/TSX 60 Index.~~

~~**Scanning Risk:** The Risk Engine chooses the difference between the current market value of an Underlying Interest and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions.~~

Capitalized terms not otherwise defined in this Manual shall have the meanings given to them in the Rules.

~~**Active Scenario:** The number of the Risk Arrays scenario that gives the largest amount (worst case scenario).~~ maximum likely loss scenario in the SPAN® risk analysis.

~~**Short Option Minimum:** Rates and rules to provide coverage for the special situations associated with portfolios of deep out of the money short option positions. This amount will be called if it is higher than the result of the Risk Arrays.~~

~~**Liquidity Interval:** 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~~

Additional Margins: 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 Concentration 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 Variation Margin Delivery Risk, (6) Additional Capital Margin, (7) Additional Margin for Uncovered Risk of Limited Clearing Members and (8) any other additional Margins as set out in the Rules (other than Margin required pursuant to Rule D-607).

Additional Capital Margin: 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 Concentration Risk: This Margin Requirement covers the risk that arises from sizeable positions which cannot, due to their size compared to the total of open positions in a product or a group of products, be liquidated within the pre-defined Close-out

Period for the product or group of products, leading to a longer Close-out Period for that Clearing Member.

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 Uncovered Risk of Limited Clearing Members: This Margin Requirement covers the risk exposure that arises if the total value of the risk represented by an LCM 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 LCM 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 Mismatched Settlement Risk: This Margin Requirement covers the risk arising from a lag between the settlement of positions which otherwise result 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 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.

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

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 is calculated by the Risk Engine and 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.

Buckets: All Acceptable Securities of Fixed Income Transactions that behave in a similar manner are grouped together into “Buckets” and each Bucket behaves as a Combined Commodity. Acceptable Securities are bucketed according to their remaining time to maturity and issuer. Due to the nature of the bucketing process, the Acceptable Securities’ assignment will be dynamic in that they will change from one Bucket to the other as the Acceptable Security nears maturity.

~~**MTM Price Valuation:** The MTM Price Valuation is the difference between the market value of the Security and the funds borrowed. This amount is collateralized and should be credited (or debited) to the Repo Party’s Margin Fund and debited (or credited) to the Reverse Repo Party’s Margin Fund.~~

Clearing Engine: The Corporation uses SOLA® Clearing as its Clearing Engine.

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

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

Close-out Period or Liquidation days: The period required by the Corporation to unwind the positions in a particular contract without moving the market due to the liquidation of positions.

Combined Commodity: The Risk Engine divides the positions in each portfolio into groupings called Combined Commodities. Each Combined Commodity may represent all positions on the same ultimate Underlying Interest.

Daily Ratio: 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.

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

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.

Floating Price Rate: has the meaning given thereto in Section D-601 of the Rules.

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.

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 Spread Charge: Portfolio containing offsetting positions (identified as "Inter-Commodity Spread") in highly correlated instruments are subject in the Risk Engine to credits which reduce the overall Base Initial Margin.

Intra-Commodity (Inter-Month) Spread Charge: Underlying Interests' prices, from a maturity month to another ~~are~~may not be perfectly correlated. Gains on a maturity month should not totally offset losses on another maturity month. To ~~fix this issue, the Risk Engine allows the user to calculate and to apply a margin charge relative to the Inter-Month spread risk in order to cover the risk of these two calendar spread positions.~~, an Intra-Commodity (Inter-Month) Spread Charge can be set in the Risk Engine.

~~Inter-Commodity Spread Charge: The Corporation considers the correlation that exists between different classes of Futures contracts when calculating the Initial Margin. For example, different interest rate Futures contracts are likely to react to the same market indicators, but at different degrees. For instance, a portfolio composed of a long position and a short position on two different interest rate Futures contracts will be likely less risky than the sum of the two positions taken individually.~~

~~Clearing Engine: The Corporation uses SOLA® Clearing as its Clearing Engine.~~

Limited Clearing Members (LCMs): has the meaning given thereto in Section A-102 of the Rules.

Liquidity Interval: The Liquidity Interval is calculated based on the historical bid-ask price spread of the Underlying Interest according to the same formula as for Margin Interval.

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

Margin Interval: Parameter established by the Corporation which reflects the maximum price fluctuation that the Underlying Interest could be expected to have during the liquidation period. The Margin Interval is used to calculate the Base Initial Margin of every Derivative Instrument.

Margin Requirement: Any amount of Margin that may be required under Rule A-7 in accordance with the methodology set forth in this Manual, including Initial Margin and Variation Margin.

Net Variation Margin Requirement: has the meaning given thereto in Section D-601 of the Rules.

Over-The-Counter Instrument (OTCI): has the meaning given thereto in Section A-102 of the Rules.

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

Risk Array: A Risk Array (RA) is a set of scenarios defined in the Risk Engine 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 Engine: The Corporation uses the Standard Portfolio Analysis system (SPAN®) as its Risk Engine.

~~Intra-day Variation Margin Risk: The Corporation considers this risk as the intra-day risk arising in circumstances in which market volatility or surges in trading volumes produce unusually large Variation Margin exposures.~~

~~Mismatched Settlement Risk: The Corporation considers this risk as the intraday risk arising from a lag between the following three events:~~

- ~~1) The Settlement of a position that provided a Margin offset prior to the next calculation of the Margin Requirement;~~
- ~~2) The calculation of the credit risk exposure and the settlement of the collateral deposits at CDCC;~~
- ~~3) A trade initiation and the calculation of the Margin 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 Risk Engine chooses the difference between the current market value of an Underlying Interest and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions.

Short Option Minimum (SOM): 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 the SOM is higher than the result of the Risk Arrays.

Uncovered Residual Risk (URR): has the meaning given thereto in Section A-102 of the Rules.

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

Unsettled Item: Any delivery of the Underlying Interest that has not been settled at the Central Securities Depository.

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.

Volatility Scan Range: The maximum change reasonably likely to occur for the volatility of each Option's (including an OTCI Option's) Underlying Interest price.

Some of the terms and concepts herein defined, as used in this Risk Manual, are derived from the CME Group proprietary SPAN® margin system, adapted for CDCC's licensed use thereof.

Summary

~~The Corporation applies rigorous risk management methods to protect their Clearing Members.~~

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, in an amount sufficient, taking into account the market value and applicable Haircuts.

~~The main aspects of risk management that are specifically addressed in this manual are as follows:~~Corporation requires Margin Deposits to cover two types of requirements, namely:

- ~~➤ The acceptability of Underlying Interests~~
- Margin Requirement;
 - ~~➤ The Margin calls that occur when a member's potential loss exceeds its Margin Deposit;~~
 - ~~➤ The monitoring of each Clearing Member's credit risk by regular tracking of Margin Deposit and Capital; and~~
- ~~➤ The Clearing Member's contribution to the Clearing Fund;~~Requirement.
 - ~~➤ The management of the forms of collateral accepted for Margin Deposit and the calculation of the Haircuts that apply to these assets;~~
 - ~~➤ The monitoring program;~~
 - ~~➤ The adjustments in contract terms; and~~
 - ~~➤ The default management process.~~

~~ACCEPTABILITY OF UNDERLYING INTERESTS~~

~~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 Interest of Options.~~
- ~~Section B-606 of the Rules sets out the ineligibility criteria for ETF Securities as Underlying Interest of Options.~~

~~CDCC reviews and publishes quarterly 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.~~

~~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 quarterly 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.~~

~~ACCEPTABLE UNDERLYING INTERESTS OF OTCI SECURITIES OPTIONS~~

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

~~CDCC reviews and publishes quarterly on its website a list of Acceptable Underlying Interests for clearing OTCI Securities Options.~~

~~Between two quarterly 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.~~

~~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; and~~
 - ~~• Bonds issued by Canada Post;~~
 - ~~• Bonds issued by certain provincial governments and provincial Crown corporations determined as acceptable by CDCC¹, 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, real return, step-up or zero (Treasury Bills are eligible);~~
- ~~• The net amount outstanding² must be greater than or equal to \$250 million;~~
- ~~• The bonds' prices must be issued by a source that is acceptable to the Corporation.~~

~~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;~~

¹~~To be acceptable by CDCC, the issuer should be rated by two or more credit agencies (among Moody's Investors Service, Standard and Poor's, Fitch Ratings and the Dominion Bond Rating Service). The final rating considered by CDCC corresponds to the second highest among ratings assigned by these agencies. Such final credit rating of the issuer must be investment grade and not lower than 6 notches below the credit rating assigned to the Government of Canada by the same credit agency.—~~

²~~The net amount outstanding is defined as the outstanding amount issued on the market minus the stripped coupon bonds and issuer repurchases.~~

- ~~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.~~

MARGIN DEPOSIT

1.1 MARGIN REQUIREMENT

The Corporation has three different funds for margining purposes and each serves a specific purpose:

- Margin Fund
- Difference Fund
- Clearing Fund

~~MARGIN FUND~~The Margin Fund Margin Requirement is composed of the Initial Margin and the Variation Margin. ~~The Initial 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 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 movements across the portfolio of each Clearing Member under normal market conditions. Furthermore, in the event of a default, the Corporation is faced with closing out the defaulters' portfolio within a short period (the liquidation period). In a complementary manner, Variation Margin is a daily payment process that covers the market risk due to the change in price since the previous day, ahead of the default of one of its Clearing Members. Variation Margin is settled in cash for Futures contracts and collateralized for Options contracts, OTCI and Fixed Income Transactions. Additional margin for Concentration Risk is also collected in the Margin Fund.

~~INITIAL MARGIN~~

~~As fundamental inputs to calculate the Initial Margin, the Corporation uses the following parameters: 1) confidence level (to reflect normal market conditions), 2) assumed liquidation period and 3) historical volatility over a specific period. Specifically, the Corporation uses a volatility estimator ~~as described below~~ and a confidence level over 99% under the Normal distribution's or the Student's t-distribution assumption. The Corporation also considers a variable number of days as an acceptable liquidation period. The Base Initial Margin amount is calculated using the historical volatility of the daily price returns of the Underlying Interests for Options contracts and Share Futures, the daily price returns of the Futures prices for Futures contracts (excluding ~~Shares~~Share Futures) and the yield-to-maturity (YTM) daily variation of the on-the-run security for Fixed Income Transactions. ~~The historical volatility, combined with the liquidation period and the confidence level gives the Margin Interval (MI) as described below.~~¹. Please refer to Section 6.1 for additional details on the Base Initial Margin calculation.~~

~~MARGIN INTERVAL (MI) CALCULATION~~

~~The Margin Interval calculations are re-evaluated on a regular basis. However, the Corporation may use its discretion and update the Margin Intervals more frequently if necessary. The Margin Intervals are used to calculate the Initial Margin for each Derivative Instrument.~~

~~The Margin Interval (MI) is calculated using the following formula:~~

~~Where 'n' is the number of liquidation days (see the next section for more details). "¹ is equal to the critical value equivalent to 99.97% of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student's t distribution with 4 degrees of freedom (applicable to the BAX Futures products). 'σ' 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:~~

¹ The same methodology used for Fixed Income Transactions is applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB).

~~Where r is the contract one day price's return, μ is the mean return over the specified period and λ is the decay factor. CDCC uses $\lambda = 0.99$.~~

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 6.2 for additional details on Effective Ratio Recalibration.

1.1.1.2 Additional Margins

~~In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI can not be lower than the calculated floor.~~ 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:

Liquidation Period

~~The Corporation applies different number of liquidation days “n” depending on the type of product. The Corporation uses quantitative and qualitative analysis, established according to the degree of liquidity of the product/Underlying Interest which is derived from parameters such as, but not limited to, traded volume, Government of Canada/provincial yield spreads and international guidelines. For all products, “n” is determined at least once a year and communicated to Clearing Members by a written notice.~~

~~Furthermore, in anticipation of Remembrance Day (the “Banking Holiday”), the Corporation will add one (1) more Business Day to the number of liquidation days “n” for Equity and Index products. Hence, the liquidation period will be increased by one (1) more Business Day prior and up to the Banking Holiday. The additional margin amount for the Banking Holiday will be released on the morning of the following Business Day.~~

(1) Additional Margin for Concentration 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 Variation Margin Delivery Risk

(6) Additional Capital Margin

(7) Additional Margin for Uncovered Risk of Limited Clearing Members

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

ADDITIONAL MARGIN FOR CONCENTRATION RISK

~~Default Close-out Periods are set on a product specific basis and depends especially on their liquidity. In addition, the Corporation uses different number of liquidation days (or Close-out Period) for different bulk of positions to address and manage the position Concentration Risk. For every product, CDCC determines a threshold of positions that can be easily liquidated without causing a non-ordinary market impact. CDCC nets all positions of the Clearing Member across all its accounts and the net positions is compared to the threshold in order to determine the number of margin runs with their appropriate Close-out Periods applicable to the Clearing Member positions for each specific product. Furthermore, the additional Close-out Period is added to the default one for every product. As mentioned in Section 1.1.1.1, the Base Initial Margin requirement is intended to cover potential portfolio losses over an acceptable Close-out Period. Close-out Periods are set on a product specific basis and depend especially on their liquidity. For sizeable positions which cannot, due to their size compared to the total of open positions in a product or a group of products, be liquidated within the pre-defined Close-out Period for the product or group of products, leading to a longer Close-out Period for that Clearing Member, CDCC will require Additional Margin for Concentration Risk. The Concentration Risk methodology will add a number of liquidation day(s) to the pre-defined Close-out Period that will be applied to the incremental positions that are above a certain threshold. The thresholds are determined based on the average trading volume of the product.²~~

For example, let's assume that CDCC sets a threshold for a specific product with a default Close-out Period of two (2) days at 2500 contracts and the Clearing Member net position is 8000 contracts, CDCC

² For Real Return Bonds, the threshold is based on average amount of bids in the primary market auctions for Real Return Bonds.

will perform a first ~~margin~~Margin run with a number of liquidation days equal to two (2) (the default Close-out Period of this product) for the first 5000 contracts (5000 = 2500 * 2) and a second ~~margin~~Margin run with a number ~~esof~~ liquidation days equal to 3 (the default Close-out Period of this product incremented by one (1) day) for 2500 contracts (i.e. the one day threshold) and a third ~~margin~~Margin run with a number of liquidation days equal to 4 (the default Close-out Period of this product incremented by two (2) days) for 500 contracts (i.e. the remaining position: 500 = 8000 - 5000 - 2500). The ~~total Initial~~Additional Margin ~~CDGC charges the Clearing Member for this position for~~ Concentration Risk is the sum of the ~~three Initial Margins that are~~ calculated for the three margin runs. Margin runs.

~~For Futures (excluding Share Futures) and Fixed Income transactions, the thresholds are determined using an average trading volume of the product over a certain period of time. However for Options and Share Futures, the thresholds are determined using an average trading volume over a certain period of time of the Underlying Interest.~~

Price Scan Range (PSR) Calculation

~~In order to calculate the most unfavourable projected liquidation value, the Risk Engine uses the MI of the above formula to calculate the Price Scan Range (PSR) and to run several scenarios through its Risk Array calculation (for a detailed description refer to the section on Risk Arrays below).~~

~~A Risk Array is a set of 16 scenarios defined for a particular contract specifying how a hypothetical single position will lose or gain value if the corresponding risk scenario occurs from the current situation to the near future (usually next day).~~

~~PSR is the maximum price movement reasonably likely to occur, for each Derivative Instrument or, for Options contracts, their Underlying Interest. The term PSR is used by the Risk Engine to represent the potential variation of the product value and it is calculated through the following formula:~~

$$~~PSR = Underlying Interest Price \times MI \times Contract Size.~~$$

INITIAL MARGIN CALCULATION

~~To calculate the Initial Margin, the Risk Engine uses the MI which is converted to the Scanning Risk parameter. The Scanning Risk parameter represents the difference between the current market value of a Derivative Instrument (for Exchange~~

Transactions) or of an Acceptable Security (for Fixed Income Transactions) and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions. The Scanning Risk is always calculated at the Combined Commodity level.

For contracts belonging to the same Combined Commodity, the Risk Engine adds up the Risk Arrays results of all contracts under the same risk scenario. It should be noted that in the situation where the Risk Engine does not consider other variables, the Scanning Risk is the Initial Margin for the Combined Commodity.

However, in some cases other variables can increase or decrease the Scanning Risk. For example, variables such as the Intra Commodity (Inter-Month) Spread Charge which tends to increase the Initial Margin and the Inter-Commodity Spread Charge which tends to decrease the Scanning Risk to take advantage of the correlations between the different constituents of the Combined Commodity. Another example is the specific case of short deeply out of the money options wherein the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) which otherwise attracts little or no Initial Margin. Finally, in the case of OTCI with Physical Settlement/Delivery, the Corporation calculates an additional Liquidity Interval and adds it to the Margin Interval.

It should also be noted that, as described in the following sections, the determination of the Initial Margin is slightly different for Options contracts, Futures contracts and Fixed Income Transactions. The following table summarizes the list of variables used to calculate the Initial Margin by cleared product category:-

INITIAL MARGIN

Input variables to calculate the Initial Margin	Options contracts (including OTCI options)-	Futures contracts and Share Futures	Fixed Income Transactions
Scanning Risk	•	•	•
Intra-Commodity (Inter-Month) Spread Charge		•	•
Inter-Commodity Spread Charge ³		•	•
Short Option Minimum (SOM) amount	•		
Liquidity Interval ⁴	•		

³-Not appli

⁴-Applicabl

~~This section describes how the Initial Margin is calculated for the Options contracts, which include the equity options, index options, currency options, exchange traded fund options and options on futures.~~

~~The Risk Arrays are obtained by varying the Underlying Interest (eight scenarios) and the option's implied volatility (eight scenarios). The term PSR for Options contracts is calculated through the following formula:~~

$$~~PSR = \text{Underlying Interest Price} \times MI \times \text{Contract Size}~~$$

~~For equity options contracts, the contract size is usually equal to 100.~~

~~**RISK ARRAYS**~~

~~Each Risk Array scenario represents losses or gains due to hypothetical market conditions:~~

- ~~➤ The (underlying) price movement: upward (+) and downward (-) with corresponding scan range fraction (0, 1/3, 2/3, 3/3 or 2)~~
- ~~➤ The (underlying) volatility movement: upward (+) and downward (-) with corresponding scan range fraction (0 or 1).~~

~~Since some scenarios consider large movements on the Underlying Interest price, the whole difference (gain and loss) between the new (simulated) theoretical option price and the actual option price will not be considered. For scenarios 15 and 16, since their probability of occurrence is low, only a fraction of 35% of the difference is considered. The purpose of these two additional extreme scenarios is to reduce the problem of short option positions that are highly out of the money near expiration. If the Underlying Interest price varies sharply, these positions could then be in the money.~~

~~A scan range is a fluctuation range of the Underlying Interest price and volatility defined for each Combined Commodity.~~

~~The Risk Engine calculates 16 Risk Array scenarios as follows:~~

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

~~Each Risk Array value is calculated as the current contract price less the theoretical (simulated) contract price obtained for the corresponding scenario by using the valuation model. (The Risk Engine uses different valuation models including Black 76, Black Scholes, Generic Merton, Barone Adesi-Whaley (BAW) and others).~~

~~However, it should be noted that for the intra-day margin processes, CDCC relies on the previous day's closing prices for those Option contracts for which it has open interest.~~

~~However, since the Initial Margin driven by Option contracts is relatively small with respect to the total Initial Margin that includes all cleared products, the Corporation does not consider the Volatility Scan Range (VSR) in its risk model. This means that the Corporation does not vary the option implied volatility up and down (+1 and -1) eight times, but varies only the Underlying Interest price in order to simulate the potential losses for each position. Therefore, the Risk Engine produces eight different scenarios as shown in the table below.~~

Risk Scenarios	1	2	3	4	5	6	7	8
Underlying Price-Variation*	1/3	-1/3	2/3	-2/3	1	-1	2	-2
Weight Fraction-Considered	100%	100%	100%	100%	100%	100%	35%	35%

* Expressed in scan range

~~For Options contracts belonging to the same Combined Commodity, the Risk Engine first calculates the Risk Arrays for each Option contract and for each one of the eight risk scenarios. The Risk Engine then adds up the Risk Arrays results of all Options contracts under the same risk scenario. For example, for two Options contracts O1 and O2 on the Underlying Interest XX, the same scenarios are performed for each Option contract, and then, they are added up. Therefore, the Risk Array value for O1 under the risk scenario 1 is added up to the Risk Array value for O2 under the risk scenario 1, likewise the Risk Array value for O1 under the risk scenario 2 is added up to the Risk Array value for O2 under the risk scenario 2, and so on. The largest total Risk Array value amongst the eight values is the Scanning Risk of this Combined Commodity. The details of this method are described in the section on Risk Arrays.~~

~~For a better explanation of the Risk Engine methodology used by the Corporation, here are the steps to calculate the Initial Margin for an Option contract using the Risk Array:~~

Example 1:

~~Let's assume that the price of an Option contract is X_0 , its Underlying Interest price is P_0 and its Margin Interval is MI. Using the formula described above, we can calculate the Price Scan Range (PSR) of the option which represents the fluctuation range of the Underlying Interest as follows:-~~

$$~~PSR = MI \times P_0 \times \text{Contract Size.}~~$$

~~Since the contract size of an Option contract is generally 100, the formula becomes:-~~

$$~~PSR = MI \times P_0 \times 100~~$$

~~For the clarity of the table below, please note that the PSR used in the following steps does not include the contract size, i.e. $PSR = MI \times P_0$.~~

Scenario 1:

~~Step 1: calculate the Underlying Interest price variation. To accomplish this, the Risk Engine varies the Underlying Interest price by 33% (or 1/3) to the upper range of its MI. If for example the MI is 30%, the Underlying Interest price moves to the upper range by 33% of the 30% which leads to a 10% increase. Therefore, the Underlying Interest price variation is +33% of the PSR.~~

~~Step 2: calculate the new (simulated) Underlying Interest price by adding the Underlying Interest price variation calculated in the last step to the original Underlying Interest price.~~

~~Step 3: calculate the new (simulated) theoretical option price with the selected model using the new (simulated) Underlying Interest price.~~

~~Step 4: calculate the option's gain or loss by subtracting the new (simulated) theoretical option price from the original option price.~~

~~Step 5: multiply the gain or loss by the considered weight fraction (the last row of the above table) to get the Risk Array amount associated to the scenario 1.~~

~~After repeating the above steps for the remaining seven scenarios, the Risk Engine chooses the largest amount of (the weighted) gain or loss as the most unfavourable projected liquidation value (worst case) of the option. This amount is called the Scanning Risk.~~

Here is the same table as before but with the formulas of each step:

Risk-Scenarios	1	2	3	4	5	6	7	8
Underlying-Price-Variation	$1/3 * PSR$	$-1/3 * PSR$	$2/3 * PSR$	$-2/3 * PSR$	PSR	$-1 * PSR$	$2 * PSR$	$-2 * PSR$
New-Underlying-Price	$P_1 = P_0 + 1/3 * PSR$	$P_2 = P_0 - 1/3 * PSR$	$P_3 = P_0 + 2/3 * PSR$	$P_4 = P_0 - 2/3 * PSR$	$P_5 = P_0 + PSR$	$P_6 = P_0 - PSR$	$P_7 = P_0 + 2 * PSR$	$P_8 = P_0 - 2 * PSR$
New-Option-Price	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
Gain / Loss	$P\&L_1 = X_0 - X_1$	$P\&L_2 = X_0 - X_2$	$P\&L_3 = X_0 - X_3$	$P\&L_4 = X_0 - X_4$	$P\&L_5 = X_0 - X_5$	$P\&L_6 = X_0 - X_6$	$P\&L_7 = X_0 - X_7$	$P\&L_8 = X_0 - X_8$
Weight-Fraction-Considered	100%	100%	100%	100%	100%	100%	35%	35%
Risk-Arrays-Results	$RA_{1=} 100% * P\&L_1$	$RA_{2=} 100% * P\&L_2$	$RA_{3=} 100% * P\&L_3$	$RA_{4=} 100% * P\&L_4$	$RA_{5=} 100% * P\&L_5$	$RA_{6=} 100% * P\&L_6$	$RA_{7=} 35% * P\&L_7$	$RA_{8=} 35% * P\&L_8$

The table above shows all details about the Risk Engine method used by the Corporation to calculate the worst potential loss of an Option contract. The last row has the eight Risk Arrays outcomes. The largest amount (positive amount) amongst the eight amounts is the Scanning Risk which will be, in most cases, the Initial Margin of this position.

It is important to note that the above calculations are performed at the Combined Commodity level, implying that when there is more than a single contract with the same Underlying Interest, the Risk Engine method calculates the Risk Arrays for all contracts belonging to the same Combined Commodity and then sums up the Risk Arrays results thus calculated for all contracts for the same scenario. In other words, the $RA_{1=}$ of the first contract is added up to the $RA_{1=}$ of the second contract and to the $RA_{1=}$ of the n^{th} contract that belong to the same Combined Commodity in order to get the Total $RA_{1=}$ for the same Combined Commodity. Then, the $RA_{2=}$ of the first contract is added up to the $RA_{2=}$ of the second contract and to the $RA_{2=}$ of the n^{th} contract that belong to the same Combined Commodity in order to get the total $RA_{2=}$ for the Combined Commodity. Likewise we obtain the total $RA_{3=}$, $RA_{4=}$, $RA_{5=}$, $RA_{6=}$, $RA_{7=}$ and $RA_{8=}$. Finally, the Risk Engine considers the largest amount of the eight total Risk Arrays as the Scanning Risk.

Example 2:

Let's assume a portfolio with three different positions: a short position in ten (10) Futures contracts on the S&P/TSX 60 Index, a long position in six (6) call Options contracts on the same index and a short position in three (3) put Options contracts on the same Underlying Interest (the expiry date for these three Options contracts might be the same or different).

In addition, the contract size and the price of the Futures contract are respectively 200 and F_0 and its Margin Interval is MI_F . The price of the call option is X_0 , the price of the put option is Y_0 and the contract size of these two Option contracts is 100, whereas the price of the Underlying Interest S&P/TSX 60 Index is P_0 and its Margin Interval is MI_I . The MI_F and the MI_I values are almost the same but not exactly equal since the first is calculated using the historical volatility of the Future's returns, whereas the second is calculated using the historical volatility of the index's returns. However, since the index and the Futures contracts are strongly correlated, both Margin Interval values must be almost similar. Using the calculated Margin Intervals, we can calculate the Price Scan Range (PSR_F) of the Future contract, which represents the fluctuation range of the Futures contract and the index Price Scan Range (PSR_I) which represents the fluctuation range of the underlying index as follows:

$$PSR_F = MI_F \times F_0 \times \text{Contract Size}$$

and,

$$PSR_I = MI_I \times P_0 \times \text{Contract Size}$$

Thus, since this Futures contract size is 200 and the contract size of the index option is 100, the previous formulas become:-

$$PSR_F = MI_F \times F_0 \times 200$$

and,

$$PSR_I = MI_I \times P_0 \times 100$$

For the clarity of the table below, please note that the PSR_F and the PSR_I do not include the contract size, i.e. $PSR_F = MI_F \times F_0$ and $PSR_I = MI_I \times P_0$.

This is the Risk Arrays table of this example:

Risk Scenario	1	2	3	4	5	6	7	8
10-Index-Futures-Contracts								
Futures-Price-Variation	$10 \times 200 \times$ $1/3 \times PSR_F$	$-10 \times 200 \times$ $1/3 \times PSR_F$	$10 \times 200 \times$ $2/3 \times PSR_F$	$-10 \times 200 \times$ $2/3 \times PSR_F$	$10 \times 200 \times$ PSR_F	$-10 \times 200 \times$ PSR_F	$10 \times 200 \times$ $2 \times PSR_F$	$-10 \times 200 \times$ $2 \times PSR_F$
Weight-Fraction-Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total-Weighted-Profit-and-Loss	$P\&L_{F1} =$ $2000 / 3 \times PSR_F$	$P\&L_{F2} =$ $-2000 / 3 \times PSR_F$	$P\&L_{F3} =$ $-4000 / 3 \times PSR_F$	$P\&L_{F4} =$ $-4000 / 3 \times PSR_F$	$P\&L_{F5} =$ $2000 \times PSR_F$	$P\&L_{F6} =$ $-2000 \times PSR_F$	$P\&L_{F7} =$ $1400 \times PSR_F$	$P\&L_{F8} =$ $-1400 \times PSR_F$
6-Index-Call-Option-Contracts								
Index-Price-Variation	$1/3 \times PSR_I$	$-1/3 \times PSR_I$	$2/3 \times PSR_I$	$-2/3 \times PSR_I$	PSR_I	$-PSR_I$	$2 \times PSR_I$	$-2 \times PSR_I$
New-Index-Price	$P_1 =$ $P_0 + 1/3 \times PSR_I$	$P_2 =$ $P_0 - 1/3 \times PSR_I$	$P_3 =$ $P_0 + 2/3 \times PSR_I$	$P_4 =$ $P_0 - 2/3 \times PSR_I$	$P_5 =$ $P_0 + PSR_I$	$P_6 =$ $P_0 - PSR_I$	$P_7 =$ $P_0 + 2 \times PSR_I$	$P_8 =$ $P_0 - 2 \times PSR_I$

New Call Option-Price	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
Weight-Fraction-Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total (6 x 100)-Weighted Profit and-Loss	$P\&L_{X1} = 600 \times (X_0 - X_1)$	$P\&L_{X2} = 600 \times (X_0 - X_2)$	$P\&L_{X3} = 600 \times (X_0 - X_3)$	$P\&L_{X4} = 600 \times (X_0 - X_4)$	$P\&L_{X5} = 600 \times (X_0 - X_5)$	$P\&L_{X6} = 600 \times (X_0 - X_6)$	$P\&L_{X7} = 210 \times (X_0 - X_7)$	$P\&L_{X8} = 210 \times (X_0 - X_8)$
3-Index-Put-Option-Contracts								
New put Option-Price	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7	Y_8
Weight-Fraction-Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total (-3 x 100)-Weighted Profit and-Loss	$P\&L_{Y1} = -300 \times (Y_0 - Y_1)$	$P\&L_{Y2} = -300 \times (Y_0 - Y_2)$	$P\&L_{Y3} = -300 \times (Y_0 - Y_3)$	$P\&L_{Y4} = -300 \times (Y_0 - Y_4)$	$P\&L_{Y5} = -300 \times (Y_0 - Y_5)$	$P\&L_{Y6} = -300 \times (Y_0 - Y_6)$	$P\&L_{Y7} = -105 \times (Y_0 - Y_7)$	$P\&L_{Y8} = -105 \times (Y_0 - Y_8)$
Combined-Commodity-Risk-Arrays-Results	$RA_1 = P\&L_{F1} + P\&L_{X1} + P\&L_{Y1}$	$RA_2 = P\&L_{F2} + P\&L_{X2} + P\&L_{Y2}$	$RA_3 = P\&L_{F3} + P\&L_{X3} + P\&L_{Y3}$	$RA_4 = P\&L_{F4} + P\&L_{X4} + P\&L_{Y4}$	$RA_5 = P\&L_{F5} + P\&L_{X5} + P\&L_{Y5}$	$RA_6 = P\&L_{F6} + P\&L_{X6} + P\&L_{Y6}$	$RA_7 = P\&L_{F7} + P\&L_{X7} + P\&L_{Y7}$	$RA_8 = P\&L_{F8} + P\&L_{X8} + P\&L_{Y8}$

The largest amount (positive number) of the eight Risk Arrays results is the Scanning Risk which will be the Initial Margin of a portfolio with these three positions.

By convention, Risk Array values are given for a single long position. For a short position (as for the short Put option of the previous example), the calculated profit and loss is multiplied by the negative sign (-1). Losses for long positions are expressed as positive numbers and gains as negative numbers.

In the case of all the eight Risk Arrays values being negative (i.e. all corresponding to a gain) or zero (no risk), the Scanning Risk amount is set to zero.

The number of the Risk Arrays scenario that gives the largest amount (worst case scenario) for the option is called the Active Scenario. If two scenarios have the same figure, the one with the lowest scenario number is the Active Scenario. For example, if scenarios 5 and 7 give the largest and similar results, scenario 5 will be defined as the Active Scenario.

The Risk Engine calculates the Initial Margin for each Combined Commodity, for each member's account and sub-account. Thus, the Initial Margins calculated for each Combined Commodity account and sub-account are then sent to CDCS in order to be aggregated at the Clearing Member level.

Risk Arrays values are denominated in the same currency as the specific contract.

The Corporation's Risk Arrays file is published every day on the Chicago Mercantile Exchange (CME) website.

Short Option Minimum

~~In the event of a sharp variation of the Underlying Interest price, short option positions can lead to significant losses. Therefore, the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) for short positions in each Combined Commodity. This amount will be called if it is higher than the result of the Risk Arrays.~~

~~In order to determine the appropriate SOM for every group of products, CDCC considers Out of The Money (OTM) call and put Options for every Underlying Interest.~~

~~After shocking the Underlying Interest price by its appropriate stress scenario, as set forth in the relevant notice to members, CDCC re-calculates the price of all OTM call and put Options using the new Underlying Interest price and the same other parameters of the Options. The difference between the actual Option price and the new Option price represents the potential loss of the Option. Then, the average of all Options' losses is calculated to determine the potential loss for every Underlying Interest. Finally, the average of the potential losses for all Underlying Interests of the same group of products is calculated to determine the potential loss of the Combined Commodity, which represents its SOM. The latter is then translated in a percentage of the Price Scan Range (PSR).~~

~~This SOM calculation is reviewed on a regular basis, at least annually, and communicated to Clearing Members by written notice.~~

~~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

~~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. Similarly, Shares Futures with physical delivery that expired are considered as Unsettled Items. 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 position thresholds are determined as described below:

<u>Product</u>	<u>Threshold methodology</u>
<u>Options</u>	<u>Average trading volume of the Underlying Interest over a certain period of time.</u>
<u>Futures (excluding Share Futures)</u>	<u>Average trading volume of the product over a certain period of time.</u>
<u>Share Futures</u>	<u>Average trading volume of the Underlying Interest over a certain period of time.</u>
<u>Fixed Income Transactions (excluding Real Return Bonds)</u>	<u>Average trading volume of the product over a certain period of time.</u>
<u>Real Return Bonds³</u>	<u>Average amount of bids in the primary market auctions for Real Return Bonds.</u>

ADDITIONAL MARGIN FOR SPECIFIC WRONG-WAY RISK

The Specific Wrong-Way Risk arises ~~where an exposure to a counterparty is highly likely to increase when~~when the exposure of a Clearing Member in its own products⁴ is adversely correlated with the credit worthiness of that ~~counterparty is deteriorating.~~Clearing Member.

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

- Put Options: When a Clearing Member ~~takes~~holds a Short Put Option position on the shares of ~~its own company or affiliates~~itself or its

³ For Real Return Bonds, the threshold is applied at the asset class level.

⁴ 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.

Affiliates, the full strike value amount is charged as ~~margin requirement~~Additional Margin for Specific Wrong-Way Risk.

- Share Futures: When a Clearing Member ~~takes holds~~ a long Share Futures position on the shares of ~~its own company or affiliates~~itself or its Affiliates, the full settlement value amount is charged as ~~margin requirement~~Additional Margin for Specific Wrong-Way Risk.
- 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 for Options products and the full settlement value amount is charged as margin requirement for Share Futures. In such case, the margin requirement is collected in the Difference Fund. The full strike value amount is charged as Additional Margin for Specific Wrong-Way Risk for Option products and the full settlement value amount is charged as Additional Margin for Specific Wrong-Way Risk for Share Futures when a Clearing Member holds a position on itself or its Affiliates.~~

~~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.~~

ADDITIONAL MARGIN FOR MISMATCHED SETTLEMENT RISK

~~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).~~

~~With respect to the Three Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC combines the contracts in different groups and applies the same charge to the contracts of a same group.~~

~~CDCC updates the Margin Intervals (MI) on a regular basis and publish them on its website.~~

~~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.~~

~~*INTRA-COMMODITY (INTER-MONTH) SPREAD CHARGE*~~

~~The different Futures contracts belonging to the same Combined Commodity have in general positive correlated returns. For example, a portfolio composed of a long position and a short position of two Futures contracts that have the same Underlying Interest but different expiry dates, will be less risky than the sum of the two positions taken individually. Margins on correlated positions address this fact.~~

~~The Risk Engine automatically matches the long positions on Futures maturing in one month with the short positions on Futures maturing in another month. The resulting Margin Requirement on these two Futures contracts belonging to the same Combined Commodity, could be lower than the real risk associated with the combination of the two contracts. To address this issue, the Risk Engine allows the user to calculate and apply an additional ~~margin charge relative to the Inter-Month spread risk~~, in order to cover the risk associated with these two positions. This ~~margin is called Inter-Month Spread Charge or Intra-Commodity Spread Charge~~ (because it is calculated within the same Combined Commodity).~~

~~Intra-Commodity (Inter-Month) Spread Charge on correlated Futures positions is calculated by the Corporation's risk department and updated on a regular basis.~~

~~For the Futures contracts, the Intra-Commodity Spread Charge (ICSC) which is an additional dollar amount charge applied to each combination of two different Futures contracts, is determined as follows:~~

~~Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). "~~is equal to the critical value equivalent to 99.87% of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student's t-distribution with 4 degrees of freedom (applicable to the BAX Futures products).~~" 'σ' is the volatility estimator of the Futures combination's daily ~~profity~~ and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.~~

~~In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC ~~can not be lower than the calculated floor.~~~~

~~With respect to the Three Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC calculates the Intra-Commodity (Inter-Month) Spread Charge for all combinations of spreads and butterfly's strategies and applies a same charge for a same group of combinations with close maturities.~~

~~For all Futures contracts, in order to consider the highest economical correlation between the different Futures contracts and to offer the highest benefit to the Clearing Members, CDCC applies the different Intra-Commodity (Inter-Month) Spread Charges by considering the combinations with the lowest charges first and the ones with the highest charges will be considered at the end. If two different combinations or group of combinations will have the same charge, the one with the lowest maturity will be considered first. This is the same spread priority concept that is applied for Fixed ~~Income~~.~~

~~The Intra-Commodity (Inter-Month) Spread Charges and the spread priorities are updated and published on the CDCC website on a regular basis.~~

~~*INTER-COMMODITY-SPREAD-CHARGE*~~

~~Similarly, the Corporation considers the correlation that exists between different classes of Futures contracts when calculating the Initial Margin. For example, different interest rate Futures contracts are likely to react to the same market indicators, but at different degrees. For instance, a portfolio composed of a long position and a short position on two different interest rate Futures contracts will be likely less risky than the sum of the two positions taken individually. The Corporation will grant a margin relief according to the historical correlation of the returns of the two Futures contracts.~~

~~When calculating the Initial Margin on a portfolio with several long and short Futures positions, the Corporation matches the positions in accordance with predefined steps. For example, if the first matching step consists of matching long or short positions on the front month Futures contracts with long or short positions on the second front month Futures contract, the positions of both Futures contracts might not be equal. In this case, the Corporation determines, using the hedge ratio concept the exact position (number of contracts) of a Futures contract that can be offset by a position on the other Futures contract. Any position that has not been matched will be available for the second matching step. This is the same spread priority process also defined for Cash Buy or Sell Trades and Repurchase Transactions.~~

~~The Corporation regularly performs an analysis to determine the margin reductions that are applied for all Futures contracts combinations.~~

~~The Corporation also considers the positive (negative) correlation that exists between the different interest rate Futures contracts and the Fixed Income Transactions, and provides a margin benefit for a combination of any Futures contracts with the opposite (same) Fixed Income Transactions.~~

Spread Priority

~~To determine the appropriate margin reduction for each combination of two Futures contracts, the Corporation performs the following steps:~~

- ~~1) Use the yearly historical data of the different Futures contracts and calculate the correlation matrix.~~
- ~~2) For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represent the Futures contracts correlations with themselves). This closest diagonal usually contains the highest correlations because of the proximity of the maturities. Then, consider the second closest diagonal, then the third and so on until the last diagonal that has one correlation number.~~
- ~~3) Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the margin reduction applied to the Clearing Members. Discounts are applied to all the matrix correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.~~
- ~~4) If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.~~

~~Different Futures contracts that do not have the same contract size nor the same volatility yield would not have a margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used to determine how much position of one contract in any combination can be matched with the other Futures contract of the same combination. The remaining position (or quantity of Futures contracts) of any contract of this first combination will be matched with another position to form another combination according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.~~

~~The Corporation allows a margin reduction for two positively correlated Futures contracts with different directions and for two negatively correlated Futures contracts with same directions.~~

~~When the spread priority process is performed, the Corporation considers the combinations between interest rate Futures contracts first (Intra Commodity Spread Charge). Any remaining (outright) positions in these Futures contracts positions will be considered for Inter Commodity Spread Charge with Fixed Income Transactions.~~

~~INITIAL MARGIN FOR FIXED INCOME TRANSACTIONS~~

~~At the Corporation, a Fixed Income Transaction can be either a Repurchase Transaction or a Cash Buy or Sell Trade. A Cash Buy or Sell Trade is the sale of a security from one party to another. Depending on its maturity, the Fixed Income Security can be delivered one, two or three days after the Fixed Income Transaction is completed. Between the Fixed Income Transaction novation date and the delivery date, the Corporation has to cover the counterparty risk.~~

~~A Repurchase Transaction is a transaction whereby the seller (the Repo Party) agrees to sell a security to a buyer (the Reverse Repo Party) on a given date (the purchase date) and simultaneously agrees to buy the same security back from the Reverse Repo Party at a later date (the repurchase date) at a fixed price (the repurchase price). Thus, a Repo is equivalent to a cash transaction combined with a forward contract. The cash transaction results in a transfer of money from the buyer to the seller in exchange for a legal transfer of the security from the seller to the buyer, while the forward contract ensures repayment by the seller to the buyer and return of the securities from the buyer to the seller. The difference between the repurchase price and the purchase price is the Price Differential calculated with the agreed Repo Rate, while the settlement date of the forward contract (i.e. the repurchase date) is the maturity date of the transaction.~~

~~In such Repurchase Transaction, there are two sources of risk that the Corporation needs to consider and cover. The potential Purchased Security's price fluctuation and the Floating Price Rate fluctuation over the life of the Repurchase Transaction. However, in a Cash Buy or Sell Trade, there is only one source of risk that the Corporation needs to consider and cover, namely, the Purchased Security's price fluctuation.~~

~~SECURITY PRICE RISK~~ Mismatched Settlement Risk is the risk arising from a lag between the settlement of positions which result 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 or a Variation Margin credit on the rest of the portfolio.

Given the fact that Margin offsets are granted when Fixed Income portfolios have both long and short positions, the Additional Margin charge will be calculated on a gross basis for the positions that could cause mismatched settlement exposure prior to a default.

In order to address the Mismatched Settlement Risk⁵, CDCC will perform forward looking analysis to forecast material changes in Margin Requirements⁶ as a result of end of day settlement for Fixed Income Transactions.

The Additional Margin for Mismatched Settlement Risk will be calculated by using the maximum of A or B, minus the total Margin Requirement for Fixed Income Transactions:

⁵ The Additional Margin for Mismatched Settlement Risk is not applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB).

⁶ For the purposes of this "Additional Margin for Mismatched Settlement Risk" section, the Margin Requirement includes the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) and the Variation Margin.

Where A represents the maximum of the Margin Requirement for buy transactions that settle on the current Business Day (t) or Margin Requirement for sell transactions that settle on the current Business Day (t), to which is added the remaining Margin Requirement for Fixed Income Transactions that settle on t+1 and beyond.

Where B represents the maximum of the Margin Requirement for buy transactions that settle on the next Business Day (t+1) or Margin Requirement for sell transactions that settle on the current Business Day (t) and the next Business Day (t+1), to which is added the remaining Margin Requirement for Fixed Income Transactions that settle on the second Business Day following the Transaction (t+2) and beyond.

ADDITIONAL MARGIN FOR INTRA-DAY VARIATION MARGIN RISK

The Intra-Day Variation Margin Risk arises when market volatility of cleared volumes produces unusually large Variation Margin exposures. In order to address the Intra-Day Variation Margin Risk, CDCC may call for additional Margin from each Clearing Member if it determines that the intra-day exposure for Futures and Fixed Income Transactions to the Clearing Member exceeds certain limits (thresholds expressed in percentage) in relation to the Clearing Member's respective Margin Requirement⁷ and Clearing Fund contribution. Additional Margin for Intra-Day Variation Margin Risk is subject to a minimum value (floor).

Since the Variation Margin for Fixed Income Transactions is calculated on a daily basis, the Intra-day Variation Margin will compare the previous Business Day's value to the current requirement. If the current requirement is less than the previous Business Day's requirement, no Additional Margin will be required.

The Additional Margin for Intra-day Variation Margin Risk requirement is 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.

⁷ For the purposes of this "Additional Margin for Intra-Day Variation Margin Risk" section, the Margin Requirement includes the Base Initial Margin, Additional Margin for Concentration Risk, Additional Margin for Specific Wrong-Way Risk and Variation Margin for Options and Unsettled Items.

ADDITIONAL MARGIN FOR VARIATION MARGIN DELIVERY RISK

~~The price of the Purchased Security changes continuously during the life of a Repurchase Transaction. On one hand, if the price decreases and the Repo Party defaults, the Corporation, as a central counterparty, incurs market risk for the price difference. The position may be transferred to any Fixed Income Clearing Member who agrees to buy the security at the expiry date with the new market conditions (new security's market price and interest rate). In this case, the Corporation has to cover the potential decrease in the security's value (negative variation for the seller) that could arise during the next specific period. On the other hand, if the security's price increases and the Reverse Repo Party defaults, the Corporation, as a central counterparty, incurs market risk for the price difference. The position may be transferred to any Fixed Income Clearing Member who agrees to sell the same security at the expiry date with the new market conditions (new security's market price and interest rate). In that case, the Corporation has to cover the potential increase in the security's value (negative variation for the buyer) that could arise during the next specific period.~~ 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

On a daily basis, the Corporation measures 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 methodology to calculate the Initial Margin for Fixed Income Transactions is slightly different from the Options contracts and Futures contracts. Indeed, the different types of securities that are accepted by the Corporation for clearing of a Repurchase Transaction are separated in different Buckets depending on their remaining time to maturities and issuers. In addition, in its risk model, the Corporation assumes that all securities belonging to the same Bucket have the same yield volatility expressed in terms of Margin Interval (same concept of Margin Interval described before) which is calculated using the Yield To Maturity (YTM) of the on-the-run security of the Bucket. The Margin Interval is calculated as follows:

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). " is equal to the critical value equivalent to 99.87% of the cumulative Normal distribution. 'σ' is the volatility estimator of the YTM's daily variation of the on-the-run security over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI can not be lower than the calculated floor.

It's important to note that for some particular Buckets, there may not be any on-the-run security. In this particular situation, a linear interpolation between the MIs of the two closest Buckets is performed to determine the MI of the particular bucket.

Each Bucket is considered as a Combined Commodity. Since the bond's convexity effect is very small with respect to its duration, the Initial Margin is calculated for a physical cash trade exactly the same way as for Futures contracts. The first part of the example # 2 of the section on Risk Arrays shows how the Scanning Risk is calculated for a Futures contract. As for a Futures contract, the Initial Margin for a physical security can also be obtained straightforwardly by calculating its Price Scan Range (PSR).

Therefore, the Initial Margin amount related to the security's price of a Repurchase Transaction on one security belonging to a Bucket is calculated as follows:

$$Initial\ Margin - 1 = Security's\ Price \times MI \times D \times Contract\ Size$$

Where D is the duration of the security and the contract size is the transaction's Nominal Value divided by 100. However, for all securities that belong to the 3-month, 6-month and 1-year buckets, CDCC uses a fixed duration which is set at 1.

Thus, all Repo-related Fixed Income Securities belonging to the same Bucket have the same Margin Interval but each specific Repo-related security of the same Bucket has a different Initial Margin driven by its own price and its own duration.

In the above formula of the Price Scan Range, only the first part of the Initial Margin of a Repurchase Transaction is calculated, namely, the Initial Margin 1. As mentioned above, there are two sources of risk for a Repurchase Transaction. This is the Initial Margin of the first source of risk, the security's price. In the next section, the second part of the Initial Margin of a Repurchase Transaction which covers the second source of risk, the Floating Price Rate, is described. Finally, both Initial Margins are added up to get the total Initial Margin of a Repurchase Transaction. However, the Initial Margin 1 corresponds to the total Initial Margin for a Cash Buy or Sell Trade.

INTEREST RATE RISK (REPURCHASE TRANSACTIONS)

The Floating Price Rate changes continuously during the life of a Repurchase Transaction. On one hand, if the Floating Price Rate decreases and the Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to buy the Fixed Income Security at the expiry date with the new market conditions. In this case, the Corporation has to cover the potential decrease in the Floating Price Rate (negative variation for the seller) that could arise during the next specific period. On the other hand, if the Floating Price Rate increases and the Reverse Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to sell the same Fixed Income Security at the expiry date with the new market conditions. In that case, the Corporation has to cover the potential increase in the Floating Price Rate (negative variation for the buyer) that could arise during the next specific period.

In order to properly quantify the risk related to the Floating Price Rate using the Risk Engine, it is necessary to model the Floating Price Rate into a Virtual Futures Contract (VFC) with a price equal to: $VFC's\ price = 100 - Floating\ Price\ Rate$. For an overnight Repurchase Transaction the Initial Margin is straightforwardly calculated by sending to the Risk Engine the determined VFC. However, in order to calculate the VFC's price for longer term Repurchase Transactions, the Corporation determines the appropriate interest rate using the overnight index swap (OIS) term structure.

The portion of the Initial Margin that covers the Floating Price Rate related risk is then added to the portion of Initial Margin that covers the security price related risk to get the total Initial Margin for a Repurchase Transaction.

It's important to note that the portion of Initial Margin that covers the Floating Price

Rate related risk is very small with respect to the portion of **Initial Margin** that covers the security price related risk.

~~INTRA-COMMODITY (INTER-MONTH) SPREAD CHARGE~~

~~For Fixed Income Transactions, a portfolio composed of a short position and a long position on two different Acceptable Securities belonging to the same Bucket, will generate a lower **margin requirement** than if they were margined independently without considering their correlation.~~

~~The Risk Engine automatically matches the Seller and the Buyer of two different securities belonging to the same Bucket. The resulted **Margin requirement** on these two Repurchase Transactions assumes a perfect correlation between the two Fixed Income Securities, thus the gain of one Fixed Income Security is **offsetted** by the loss of the other Fixed Income Security. However, the Acceptable Securities' prices are not perfectly correlated. Gains on one position should not totally offset losses of the other Fixed Income Security. To **fix this issue**, the Risk Engine allows **the user** to calculate and to apply a **margin charge relative to the Inter Month** spread risk in order to cover the risk of these two Fixed Income Transactions. This **margin** is called the **Intra Commodity (Inter Month) Spread Charge** or **Intra Commodity Spread Charge** (because it is calculated within the Combined Commodity).~~

~~The **Intra Commodity (Inter Month) Spread Charge** on correlated Acceptable Securities of each Bucket is calculated by the Corporation's risk department and updated regularly.~~

~~For Fixed Income Transactions, the **Intra Commodity Spread Charge (ICSC)** which is an additional dollar amount charge applied to each combination of two different transactions on two different securities that belong to a same Bucket, is determined as follows:~~

~~Where 'n' is the number of liquidation days (see the **Margin Interval (MI) Calculation** section for more details). " is equal to the critical value equivalent to 99.87% of the cumulative Normal distribution. 'σ' is the volatility estimator of the **fixed income transaction** combination's daily profit and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the **Margin Interval (MI) Calculation** section.~~

~~In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC **can not** be lower than the calculated floor.~~

INTER-COMMODITY SPREAD CHARGE

The Fixed Income Securities belonging to two different Buckets generally have a significant correlation. Inter-Commodity spread charge is a **margin** amount generated for opposite or similar Fixed Income Transactions in two different Acceptable Securities belonging to two different Buckets.

Without any **margin relief**, the Initial Margin for opposite or similar positions on two different Acceptable Securities belonging to different Buckets would be the sum of both Initial Margins. However, two different Fixed Income Transactions in different Acceptable Securities belonging to two different Buckets can benefit from a reduction in their **Initial Margins** because of the consideration given to their correlation. The formula to get the portfolio's **Initial Margin** is:-

$$\text{Total Initial Margin} = (\text{Initial Margin}_{\text{Position-1}} \times \text{Hedge Ratio}_{\text{Position-1}} + \text{Initial Margin}_{\text{Position-2}} \times \text{Hedge Ratio}_{\text{Position-2}}) \times (1 - \text{Margin Relief})$$

The **margin relief** is a percentage determined using the correlation matrix between the different on-the-run Fixed Income Securities of each Bucket.

The Inter-Commodity **margin relief** percentages between the different Buckets are calculated by the Corporation's risk department and updated on a regular basis.

The Corporation also considers the positive (negative) correlation that exists between the different Fixed Income Transactions and the interest rate Futures contracts. The Corporation provides a **margin** reduction for a combination of any Fixed Income Transactions with opposite or similar Futures contracts positions.

Spread Priority

To determine the appropriate **margin** reduction for each combination of two Fixed Income Securities, the Corporation performs the following steps:

- 1) Use the yearly historical data of the different Fixed Income Securities and calculate the correlation matrix.
- 2) For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represents the Fixed Income Securities correlations with themselves). The first diagonal usually contains the highest correlations because of the nearness of the maturities. Then, consider the second closest diagonal, then the third, and so on, until the last diagonal that has only one correlation number.
- 3) Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the **margin** reduction applied to the Clearing Members. Discounts are applied to all the matrix correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.

- 4) If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.

Different Fixed Income Securities that do not have the same price nor the same duration would not have a margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used to determine how much position of one contract in any combination can be matched with the other Fixed Income Transaction of the same combination. The remaining position (or quantity of Fixed Income Transaction) of any contract of this first combination will be matched with another position to form another combination, according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.

The Corporation allows a margin reduction for two positively correlated Fixed Income Transactions with different directions and for two negatively correlated Fixed Income Transactions with same directions.

When the spread priority process is performed, the Corporation considers the combinations between Fixed Income Transactions first. Any remaining (outright) positions in these Fixed Income Transactions positions will be considered for Inter Commodity spread charge with the Futures contracts.

For a better understanding of this process, please refer to the spread priority example of the section Fixed Income Transactions, and to the third scenario of the *IM_repo_3_scenarios.xls* file available at the Corporation website.

Spread Priority Example

Here is an example of the matrix correlation demonstrating the application of the spread priority process:

Correlation	3-months	6-months	1-year	2-year	3-year	5-year	7-year	10-year	15-year	20-year	30-year
3-months	100%	92%	88%	68%	11%	-1%	2%	4%	24%	24%	14%
6-months		100%	94%	81%	54%	42%	5%	7%	26%	26%	17%
1-year			100%	82%	68%	46%	20%	22%	39%	39%	29%
2-year				100%	76%	59%	68%	69%	78%	75%	69%
3-year					100%	82%	87%	86%	93%	90%	89%
5-year						100%	91%	55%	57%	89%	88%
7-year							100%	80%	91%	70%	94%
10-year								100%	82%	95%	43%
15-year									100%	69%	97%
20-year										100%	67%
30-year											100%

The numbers in the first diagonal (blue) on the right of the 100% diagonal should be considered first, then the numbers in the second diagonal (green), then the numbers in the third diagonal (yellow), and so on, until the last white diagonal which contains one single number (the number of this cell is 14%).

Amongst the numbers in the first diagonal in blue, the combination with the highest number is treated first. In this case, it is a combination of 1-year Fixed Income Security with 6-month Fixed Income Security which has the highest number (94%). The combination with a 92% correlation is considered, followed by the combination with a 91% correlation, and so on.

Out of the 10 numbers of this diagonal, there are three correlations with the same percentage of 82%. By subsequent, the correlation with a 1-year Fixed Income Security and a 2-year Fixed Income Security has to be considered first, then the correlation with a 3-year Fixed Income Security and a 5-year Fixed Income Security has to be considered thereafter and finally the correlation with a 10-year Fixed Income Security and a 15-year Fixed Income Security has to be considered.

~~VARIATION MARGIN~~ Additional Capital Margin is determined by the Corporation as part of the Daily Capital Margin Monitoring (DCMM) process intended to evaluate the credit risk of its Clearing Members (excluding Limited Clearing Members).

The Corporation compares the Clearing Member’s capital amount to the sum of the Base Initial Margin for all products and Variation Margin requirements for Options and Unsettled Items.

In the event that the sum of the Base Initial Margin and Variation Margin requirements for Options and Unsettled Items 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 (NAA), 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 Margin Requirement covers the risk exposure that arises if the total value of the risk represented by an LCM 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 LCM 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.

1.1.2 Variation Margin

The Variation Margin requirement 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 since the previous evaluation in accordance with the Rules.

<u>Products</u>	<u>Variation Margin coverage type</u>
-----------------	---------------------------------------

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

1.1.2.1 Options Contracts

For Options contracts, the Variation Margin is collateralized daily based on the Option Price reported by the Exchange, or the last OTCI Option Price⁸, 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 Contracts

For Futures contracts, the Variation Margin ~~is financially~~(Gains and Losses) is cash settled every ~~day based on the settlement price as determined by the relevant marketplace.~~ 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

~~MTM REPO RATE VALUATION~~

~~The Mark-To-Market (MTM) process essentially transfers any losses due to market fluctuations in the Floating Price Rate which is determined from the overnight index swap curve from one party to the Repurchase Transaction to the other. Each open position will be Marked-to-Market on a daily basis with the resulting cash movements settling during the morning settlement cycle. This amount is called the MTM Repo Rate Payment.~~Variation Margin Requirement⁹ 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.

⁸ Please refer to Section 6.1.4.3 for additional details on the theoretical price calculation of OTCI Options.

⁹ The Variation Margin Requirement for Fixed Income Transactions is not applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB). The applicable Variation Margin Requirement for Fixed Income Transactions is rounded up to the nearest \$1 of nominal value.

PRICE VALUATION REQUIREMENT-

The MTM process works as follows. On one hand, if the Floating Price Rate decreases during the life of the Repurchase Transaction, the Repo Party must pay the difference between the original Repo Rate and the new Floating Price Rate. On the other hand, if the Floating Price Rate increases, the Reverse Repo Party must pay the difference between the new Floating Price Rate and the original Repo Rate.

In addition, when one party to the Repurchase Transaction pays the MTM, it is necessary to compensate that Clearing Member for the opportunity cost of funds (OCF) which was forfeited.

The MTM process is important since it ensures that, in the event of default, the Corporation will be able to replace the defaulting Clearing Member's Repurchase Transaction without incurring any additional losses beyond the current valuation.

Since the MTM and OCF are related to the Repo Rate and the Floating Price Rate, these two components are applied only to Repurchase Transactions and not to Cash Buy or Sell Trades.

Here is an example of the MTM and the OCF calculations:

$$MtM_t = A \times (OIS\ rate_t - original\ Repo\ Rate) \times t/365 - MtM_{t,n}$$

and

$$OCF_t = MtM_{t,n} \times CORRA\ Rate_{t,n} \times n/365$$

where

A = Purchase Price

t = Remaining term (in days)

OIS rate_t = Interest rate derived from the OIS curve with a remaining term of t days

Original Repo Rate = the contractual Repo Rate

n = Number of days between t and the last business day. It's usually equal to 1 except when there is a week end or a Holiday.

MTM PRICE VALUATION

At each margin run process (two intra days and one end of day process), the Clearing Engine compares the Market Value of the Purchased Security to the

~~Repurchase Price. The Corporation is exposed to the Reverse Repo Party when the Market Value of the Purchased Security exceeds the Repurchase Price, and inversely, the Corporation is exposed to the Repo Party when the Repurchase Price exceeds the Market Value of the Purchased Security; therefore, this difference needs to be considered in the event of a Clearing Member default.~~

~~The MTM price valuation amount is the difference between the Market Value of the Purchased Security and the Repurchase Price. This amount is collateralized and should be credited to the Repo Party's Margin Fund and debited to the Reverse Repo Party's Margin Fund when the Market Value of the Purchased Security exceeds the Repurchase Price, and the other way around when the Repurchase Price exceeds the Market Value of the Purchased Security. It should be noted that MTM price valuation is also applicable for Cash Buy or Sales Trades. In this situation, the MTM price valuation amount is the difference between the Market Value of the Purchased Security and the Purchase Price.~~
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 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 Underlying Interest of an Option contract with physical delivery that has been exercised or assigned in the money, but is not yet settled (i.e. the Underlying Interest is not yet delivered) is considered an Unsettled Item. Similarly, the Underlying Interest of a Future contract with physical delivery that has expired is considered an Unsettled Item.

The Variation Margin for Unsettled Items with respect to both Options and Futures contracts is collateralized. With respect to Variation Margin for Unsettled Items related to Options contracts, 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. ~~All the account types are treated on a net account basis for Futures contracts, OTCI and Fixed Income Transactions. However, Options contracts are treated differently depending on the account type they are held in. If they are held in a Firm Account or a Multi-Purpose Account, they are treated on a net account basis, whereas if they are held in a Client Account, they are treated on a gross account basis, which means that only short Options contracts are considered when computing the Initial Margin.~~

~~Gross accounts allow calculation of Initial Margin for different clients that clear through one Clearing Member. Since each client has its own risk profile, the Initial Margin must be computed separately for each client and must not allow offsets between positions that belong to different clients. Subsequently, only Short Positions in Options contracts are considered when calculating the Initial Margins for the Client Account.~~

~~Net accounts allow calculation of Initial Margin for the Clearing Member's own positions (Firm Account), for a Market Maker positions (Market Maker Account) or for the positions of a particular single Client (Netted Client Account). In this case, the Initial Margin must consider the possible offsets between all positions. Therefore, all positions held in one Firm Account or one Multi-Purpose Account are used to~~

~~calculate the Initial Margin for this account.~~

~~The Initial Margins calculated for each account are then aggregated at the Clearing Member level to get the Initial Margin by Clearing Member.~~

~~In order to cover the Initial Margin described above, Clearing Members shall deposit an acceptable form of Deposits in accordance with Section A-709 of the Rules.~~

~~Additional Margin for Intra-Day Variation Margin Risk~~

~~In order to address the Intra-Day Variation Margin Risk⁵, CDCC makes additional margin calls vis-à-vis each Clearing Member if it determines that it's intra-day exposure to the Clearing Member exceeds a certain limit (threshold in percentage) in relation to their respective Initial Margin or their Clearing Fund contribution. Margin calls are subject to a minimum value (floor). Thereby, CDCC will compare the Clearing Member's Intra-Day Variation Margin amount to its Initial Margin and its Clearing Fund contribution on a daily basis and requires, if necessary, additional margin calls. Additional calls for Intra-Day Variation Margin could also be used in any other circumstances that CDCC deems appropriate.~~

DIFFERENCE FUND

~~As defined in Section 8.2 of the Operations Manual, the Difference Fund is Margin Deposits held by the Corporation 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, (5) Intra-Day Margin, (6) Specific Wrong-Way Risk for Unsettled Items, (7) Additional Margin for Intra-Day Variation Margin Risk, and (8) Additional Margin for Mismatched Settlement Risk⁶. The Corporation accepts Deposits to the Difference Fund in the same form and proportion as for the Margin Fund, as set forth in Section A-709 of the Rules.~~

~~Additional Margin for the Mismatched Settlement Risk~~

~~In order to address the Mismatched Settlement Risk CDCC will perform forward looking analysis to forecast material changes in total margin requirement (IM + VM) as a result of intra-day settlement for fixed income transaction.~~

~~The additional change for Mismatched Settlement Risk will be calculated by using the maximum of **A** or **B**, minus the current calculated margin requirement for fixed income transactions:~~

~~Where **A** represents the maximum of (IM + VM) of buys transactions of the current day (t) or (IM + VM) of sells transactions of the current day (t) to which is added the remaining margin requirement for fixed income transaction of t+1 and beyond.~~

⁵ This Margin is applying only on Futures contracts

⁶ The Additional margin for Mismatched Settlement Risk will not be applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB)

Where B represents the maximum of $(IM + VM)$ of buys transactions of the next day $(t+1)$ or $(IM + VM)$ of sells transactions of the current day (t) and the next day $(t+1)$ to which is added the remaining margin requirement for fixed income transaction of $t+2$ and beyond.

Despite the fact that the Difference Fund is used to cover all the above elements, the sub-section regarding the Daily Capital Margin Monitoring intends to capture the credit risk. Consequently, this sub-section is described in details thereunder.

Daily Capital Margin Monitoring:-

The Corporation measures the credit exposure to its Clearing Members on a daily basis through the Daily Capital Margin Monitoring Calls (DCMM). The capital level is derived from regulatory reports received on a monthly basis in a timely manner (and on a quarterly basis if it is a Bank Clearing Member).

As prescribed in Section A-710 of the Rules, the Corporation may call for a contribution in the Difference Fund from Members that are undercapitalized in relation to their respective Initial Margin. The Corporation compares the Clearing Member's capital amount to the Initial Margin⁷ on a daily basis and requires, if applicable, that the Clearing Member makes up any difference in the form of acceptable Deposits. Each Clearing Member's capital is analyzed and updated on a monthly basis.

In order to determine the contribution to the Difference Fund of Clearing Members, the Corporation uses the Net Allowable Assets (NAA). The Net Allowable Asset is a more restrictive type of capital, since it is the net result of the financial statement capital less the non allowable assets. Non allowable assets are composed of less liquid assets like capitalized leases, Investments in and Advances to Subsidiaries, etc. For Bank Clearing Members, the Corporation uses the Net Tier 1 capital.

The Corporation has access to the Clearing Member's financial statements from the CIPF (Canadian Investor Protection Fund), the OSFI (Office of the Superintendent of Financial Institutions Canada) for Bank Clearing Members or a Regulatory Body for a Financial Institution Clearing Member.

In addition to the monthly update of capital numbers, the Corporation performs a qualitative analysis of the financial statements of each member. The Corporation has defined specific thresholds to analyze the profitability, the margin required, the liquidity and the capital level. The Corporation could ask Clearing Members for more clarifications, if necessary.

Indeed, Investment Industry Regulatory Organization of Canada (IIROC) evaluates the financial condition of its Members. If an IIROC Member, who is also a Clearing Member, fails the tests designed to detect the risk of insolvency, the Corporation will be notified by IIROC. The Clearing Member itself shall also advise the Corporation immediately if it enters in an early warning level situation. IIROC may issue two types of warning, early warning level 1 or 2. This is function of the severity of the

⁷The Initial Margin used for DCMM calculation does not include the additional margin for Concentration Risk.

~~financial deficiency. The Corporation will be informed by IIROC and will closely monitor the situation. IIROC may impose sanctions or restrictions against the Member. The Corporation will judge if it is necessary to take any additional actions and will report the situation to the Risk Management and Advisory Committee (RMAC).~~

~~CLEARING FUND~~

~~The Clearing Fund deposits are set out in Rule A-6.~~

- ~~• 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 positions is calculated on a net basis for the Firm Account and the Multi-Purpose Account, but on a gross basis for the Client Accounts, which means that only short Options contracts are considered when computing the Initial Margin.~~

1.1.3.2 Margin Aggregation

The total Margin Requirement of each Clearing Member is composed of its Initial Margin requirement and its 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:

1. 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 is calculated at the account level and increased by both the Additional Margin for Concentration Risk and the Additional Margin for Specific Wrong-Way Risk.
- 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), the Additional

Margin for Concentration Risk and the Additional Margin for Specific Wrong-Way Risk.

- If the Variation Margin for Options and Unsettled Items is negative, this will result in a Margin credit¹⁰ decreasing the aggregate value of the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Concentration Risk and Additional Margin for Specific Wrong-Way Risk.
 - 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 (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Concentration Risk and Additional Margin for Specific Wrong-Way Risk.
- 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), the Additional Margin for Concentration Risk, the Additional Margin for Specific Wrong-Way Risk and the Variation Margin for Options and Unsettled Items and (2) the following Additional Margins calculated at the Clearing Member level: Additional Margin for Mismatched Settlement Risk, Additional Margin for Intra-Day Variation Margin Risk, Additional Margin for Variation Margin Delivery Risk, Additional Capital Margin, Additional Margin for Uncovered Risk of Limited Clearing Members and any other Additional Margins.

2. VARIATION MARGIN FOR FUTURES CONTRACTS

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

3. VARIATION MARGIN FOR FIXED INCOME TRANSACTIONS

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

¹⁰ For a given account, the Margin credit is capped to the aggregation of the Base Initial Margin and the Additional Margin for Concentration Risk.

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.

~~These provisions aim to cover extreme but plausible market conditions.~~ The Clearing Fund is a reserve fund put in place to respond to by the Corporation to absorb the deficit that may occur ~~when the Margin Fund and the Difference Fund of a defaulting~~ upon the default of a Clearing Member and its ~~Affiliate(s) no longer cover his~~ Affiliates when the suspended CM's prefunded financial resources do not cover its market exposure. ~~The Clearing Fund is an obligation shared by all the Clearing Members and this~~

This fund is structured to mitigate the largest Uncovered Residual Risk ("URR"). ~~The URR accounts for the fact that extreme~~ under extreme but plausible market conditions could generate a major loss ~~the largest Clearing Member and its Affiliate(s), causing the potential default of this Clearing Member and its~~ of all Clearing Members (excluding LCMs) and of their Affiliate(s).

~~As it is indicated in Section A-603 of the Rules, the required Clearing Fund contribution of each Clearing Member is composed of Base Deposits plus a Variable Deposit specific to each Clearing Member. Clearing Fund Base Deposits and Variable Deposit could be modified by the Corporation. Clearing Members will be notified of any change pursuant to Section A-604 of the Rules.~~

MEMBER CONTRIBUTION

~~For the purposes of application of Rule A-6, the Corporation issues an amount of Deposit~~ On a monthly basis, CDCC issues to each Clearing Member ~~on a monthly re-evaluation basis of~~ a statement indicating the amount required by such Clearing Member to meet its Clearing Fund Requirement based on the following elements:

- ~~Ø~~ The size of the Clearing Fund is based on the URR⁸largest Uncovered Residual Risk ("URR") of all Clearing Members and of their Affiliate(s) (excluding LCMs) over the last sixty Business Days. The size is then ~~multiplied~~ increased by ~~145~~ 15%.

⁸ ~~The Base Margin used for the Clearing Fund calculation does not include the additional margin for Concentration Risk.~~

- ~~Ø~~ Each Clearing Member's ~~contribution to the~~ Clearing Fund Requirement amount is equal to the weight of its respective Base Initial Margin over the last sixty Business Days multiplied by the ~~size~~total value of the Clearing Fund. A Clearing Member's contribution is subject to ~~the a minimum floor (Base Deposit), which varies according to the Clearing Member's type of activity.~~
- ~~Ø~~ The Corporation monitors and controls the size of the Clearing Fund throughout the month and may adjust it upward between monthly re-~~evaluation~~evaluations. The whole or a specified part of this increase will be assumed by the Clearing Members, who would then receive a ~~margin~~Margin call, depending on whether the Corporation determines that the size increase is directly influenced by specific Clearing Member(s) or by general market conditions. In the latter case, the increase will be ~~distributed~~allocated among Clearing Members in accordance with the ~~standard allocation process~~above methodology. If the increase is attributable to both situations, the concerned Clearing Member will incur a specific increase on top of the standard allocated increase.

STRESS SCENARIOS

~~The Corporation uses various stress scenarios to evaluate the URR. Stress scenarios are intended to assess the impact of extreme but plausible market conditions. This resulting potential loss is utilized to determine the size of the Clearing Fund. The stress scenarios are applied on a daily basis in order to estimate the risk exposure.~~

~~The Corporation also uses stress tests to monitor the risk of each Clearing Member. Such stress tests take into consideration potential movements in the yield curves, equity return, stock indices return, implied volatility and exchange rate.~~

~~The Corporation regularly assesses whether it is appropriate to add other stress scenarios to the existing scenarios.~~

Section 2: Eligible Collateral

~~FORMS OF 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), ~~is of~~ are one or more of the following assets:

- 1) ~~4-~~ Cash
- 2) ~~2-~~ Debt Securities
- 3) ~~3-~~ Valued Securities

CDCC may, ~~from time to time and at its sole discretion, amend the list of eligible collateral. CDCC may additionally,~~ on an exceptional and temporary basis ~~and~~ at its sole discretion, exclude certain forms of eligible collateral or accept other forms of collateral.

~~CASH~~ CASH

Cash amounts are accepted only in Canadian dollars.

~~DEBT SECURITIES~~

2.2 DEBT SECURITIES

2.2.1 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 on a regular basis and publishes the list of eligible Debt Securities on its ~~web site~~⁹website.

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 ~~Members~~Member itself or its ~~affiliates~~Affiliates.

2.2.2 Types of Debt Securities

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

The coupon ~~must be one~~rate of the ~~following: a zero coupon or a fixed rate~~debt instrument must be fixed. Zero coupon bonds are eligible.

Furthermore, real return bonds ~~and floating rate notes~~ can be eligible for a specific issuer as determined by CDCC on ~~its~~the list of eligible Debt Securities published on its ~~web site~~¹⁰website.

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

⁹ ~~This list is published and updated regularly on the CDCC's website at www.cdcc.ca/ecFiles_en.~~

¹⁰ ~~This list is published and updated regularly on the CDCC's website at www.cdcc.ca/ecFiles_en.~~

2.2.3 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.

2.2.4 Eligible Debt Securities by Issuer

2.2.4.1 Debt Securities issued by the Government of Canada:

- Treasury bills, bullet bonds, ~~floating rate notes~~ and real return bonds.
- This excludes stripped coupons and ~~residuals~~residual securities.
- Canada Savings Bonds are also excluded.

2.2.4.2 Debt Securities guaranteed by the Government of Canada:

- Treasury bills, bullet bonds and ~~floating rate notes~~Debt Securities issued by Canada Housing Trust.
- This excludes stripped coupons and ~~residuals~~residual securities.

2.2.4.3 Debt Securities issued by a provincial government:

- Treasury bills and bullet bonds issued by the governments of Alberta, British Columbia, Manitoba, Ontario and Quebec.
- This excludes floating rate notes, stripped coupons and ~~residuals~~residual securities.

2.2.4.4 Debt Securities guaranteed by a provincial government:

- Bullet bonds issued by Financement Quebec, Hydro-Quebec and Ontario Electricity Financial Corporation.
- This excludes floating rate notes, stripped coupons and ~~residuals~~residual securities.

2.2.5 Settlement Procedures

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

2.2.6 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.

~~VALUED SECURITIES~~ VALUED SECURITIES

2.2.1 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~~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 ~~Members~~Member itself or its Affiliates.

~~A~~No value will be recognized for ~~Valued Securities if there was no trading in such~~a Valued Security ~~on such Business Day~~whose closing price is below \$10 per share.

2.2.2 Settlement Procedures

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

2.2.3 Currency of Denomination

Valued Securities must be denominated in Canadian dollars.

~~RISK CONTROL MEASURES~~

2.3 RISK CONTROL MEASURES

2.3.1 General Considerations

The CDCC collateral management framework takes a conservative approach to manage the forms of eligible collateral accepted. The framework includes risk limits and calculation of ~~haircuts~~Haircuts that apply to the different forms of eligible collateral.

2.3.2 Risk Limits

2.3.2.1 Limits at the Clearing Member Level

- ~~For~~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.

2.3.2.2 Limit on the Clearing Fund Account

For each Clearing Member, for all of its accounts combined, 100% of the Clearing Fund ~~requirements~~Requirements must be covered by Cash, acceptable Treasury bills issued by the Government of Canada or any combination thereof after the application of ~~haircuts~~Haircuts.

2.3.2.3 Limit on the Margin Fund Requirements¹¹

For each Clearing Member, for all of its accounts combined, at least 25% of the Margin ~~Fund requirements~~Requirements must be covered by Cash,

¹¹ ~~Within the risk limits framework, the Margin Fund includes the Difference Fund~~ This excludes the Net Variation Margin Requirement.

acceptable Treasury bills and bonds issued or guaranteed by the Government of Canada or any combination thereof valued after the application of ~~haircuts~~[Haircuts](#).

For each Clearing Member, for all of its accounts combined, no more than 40% of the Margin ~~Fund requirements~~[Requirements](#) may be covered by Debt Securities issued by the United States of America Federal Government after the application of ~~haircuts~~[Haircuts](#).

For each Clearing Member, for all of its accounts combined, no more than ~~40~~50% of the Margin ~~Fund requirements~~[Requirements](#) may be covered by provincial issued or guaranteed Debt Securities after the application of ~~haircuts~~[Haircuts](#).

For each Clearing Member, for all of its accounts combined, no more than 20% of the Margin ~~Fund requirements~~[Requirements](#) may be covered by Debt Securities issued or guaranteed by ~~any one~~[the](#) province of Alberta after the application of ~~haircuts~~[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 ~~Fund requirements~~Requirements may be covered by Valued Securities after the application of ~~haircuts~~Haircuts.

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

2.3.2.4 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 cash or other securities as collateral to cover the Net Variation Margin Requirement.

Limits at CDCC Level

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

~~HAIRCUTS~~ HAIRCUTS

2.3.1 Haircuts for Government Securities

The Corporation calculates the Haircuts ~~are calculated~~ based on any of the following ~~methodology and assumptions:~~ criteria:

- Valuation of the market, credit, liquidity and foreign exchange risks based on historical daily returns;
- The volatility estimator uses the EWMA approach as defined in ~~the Margin Interval (MI) Calculation section,~~Section 6.1.1, 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—~~see the Margin Interval (MI) Calculation section~~). In addition, a minimal floor for the EWMA volatility estimator is calculated as the 25th 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); ~~and~~
- 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.

2.3.2 The Haircuts for Valued Securities

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

2.3.3 Haircuts Policy

The Corporation reviews the Haircuts ~~are reviewed~~ at least semi-annually and ~~may be reviewed~~ on an ad hoc basis if any market event occurs. The Clearing Members are informed of these reviews by written notice and the Haircuts related to ~~Government~~Government Securities are also published on CDCC’s website with their effective dates.

Section 3: Monitoring Program

~~The Corporation conducts daily backtesting and stress testing.~~

~~BACKTESTING~~

3.1 BACKTESTING

Backtesting is performed on a daily basis. ~~Backtesting helps by~~ the Corporation to assess the robustness of the existing models and ~~measures~~measure the actual credit exposures. In order to have an efficient coverage, even at the introduction of new products, the Corporation performs a complete theoretical backtesting to calibrate the liquidation period and the volatility assumption. The results of the backtesting are communicated to the Risk Management and Advisory Committee (RMAC) on a regular basis.

The Corporation has put in place appropriate internal procedures if the backtesting results are not sufficient to ~~cover~~reach the minimum coverage at the product level and at the portfolio level. ~~If the results of the backtesting fail to reach the desired minimum coverage, the situation is investigated. If necessary, the results are escalated to upper management. At this level, a decision is made to adjust the current risk parameters and/or ultimately to change the risk methodology.~~ As set out in Section A-702 of the Rules, the Corporation has the discretion to adjust the ~~Initial Margin. This can be done at the product level by increasing the Margin Interval, or by asking a Clearing Member for additional Initial Margin~~Margin that may be required from Clearing Members.

~~The results are communicated to the Risk Management and Advisory Committee (RMAC) on a regular basis.~~

~~STRESS TESTING~~

3.2 STRESS TESTING

The stress testing is also conducted on a daily basis. The Corporation uses different historical and theoretical stress scenarios, each of them designed to test different ~~keys~~key parameters. The results of the stress tests help the Corporation to size the

Clearing Fund. The Clearing Fund measures the capacity of the Corporation to address extreme, but plausible market conditions. ~~Another goal of the stress test is to better understand the different relationships among the different positions of the Clearing Members. The various results may contribute to enhance the risk methodology of the Corporation. If it is concluded that these changes in the market are permanent, the Corporation may integrate the new dynamics in the Initial Margin.~~

~~The scenarios are historical and theoretical. The historical stress scenarios aim to simulate the biggest historical events that would affect Clearing Members. The historical stress scenarios are used to determine the size of the Clearing Fund. Moreover, in the case of the stress testing monitoring program, the stress scenarios help the Corporation to have a complete view of the risk profile of the current positions undertaken by each Clearing Member, and by all of them simultaneously (the portfolio-level coverage assessment).~~

~~In addition, the Corporation performs theoretical stress testing. For example, the Corporation simulates the impact of a parallel and twist shifts in the interest rate curve; large moves (up or down) in specific contracts and/or Underlying Interests; and the impact of multiple Clearing Members defaults.~~

~~Also the results of the scenarios are designed to ensure that the Corporation captures any corporate relationships between different affiliated Clearing Members.~~

The results are communicated to the Risk Management and Advisory Committee (RMAC) on a regular basis.

3.3 CLEARING MEMBERS CREDIT RISK MONITORING

The Corporation performs a qualitative analysis of the financial statements of each Clearing Member. The Corporation has defined specific thresholds to analyze the profitability, the Margin required, 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 judge if it is necessary to take any additional actions and will report the situation to the Risk Management and Advisory Committee (RMAC).

Section 4: Contract Adjustment

➤ Section A-902 of the Rules prescribes the cases in which ~~an~~ 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 Clearing Members of~~ the Adjustments Committee as soon as possible. The Adjustments Committee acts in accordance with the provisions of Rule A-9.

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

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 quarterly 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 quarterly 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.

CDCC reviews and publishes quarterly on its website a list of Acceptable Underlying Interests for clearing OTCI Securities Options.

Between two quarterly 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, real return or zero (Treasury Bills are eligible);
- The net amount outstanding¹²² must be greater than or equal to \$250 million;
- The bonds' prices must be issued by a source that is acceptable to the Corporation.

¹²² The net amount outstanding is defined as the outstanding amount issued on the market minus the stripped coupon bonds and issuer repurchases.

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.

Section 6: Appendix

6.1 BASE INITIAL MARGIN CALCULATION

To calculate the Base Initial Margin, the Risk Engine uses the Price Scan Range (PSR) which is converted to the Scanning Risk parameter. The Scanning Risk parameter represents the difference between the current market value of a Derivative Instrument (for Exchange Transactions) or of an Acceptable Security (for Fixed Income Transactions) and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions. The Scanning Risk is always calculated at the Combined Commodity level.

For contracts belonging to the same Combined Commodity, the Risk Engine adds up the Risk Arrays results of all contracts under the same risk scenario. It should be noted that in the situation where the Risk Engine does not consider other variables, the Scanning Risk is the Base Initial Margin for the Combined Commodity.

However, in some cases other variables can increase or decrease the Scanning Risk. For example, variables such as the Intra-Commodity (Inter-Month) Spread Charge which tends to increase the Base Initial Margin and the Inter-Commodity Spread Charge which tends to decrease the Scanning Risk to take advantage of the correlations between the different constituents of the Combined Commodity. Another example is the specific case of short deeply out-of-the-money options wherein the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) which otherwise attracts little or no Base Initial Margin. Finally, in the case of OTCI with physical settlement/delivery, the Corporation calculates an additional Liquidity Interval and adds it to the Margin Interval.

It should also be noted that, as described in the following sections, the determination of the Base Initial Margin is slightly different for Options contracts, Futures contracts, Share Futures and Fixed Income Transactions. The following table summarizes the list of variables used to calculate the Base Initial Margin by cleared product category:

<u>Input variables to calculate the Base Initial Margin</u>	<u>Options contracts (including</u>	<u>Futures contracts and Share</u>	<u>Fixed Income Transactions</u>

	<u>OTCI Options)</u>	<u>Futures</u>	
<u>Scanning Risk</u>	<u>•</u>	<u>•</u>	<u>•</u>
<u>Intra-Commodity (Inter-Month) Spread Charge</u>		<u>•</u>	<u>•</u>
<u>Inter-Commodity Spread Charge¹³</u>		<u>•</u>	<u>•</u>
<u>Short Option Minimum (SOM) amount</u>	<u>•</u>		
<u>Liquidity Interval¹⁴</u>	<u>•</u>		

As fundamental inputs to calculate the Base Initial Margin, the Corporation uses the following parameters: 1) confidence level (to reflect normal market conditions), 2) assumed liquidation period and 3) historical volatility over a specific period. The historical volatility, combined with the liquidation period and the confidence level gives the Margin Interval (MI) as described below.

6.1.1 Margin Interval (MI) Calculation

The Margin Interval calculations are re-evaluated on a regular basis. However, the Corporation may use its discretion and update the Margin Intervals more frequently if necessary. The Margin Intervals are used to calculate the Base Initial Margin for each Derivative Instrument.

The Margin Interval (MI) is calculated using the following formula:

$$MI = \alpha \times \sqrt{n} \times \sigma$$

Where ‘n’ is the number of liquidation days (see the next section for more details). ‘ α ’ is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student’s t-distribution with 4 degrees of freedom (applicable to the BAX Futures products). ‘ σ ’ is the volatility estimator of the

¹³ Not applicable for Share Futures contracts

¹⁴ Applicable for OTCI Options with physical settlement/delivery only.

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:

$$\sigma_t = \sqrt{(1 - \lambda) \sum_{i=1}^{260} \lambda^{i-1} (R_{t-i} - \bar{R})^2 / (1 - \lambda^{260})}$$

Where R is the daily price returns of the Underlying Interests for Options contracts and Share Futures, the daily price returns of the Futures prices for Futures contracts (excluding Share Futures) and the yield-to-maturity (YTM) daily variation of the on-the-run security for Fixed Income Transactions, \bar{R} is the mean return over the specified period and λ is the decay factor. CDCC uses $\lambda = 0.99$.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI cannot be lower than the calculated floor.

6.1.2 Liquidation Period

The Corporation applies a different number of liquidation days “n” depending on the type of product. The Corporation uses quantitative and qualitative analysis, established according to the degree of liquidity of the product/Underlying Interest which is derived from parameters such as, but not limited to, traded volume, Government of Canada/provincial yield spreads and international guidelines. For all products, “n” is determined at least once a year and communicated to Clearing Members by a written notice.

Furthermore, in anticipation of Remembrance Day (the “Banking Holiday”), the Corporation will add one (1) more Business Day to the number of liquidation days “n” for Equity and Index products.

6.1.3 Price Scan Range (PSR) Calculation

In order to calculate the most unfavourable projected liquidation value, the Risk Engine uses the MI of the above formula to calculate the Price Scan Range (PSR)

and to run several scenarios through its Risk Array calculation (for a detailed description refer to [Section 6.1.4.1 on Risk Arrays below](#)).

A Risk Array is a set of 16 scenarios defined for a particular contract specifying how a hypothetical single position will lose or gain value if the corresponding risk scenario occurs from the current situation to the near future (usually next day).

PSR is the maximum price movement reasonably likely to occur, for each Derivative Instrument or, for Options contracts, their Underlying Interest. The term PSR is used by the Risk Engine to represent the potential variation of the product value and it is calculated through the following formula:

$$\text{PSR} = \text{Price} \times \text{MI} \times \text{Contract Size.}$$

[6.1.4 Base Initial Margin for Options Contracts](#)

This section describes how the Base Initial Margin is calculated for the Options contracts, which include the equity options, index options, currency options, exchange-traded-fund options and options on futures.

The Risk Arrays are obtained by varying the Underlying Interest (eight scenarios) and the option's implied volatility (eight scenarios). The term PSR for Options contracts is calculated through the following formula:

$$\text{PSR} = \text{Underlying Interest Price} \times \text{MI} \times \text{Contract Size}$$

For equity options contracts, the contract size is usually equal to 100.

[6.1.4.1 Risk Arrays](#)

Each Risk Array scenario represents losses or gains due to hypothetical market conditions:

- The (underlying) price movement: upward (+) and downward (-) with corresponding scan range fraction (0, 1/3, 2/3, 3/3 or 2).
- The (underlying) volatility movement: upward (+) and downward (-) with corresponding scan range fraction (0 or 1).

Since some scenarios consider large movements on the Underlying Interest price, the whole difference (gain and loss) between the new (simulated) theoretical option price and the actual option price will not

be considered. For scenarios 15 and 16, since their probability of occurrence is low, only a fraction of 35% of the difference is considered. The purpose of these two additional extreme scenarios is to reduce the problem of short option positions that are highly out of the money near expiration. If the Underlying Interest price varies sharply, these positions could then be in the money.

A scan range is a fluctuation range of the Underlying Interest price and volatility defined for each Combined Commodity.

The Risk Engine calculates 16 Risk Array scenarios as follows:

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

* Expressed in scan range

Each Risk Array value is calculated as the current contract price less the theoretical (simulated) contract price obtained for the corresponding scenario by using the valuation model. (The Risk Engine uses different valuation models including Black 76, Black-Scholes, Generic Merton, Barone-Adesi-Whaley (BAW) and others).

However, it should be noted that for all the intra-day Margin processes, CDCC relies on the previous Business Day's closing prices for those Option contracts for which it has an open interest.

However, since the Base Initial Margin driven by Option contracts is relatively small with respect to the total Base Initial Margin that

includes all cleared products, the Corporation does not consider the Volatility Scan Range (VSR) in its risk model. This means that the Corporation does not vary the option implied volatility up and down (+1 and -1) eight times, but varies only the Underlying Interest price in order to simulate the potential losses for each position. Therefore, the Risk Engine produces eight different scenarios as shown in the table below.

<u>Risk Scenarios</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
<u>Underlying Price Variation*</u>	<u>1/3</u>	<u>-1/3</u>	<u>2/3</u>	<u>-2/3</u>	<u>1</u>	<u>-1</u>	<u>2</u>	<u>-2</u>
<u>Weight Fraction Considered</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>35%</u>	<u>35%</u>

* Expressed in scan range

For Options contracts belonging to the same Combined Commodity, the Risk Engine first calculates the Risk Arrays for each Option contract and for each one of the eight risk scenarios. The Risk Engine then adds up the Risk Arrays results of all Options contracts under the same risk scenario. For example, for two Options contracts O1 and O2 on the Underlying Interest XX, the same scenarios are performed for each Option contract, and then, they are added up. Therefore, the Risk Array value for O1 under the risk scenario 1 is added up to the Risk Array value for O2 under the risk scenario 1, likewise the Risk Array value for O1 under the risk scenario 2 is added up to the Risk Array value for O2 under the risk scenario 2, and so on. The largest total Risk Array value amongst the eight values is the Scanning Risk of this Combined Commodity.

For a better explanation of the Risk Engine methodology used by the Corporation, here are the steps to calculate the Base Initial Margin for an Option contract using the Risk Array:

Example 1:

Let's assume that the price of an Option contract is X0, its Underlying Interest price is P0 and its Margin Interval is MI. Using the formula described above, we can calculate the Price Scan Range (PSR) of the

option which represents the fluctuation range of the Underlying Interest as follows:

$$\text{PSR} = \text{MI} \times \text{P0} \times \text{Contract Size.}$$

Since the contract size of an Option contract is generally 100, the formula becomes:

$$\text{PSR} = \text{MI} \times \text{P0} \times 100$$

For the clarity of the table below, please note that the PSR used in the following steps does not include the contract size, i.e. $\text{PSR} = \text{MI} \times \text{P0}$.

Step 1: calculate the Underlying Interest price variation. To accomplish this, the Risk Engine varies the Underlying Interest price by 33% (or 1/3) to the upper range of its MI. If for example the MI is 30%, the Underlying Interest price moves to the upper range by 33% of the 30% which leads to a 10% increase. Therefore, the Underlying Interest price variation is +33% of the PSR.

Step 2: calculate the new (simulated) Underlying Interest price by adding the Underlying Interest price variation calculated in the last step to the original Underlying Interest price.

Step 3: calculate the new (simulated) theoretical option price with the selected model using the new (simulated) Underlying Interest price.

Step 4: calculate the option's gain or loss by subtracting the new (simulated) theoretical option price from the original option price.

Step 5: multiply the gain or loss by the considered weight fraction (the last row of the above table) to get the Risk Array amount associated to the scenario 1.

After repeating the above steps for the remaining seven scenarios, the Risk Engine chooses the largest amount of (the weighted) gain or loss as the most unfavourable projected liquidation value (worst case) of the option. This amount is called the Scanning Risk.

Here is the same table as before but with the formulas of each step:

<u>Risk</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
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Scenarios								
<u>Underlying Price Variation</u>	$1/3 * PSR$	$-1/3 * PSR$	$2/3 * PSR$	$-2/3 * PSR$	PSR	$-1 * PSR$	$2 * PSR$	$-2 * PSR$
<u>New Underlying Price</u>	$\frac{P_1 = P_0 + 1/3 * PSR}{PSR}$	$\frac{P_2 = P_0 - 1/3 * PSR}{PSR}$	$\frac{P_3 = P_0 + 2/3 * PSR}{PSR}$	$\frac{P_4 = P_0 - 2/3 * PSR}{PSR}$	$\frac{P_5 = P_0 + PSR}{PSR}$	$\frac{P_6 = P_0 - PSR}{PSR}$	$\frac{P_7 = P_0 + 2 * PSR}{PSR}$	$\frac{P_8 = P_0 - 2 * PSR}{PSR}$
<u>New Option Price</u>	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
<u>Gain / Loss</u>	$P\&L_1 = X_0 - X_1$	$P\&L_2 = X_0 - X_2$	$P\&L_3 = X_0 - X_3$	$P\&L_4 = X_0 - X_4$	$P\&L_5 = X_0 - X_5$	$P\&L_6 = X_0 - X_6$	$P\&L_7 = X_0 - X_7$	$P\&L_8 = X_0 - X_8$
<u>Weight Fraction Considered</u>	100%	100%	100%	100%	100%	100%	35%	35%
<u>Risk Arrays Results</u>	$RA_1 = 100% * P\&L_1$	$RA_2 = 100% * P\&L_2$	$RA_3 = 100% * P\&L_3$	$RA_4 = 100% * P\&L_4$	$RA_5 = 100% * P\&L_5$	$RA_6 = \frac{100% * P\&L_6}{6}$	$RA_7 = 35% * P\&L_7$	$RA_8 = 35% * P\&L_8$

The table above shows all details about the Risk Engine method used by the Corporation to calculate the worst potential loss of an Option contract. The last row has the eight Risk Arrays outcomes. The largest amount (positive amount) amongst the eight amounts is the Scanning Risk which will be, in most cases, the Base Initial Margin of this position.

It is important to note that the above calculations are performed at the Combined Commodity level, implying that when there is more than a single contract with the same Underlying Interest, the Risk Engine method calculates the Risk Arrays for all contracts belonging to the same Combined Commodity and then sums up the Risk Arrays results thus calculated for all contracts for the same scenario. In other words, the RA_1 of the first contract is added up to the RA_1 of the second contract and to the RA_1 of the n^{th} contract that belong to the same Combined Commodity in order to get the Total RA_1 for the same Combined Commodity. Then, the RA_2 of the first contract is added up to the RA_2 of the second contract and to the RA_2 of the n^{th} contract that belong to the same Combined Commodity in order to get the total RA_2 for the Combined Commodity. Likewise we obtain the total RA_3 , RA_4 ,

RA₅, RA₆, RA₇ and RA₈. Finally, the Risk Engine considers the largest amount of the eight total Risk Arrays as the Scanning Risk.

Example 2:

Let's assume a portfolio with three different positions: a short position in ten (10) Futures contracts on the S&P/TSX 60 Index, a long position in six (6) call Options contracts on the same index and a short position in three (3) put Options contracts on the same Underlying Interest (the expiry date for these three Options contracts might be the same or different).

In addition, the contract size and the price of the Futures contract are respectively 200 and F_0 and its Margin Interval is MI_F . The price of the call option is X_0 , the price of the put option is Y_0 and the contract size of these two Option contracts is 100, whereas the price of the Underlying Interest S&P/TSX 60 Index is P_0 and its Margin Interval is MI_I . The MI_F and the MI_I values are almost the same but not exactly equal since the first is calculated using the historical volatility of the Future's returns, whereas the second is calculated using the historical volatility of the index's returns. However, since the index and the Futures contracts are strongly correlated, both Margin Interval values must be almost similar. Using the calculated Margin Intervals, we can calculate the Price Scan Range (PSR_F) of the Futures contract, which represents the fluctuation range of the Futures contract and the index Price Scan Range (PSR_I) which represents the fluctuation range of the underlying index as follows:

$$PSR_F = MI_F \times F_0 \times Contract\ Size$$

and,

$$PSR_I = MI_I \times P_0 \times Contract\ Size$$

Thus, since this Futures contract size is 200 and the contract size of the index option is 100, the previous formulas become:

$$PSR_F = MI_F \times F_0 \times 200$$

and,

$$PSR_I = MI_I \times P_0 \times 100$$

For the clarity of the table below, please note that the PSR_F and the PSR_I do not include the contract size, i.e. $PSR_F = MI_F \times F_0$ and $PSR_I = MI_I \times P_0$.

This is the Risk Arrays table of this example:

Risk Scenario	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
<u>10 Index Futures contracts</u>								
<u>Futures Price Variation</u>	$10 \times 200 \times$ $1/3 \times PSR_F$	$-10 \times 200 \times$ $1/3 \times PSR_F$	$10 \times 200 \times$ $2/3 \times PSR_F$	$-10 \times 200 \times$ $2/3 \times PSR_F$	$10 \times 200 \times$ PSR_F	$-10 \times 200 \times$ PSR_F	$10 \times 200 \times$ $2 \times PSR_F$	$-10 \times 200 \times$ $2 \times PSR_F$
<u>Weight Fraction Considered</u>	100%	100%	100%	100%	100%	100%	35%	35%
<u>Total Weighted Profit and Loss</u>	$\frac{P\&L_{F1} =}{2000 / 3 \times}$ PSR_F	$\frac{P\&L_{F2} =}{-2000 / 3 \times}$ PSR_F	$\frac{P\&L_{F3} =}{4000 / 3 \times}$ PSR_F	$\frac{P\&L_{F4} =}{-4000 / 3 \times}$ PSR_F	$\frac{P\&L_{F5} =}{2000 \times}$ PSR_F	$\frac{P\&L_{F6} =}{-2000 \times}$ PSR_F	$\frac{P\&L_{F7} =}{1400 \times}$ PSR_F	$\frac{P\&L_{F8} =}{-1400 \times}$ PSR_F
<u>6 Index Call Option Contracts</u>								
<u>Index Price Variation</u>	$1/3 \times PSR_I$	$-1/3 \times PSR_I$	$2/3 \times PSR_I$	$-2/3 \times PSR_I$	PSR_I	$-PSR_I$	$2 \times PSR_I$	$-2 \times PSR_I$
<u>New Index Price</u>	$\frac{P_1 =}{P_0 + 1/3 * PSR_I}$	$\frac{P_2 =}{P_0 - 1/3 * PSR_I}$	$\frac{P_3 =}{P_0 + 2/3 * PSR_I}$	$\frac{P_4 =}{P_0 - 2/3 * PSR_I}$	$\frac{P_5 =}{P_0 + PSR_I}$	$\frac{P_6 =}{P_0 - PSR_I}$	$\frac{P_7 =}{P_0 + 2 * PSR_I}$	$\frac{P_8 =}{P_0 - 2 * PSR_I}$
<u>New Call Option Price</u>	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
<u>Weight Fraction Considered</u>	100%	100%	100%	100%	100%	100%	35%	35%
<u>Total (6 x 100) Weighted Profit and Loss</u>	$\frac{P\&L_{X1} =}{600 \times (X_0 - X_1)}$	$\frac{P\&L_{X2} =}{600 \times (X_0 - X_2)}$	$\frac{P\&L_{X3} =}{600 \times (X_0 - X_3)}$	$\frac{P\&L_{X4} =}{600 \times (X_0 - X_4)}$	$\frac{P\&L_{X5} =}{600 \times (X_0 - X_5)}$	$\frac{P\&L_{X6} =}{600 \times (X_0 - X_6)}$	$\frac{P\&L_{X7} =}{210 \times (X_0 - X_7)}$	$\frac{P\&L_{X8} =}{210 \times (X_0 - X_8)}$
<u>3 Index Put</u>								

<u>Option Contracts</u>								
<u>New put Option Price</u>	<u>Y₁</u>	<u>Y₂</u>	<u>Y₃</u>	<u>Y₄</u>	<u>Y₅</u>	<u>Y₆</u>	<u>Y₇</u>	<u>Y₈</u>
<u>Weight Fraction Considered</u>	100%	100%	100%	100%	100%	100%	35%	35%
<u>Total (-3 x 100) Weighted Profit and Loss</u>	$\frac{P\&L_{Y1} = -300 \times (Y_0 - Y_1)}{-300 \times (Y_0 - Y_1)}$	$\frac{P\&L_{Y2} = -300 \times (Y_0 - Y_2)}{-300 \times (Y_0 - Y_2)}$	$\frac{P\&L_{Y3} = -300 \times (Y_0 - Y_3)}{-300 \times (Y_0 - Y_3)}$	$\frac{P\&L_{Y4} = -300 \times (Y_0 - Y_4)}{-300 \times (Y_0 - Y_4)}$	$\frac{P\&L_{Y5} = -300 \times (Y_0 - Y_5)}{Y_5}$	$\frac{P\&L_{Y6} = -300 \times (Y_0 - Y_6)}{Y_6}$	$\frac{P\&L_{Y7} = -105 \times (Y_0 - Y_7)}{Y_7}$	$\frac{P\&L_{Y8} = -105 \times (Y_0 - Y_8)}{Y_8}$
<u>Combined Commodity Risk Arrays Results</u>	$\frac{RA_1 = P\&L_{F1} + P\&L_{X1} + P\&L_{Y1}}{P\&L_{Y1}}$	$\frac{RA_2 = P\&L_{F2} + P\&L_{X2} + P\&L_{Y2}}{P\&L_{Y2}}$	$\frac{RA_3 = P\&L_{F3} + P\&L_{X3} + P\&L_{Y3}}{P\&L_{Y3}}$	$\frac{RA_4 = P\&L_{F4} + P\&L_{X4} + P\&L_{Y4}}{P\&L_{Y4}}$	$\frac{RA_5 = P\&L_{F5} + P\&L_{X5} + P\&L_{Y5}}{P\&L_{Y5}}$	$\frac{RA_6 = P\&L_{F6} + P\&L_{X6} + P\&L_{Y6}}{P\&L_{Y6}}$	$\frac{RA_7 = P\&L_{F7} + P\&L_{X7} + P\&L_{Y7}}{P\&L_{Y7}}$	$\frac{RA_8 = P\&L_{F8} + P\&L_{X8} + P\&L_{Y8}}{P\&L_{Y8}}$

The largest amount (positive number) of the eight Risk Arrays results is the Scanning Risk which will be the Base Initial Margin of a portfolio with these three positions.

By convention, Risk Array values are given for a single long position. For a short position, the calculated profit and loss is multiplied by the negative sign (-1). Losses for long positions are expressed as positive numbers and gains as negative numbers.

In the case of all the eight Risk Arrays values being negative (i.e. all corresponding to a gain) or zero (no risk), the Scanning Risk amount is set to zero.

The number of the Risk Arrays scenario that gives the largest amount (worst case scenario) for the option is called the Active Scenario. If two scenarios have the same figure, the one with the lowest scenario number is the Active Scenario. For example, if scenarios 5 and 7 give the largest and similar results, scenario 5 will be defined as the Active Scenario.

The Risk Engine calculates the Base Initial Margin for each Combined Commodity, for each member's account and sub-account. Thus, the Base Initial Margins calculated for each Combined Commodity account and sub-account are then sent to CDCS in order to be aggregated at the Clearing Member level.

Risk Arrays values are denominated in the same currency as the specific contract.

The Corporation's Risk Arrays file is published every Business Day on CDCC's website.

6.1.4.2 Short Option Minimum

In the event of a significant variation of the Underlying Interest price, short option positions can lead to significant losses. Therefore, the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) for short positions in each Combined Commodity. This amount will be called if it is higher than the result of the Risk Arrays.

In order to determine the appropriate SOM for every group of products, CDCC considers Out of The Money (OTM) call and put Options for every Underlying Interest.

After shocking the Underlying Interest price by its appropriate stress scenario, as set forth in the relevant notice to members, CDCC re-calculates the price of all OTM call and put Options using the new Underlying Interest price and the same other parameters of the Options. The difference between the actual Option price and the new Option price represents the potential loss of the Option. Then, the average of all Options' losses is calculated to determine the potential loss for every Underlying Interest. Finally, the average of the potential losses for all Underlying Interests of the same group of products is calculated to determine the potential loss of the Combined Commodity, which represents its SOM. The latter is then translated in a percentage of the Price Scan Range (PSR).

This SOM calculation is reviewed on a regular basis, at least annually, and communicated to Clearing Members by written notice.

6.1.4.3 OTCI Options

The Base Initial Margin calculation process for OTCI Options 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

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 on 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.

Then, the 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 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 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 Options, 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.

6.1.5 Base Initial Margin for Futures Contracts

This section describes how the Base Initial Margin is calculated for Futures contracts, which includes Index Futures, Interest Rate Futures, Government of Canada Bonds Futures and Share Futures.

The first part of example # 2 in Section 6.1.4.1 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 Base 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 Base Initial Margin for a Futures contract is always equal to its Price Scan Range (PSR).

With respect to the Three-Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC combines the contracts in different groups and applies the same charge to the contracts of a same group.

6.1.5.1 Intra-Commodity (Inter-Month) Spread Charge

The different Futures contracts belonging to the same Combined Commodity have in general positive correlated returns. For example, a portfolio composed of a long position and a short position of two Futures contracts that have the same Underlying Interest but different expiry dates, will be less risky than the sum of the two positions taken individually. Margins on correlated positions address this fact.

The Risk Engine automatically matches the long positions on Futures maturing in one month with the short positions on Futures maturing in another month. The resulting Margin Requirement on these two Futures contracts belonging to the same Combined Commodity, could be lower than the real risk associated with the combination of the two contracts. To address this issue, the Risk Engine allows the user to calculate and

apply an additional charge relative to the inter-month spread risk, in order to cover the risk associated with these two positions. This Margin is called Inter-Month Spread Charge or Intra-Commodity (Inter-Month) Spread Charge (because it is calculated within the same Combined Commodity).

Intra-Commodity (Inter-Month) Spread Charge on correlated Futures positions is calculated by the Corporation's risk department and updated on a regular basis.

For the Futures contracts, the Intra-Commodity (Inter-Month) Spread Charge (ICSC) which is an additional dollar amount charge applied to each combination of two different Futures contracts, is determined as follows:

$$ICSC = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student's t-distribution with 4 degrees of freedom (applicable to the BAX Futures products). 'σ' is the volatility estimator of the Futures combination's daily profit and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC cannot be lower than the calculated floor.

With respect to the Three-Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC calculates the Intra-Commodity (Inter-Month) Spread Charge for all combinations of spreads and butterfly-strategies and applies a same charge for a same group of combinations with close maturities.

For all Futures contracts, in order to consider the highest economical correlation between the different Futures contracts and to offer the highest benefit to the Clearing Members, CDCC applies the different Intra-Commodity (Inter-Month) Spread Charges by considering the combinations with the lowest charges first and the ones with the highest charges will be considered at the end. If two different combinations or group of combinations will have the same charge, the one with the lowest maturity will be considered first. This is the same spread priority concept that is applied for Fixed- Income Transactions.

The Intra-Commodity (Inter-Month) Spread Charges and the spread priorities are updated and published on the CDCC website on a regular basis.

6.1.5.2 Inter-Commodity Spread Charge

Similarly, the Corporation considers the correlation that exists between different classes of Futures contracts when calculating the Base Initial Margin. For example, different interest rate Futures contracts are likely to react to the same market indicators, but at different degrees. For instance, a portfolio composed of a long position and a short position on two different interest rate Futures contracts will be likely less risky than the sum of the two positions taken individually. The Corporation will grant a Margin relief according to the historical correlation of the returns of the two Futures contracts.

When calculating the Base Initial Margin on a portfolio with several long and short Futures positions, the Corporation matches the positions in accordance with predefined steps. For example, if the first matching step consists of matching long or short positions on the front month Futures contracts with long or short positions on the second front month Futures contract, the positions of both Futures contracts might not be equal. In this case, the Corporation determines, using the hedge ratio concept the exact position (number of contracts) of a Futures contract that can be offset by a position on the other Futures contract. Any position that has not been matched will be available for the second matching step. This is the same spread priority process also defined for Cash Buy or Sell Trades and Repurchase Transactions.

The Corporation regularly performs an analysis to determine the Margin reductions that are applied for all Futures contracts combinations.

The Corporation may also consider the positive (negative) correlation that exists between the different interest rate Futures contracts and the Fixed Income Transactions, and provides a Margin benefit for a combination of any Futures contracts with the opposite (same) Fixed Income Transactions.

6.1.5.3 Spread Priority

To determine the appropriate Margin reduction for each combination of two Futures contracts, the Corporation performs the following steps:

Use the yearly historical data of the different Futures contracts and calculate the correlation matrix.

For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represent the Futures contracts correlations with themselves). This closest diagonal usually contains the highest correlations because of the proximity of the maturities. Then, consider the second closest diagonal, then the third and so on until the last diagonal that has one correlation number.

Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the Margin reduction applied to the Clearing Members. Discounts are applied to all the matrix correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.

If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.

Different Futures contracts that do not have the same contract size nor the same volatility yield would not have a Margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used

to determine how much position of one contract in any combination can be matched with the other Futures contract of the same combination. The remaining position (or quantity of Futures contracts) of any contract of this first combination will be matched with another position to form another combination according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.

The Corporation allows a Margin reduction for two positively correlated Futures contracts with different directions and for two negatively correlated Futures contracts with same directions.

When the spread priority process is performed, the Corporation considers the combinations between interest rate Futures contracts first (Intra-Commodity (Inter-Month) Spread Charge). Any remaining (outright) positions in these Futures contracts positions will be considered for Inter-Commodity Spread Charge with Fixed Income Transactions.

6.1.6 Base Initial Margin for Fixed Income Transactions

A Fixed Income Transaction is defined as either a Repurchase Transaction or a Cash Buy or Sell Trade. A Cash Buy or Sell Trade is the sale of a security from one party to another. Depending on its maturity, the Fixed Income Security can be delivered one, two or three Business Days after the Fixed Income Transaction is completed. Between the Fixed Income Transaction novation date and the delivery date, the Corporation has to cover the counterparty risk.

In such Repurchase Transaction, there are two sources of risk that the Corporation needs to consider and cover, namely, the security price risk described in Section 6.1.6.1 below and the interest rate risk described in Section 6.1.6.2 below. However, in a Cash Buy or Sell Trade, there is only one source of risk that the Corporation needs to consider and cover, namely, the security price risk described in Section 6.1.6.1 below.

6.1.6.1 Security Price Risk

The methodology to calculate the Base Initial Margin for Fixed Income Transactions is slightly different from the Options contracts and Futures contracts. Indeed, the different types of securities that are accepted by

the Corporation for clearing of a Fixed Income Transaction are separated in different Buckets depending on their remaining time to maturities and issuers. In addition, in its risk model, the Corporation assumes that all securities belonging to the same Bucket have the same yield volatility expressed in terms of Margin Interval (same concept of Margin Interval described before) which is calculated using the Yield-To-Maturity (YTM) of the on-the-run security of the Bucket. The Margin Interval is calculated as follows:

$$MI = \alpha \times \sqrt{n} \times \sigma$$

Where ‘n’ is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). ‘ α ’ is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution. ‘ σ ’ is the volatility estimator of the YTM’s daily variation of the on-the-run security over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI cannot be lower than the calculated floor.

It’s important to note that for some particular Buckets, there may not be any on-the-run security. In this particular situation, a linear interpolation between the MIs of the two closest Buckets is performed to determine the MI of the particular bucket.

Each Bucket is considered as a Combined Commodity.

The Base Initial Margin amount related to the security’s price of a Fixed Income Transaction on one security belonging to a Bucket is calculated as follows:

Base Initial Margin 1 = Security’s Price x MI x D x Contract Size

Where D is the duration of the security and the contract size is the transaction’s nominal value divided by 100. However, for all securities

that belong to the 3-month, 6-month and 1-year buckets, CDCC uses a fixed duration which is set at 1.

Thus, all related Fixed Income Securities belonging to the same Bucket have the same Margin Interval but each specific Repurchase Transaction related security of the same Bucket has a different Base Initial Margin driven by its own price and its own duration.

6.1.6.2 Interest Rate Risk (Repurchase Transactions)

The Floating Price Rate changes continuously during the life of a Repurchase Transaction. On one hand, if the Floating Price Rate decreases and the Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to buy the Fixed Income Security at the expiry date with the new market conditions. In this case, the Corporation has to cover the potential decrease in the Floating Price Rate (negative variation for the seller) that could arise during the next specific period. On the other hand, if the Floating Price Rate increases and the Reverse Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to sell the same Fixed Income Security at the expiry date with the new market conditions. In that case, the Corporation has to cover the potential increase in the Floating Price Rate (negative variation for the buyer) that could arise during the next specific period.

In order to properly quantify the risk related to the Floating Price Rate using the Risk Engine, it is necessary to model the Floating Price Rate into a Virtual Futures Contract (VFC) with a price equal to: $VFC's\ price = 100 - Floating\ Price\ Rate$. For an overnight Repurchase Transaction the Base Initial Margin is straightforwardly calculated by sending to the Risk Engine the determined VFC. However, in order to calculate the VFC's price for longer term Repurchase Transactions, the Corporation determines the appropriate interest rate using the overnight index swap (OIS) term structure.

The portion of the Base Initial Margin requirement that covers the Floating Price Rate related risk is then added to the portion of Base Initial Margin requirement that covers the security price related risk to

get the total Base Initial Margin requirement for a Repurchase Transaction.

It's important to note that the portion of Base Initial Margin requirement that covers the Floating Price Rate related risk is very small with respect to the portion of Base Initial Margin requirement that covers the security price related risk.

6.1.6.3 Intra-Commodity (Inter-Month) Spread Charge

For Fixed Income Transactions, a portfolio composed of a short position and a long position on two different Acceptable Securities belonging to the same Bucket, will generate a lower Margin Requirement than if they were margined independently without considering their correlation.

The Risk Engine automatically matches the Seller and the Buyer of two different securities belonging to the same Bucket. The resulted Margin Requirement on these two Repurchase Transactions assumes a perfect correlation between the two Fixed Income Securities, thus the gain of one Fixed Income Security is offset by the loss of the other Fixed Income Security. However, the Acceptable Securities' prices are not perfectly correlated. Gains on one position should not totally offset losses of the other Fixed Income Security. To address this discrepancy, the Risk Engine allows to calculate and to apply a Margin charge relative to the inter-month spread risk in order to cover the risk of these two Fixed Income Transactions. This Margin is called the Intra-Commodity (Inter-Month) Spread Charge or Intra-Commodity (Inter-Month) Spread Charge (because it is calculated within the Combined Commodity).

The Intra-Commodity (Inter-Month) Spread Charge on correlated Acceptable Securities of each Bucket is calculated by the Corporation's risk department and updated regularly.

For Fixed Income Transactions, the Intra-Commodity (Inter-Month) Spread Charge (ICSC) which is an additional dollar amount charge applied to each combination of two different transactions on two different securities that belong to a same Bucket, is determined as follows:

$$ICSC = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution. 'σ' is the volatility estimator of the Fixed Income Transaction combination's daily profit and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC cannot be lower than the calculated floor.

6.1.6.4 Inter-Commodity Spread Charge

The Fixed Income Securities belonging to two different Buckets generally have a significant correlation. Inter-Commodity spread charge is a Margin amount generated for opposite or similar Fixed Income Transactions in two different Acceptable Securities belonging to two different Buckets.

Without any Margin relief, the Base Initial Margin for opposite or similar positions on two different Acceptable Securities belonging to different Buckets would be the sum of both Base Initial Margins. However, two different Fixed Income Transactions in different Acceptable Securities belonging to two different Buckets can benefit from a reduction in their Base Initial Margin requirements because of the consideration given to their correlation. The formula to get the portfolio's Base Initial Margin is:

Total Base Initial Margin = (Base Initial Margin Position 1 x Hedge Ratio Position 1 + Base Initial Margin Position 2 x Hedge Ratio Position 2) x (1 - Margin Relief)

The Margin relief is a percentage determined using the correlation matrix between the different on-the-run Fixed Income Securities of each Bucket.

The Inter-Commodity [Margin](#) relief percentages between the different Buckets are calculated by the Corporation's risk department and updated on a regular basis.

The Corporation also considers the positive (negative) correlation that exists between the different Fixed Income Transactions and the interest rate Futures contracts. The Corporation provides a [Margin](#) reduction for a combination of any Fixed Income Transactions with opposite or similar Futures contracts positions.

6.1.6.5 Spread Priority

To determine the appropriate [Margin](#) reduction for each combination of two Fixed Income Securities, the Corporation performs the following steps:

Use the yearly historical data of the different Fixed Income Securities and calculate the correlation matrix.

For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represents the Fixed Income Securities correlations with themselves). The first diagonal usually contains the highest correlations because of the nearness of the maturities. Then, consider the second closest diagonal, then the third, and so on, until the last diagonal that has only one correlation number.

Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the [Margin](#) reduction applied to the Clearing Members. Discounts are applied to all the matrix correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.

If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.

Different Fixed Income Securities that do not have the same price nor the same duration would not have a Margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used to determine how much position of one contract in any combination can be matched with the other Fixed Income Transaction of the same combination. The remaining position (or quantity of Fixed Income Transaction) of any contract of this first combination will be matched with another position to form another combination, according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.

The Corporation allows a Margin reduction for two positively correlated Fixed Income Transactions with different directions and for two negatively correlated Fixed Income Transactions with same directions.

When the spread priority process is performed, the Corporation considers the combinations between Fixed Income Transactions first. Any remaining (outright) positions in these Fixed Income Transactions positions will be considered for Inter-Commodity spread charge with the Futures contracts.

6.1.6.6 Spread Priority Example

Here is an example of the matrix correlation demonstrating the application of the spread priority process:

<u>Correlation</u>	<u>3 months</u>	<u>6 months</u>	<u>1 year</u>	<u>2 years</u>	<u>3 years</u>	<u>5 years</u>	<u>7 years</u>	<u>10 years</u>	<u>15 years</u>	<u>20 years</u>	<u>30 years</u>
<u>3 months</u>	<u>100%</u>	<u>92%</u>	<u>88%</u>	<u>68%</u>	<u>11%</u>	<u>-1%</u>	<u>2%</u>	<u>4%</u>	<u>24%</u>	<u>24%</u>	<u>14%</u>
<u>6 months</u>		<u>100%</u>	<u>94%</u>	<u>81%</u>	<u>54%</u>	<u>42%</u>	<u>5%</u>	<u>7%</u>	<u>26%</u>	<u>26%</u>	<u>17%</u>
<u>1 year</u>			<u>100%</u>	<u>82%</u>	<u>68%</u>	<u>46%</u>	<u>20%</u>	<u>22%</u>	<u>39%</u>	<u>39%</u>	<u>29%</u>
<u>2 years</u>				<u>100%</u>	<u>76%</u>	<u>59%</u>	<u>68%</u>	<u>69%</u>	<u>78%</u>	<u>75%</u>	<u>69%</u>
<u>3 years</u>					<u>100%</u>	<u>82%</u>	<u>87%</u>	<u>86%</u>	<u>93%</u>	<u>90%</u>	<u>89%</u>
<u>5 years</u>						<u>100%</u>	<u>91%</u>	<u>55%</u>	<u>57%</u>	<u>89%</u>	<u>88%</u>
<u>7 years</u>							<u>100%</u>	<u>80%</u>	<u>91%</u>	<u>70%</u>	<u>94%</u>
<u>10 years</u>								<u>100%</u>	<u>82%</u>	<u>95%</u>	<u>43%</u>
<u>15 years</u>									<u>100%</u>	<u>69%</u>	<u>97%</u>
<u>20 years</u>										<u>100%</u>	<u>67%</u>
<u>30 years</u>											<u>100%</u>

The numbers in the first diagonal (blue) on the right of the 100% diagonal should be considered first, then the numbers in the second diagonal (green), then the numbers in the third diagonal (yellow), and so on, until the last white diagonal which contains one single number (the number of this cell is 14%).

Amongst the numbers in the first diagonal in blue, the combination with the highest number is treated first. In this case, it is a combination of 1-year Fixed Income Security with 6-month Fixed Income Security which has the highest number (94%). The combination with a 92% correlation is considered, followed by the combination with a 91% correlation, and so on.

Out of the 10 numbers of this diagonal, there are three correlations with the same percentage of 82%. By subsequent, the correlation with a 1-year Fixed Income Security and a 2-year Fixed Income Security has to be considered first, then the correlation with a 3-year Fixed Income Security and a 5-year Fixed Income Security has to be considered thereafter and finally the correlation with a 10-year Fixed Income Security and a 15-year Fixed Income Security has to be considered.

6.2 RECALIBRATION OF THE EFFECTIVE RATIO

The Base Initial Margin requirement of each LCM is affected by a multiplication factor (the “Effective Ratio”).

Objective: The Recalibration Methodology 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.

6.2.1 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:

$$\text{Lower Limit (LB)} = \min \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

$$\text{Upper Limit (UB)} = \max \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

Where :

Total CF_t: total amount of Clearing Fund Requirements on the Business Day t.

Total Base IM_t: 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 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:

$$\text{Lower Limit (LB)} = \min \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

Canadian Derivatives Clearing Corporation	Corporation canadienne de compensation de produits dérivés
The Exchange Tower	Tour de la Bourse
130 King Street West	800 Victoria Square
5th Floor	3rd Floor
Toronto, Ontario	Montréal, Québec
M5X 1J2	H4Z 1A9
Tel. : 416-367-2463	Tel. : 514-871-3545
Fax : 416-367-2473	Fax : 514-871-3530
e-mail: risk@cdcc.ca	e-mail: risk@cdcc.ca

$$\text{Upper Limit (UB)} = \max \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

Where :

Total CF_t: total amount of Clearing Fund Requirements on the Business

Day t.

Total Base IM_t : 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.

6.2.2 Recalibration Governance

- On a quarterly basis, CDCC will report to 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 LCM will be notified in writing of the new ER, where applicable.

6.2.3 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 LCM 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 LCM of the new ER, and shall remain in force until a revised ER notified to the LCM either as a result of the ER annual review or subsequent to a Risk Model Change enters into force, in accordance with this section.

6.2.4 Recalibration Additional Information

- If the Corporation notifies an LCM of the new ER applicable to it, the Corporation shall provide the LCM 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 LCM 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.
- An LCM may dispute a Recalibration Event by notifying the Corporation that it requires it to be discussed at the next following quarterly RMAC meeting.
- If an LCM 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 LCM.



RISK MANUAL

30 AUGUST 2017

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Glossary

Capitalized terms not otherwise defined in this Manual shall have the meanings given to them in the Rules.

Active Scenario: The maximum likely loss scenario in the SPAN® risk analysis.

Additional Margins: 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 Concentration 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 Variation Margin Delivery Risk, (6) Additional Capital Margin, (7) Additional Margin for Uncovered Risk of Limited Clearing Members and (8) any other additional Margins as set out in the Rules (other than Margin required pursuant to Rule D-607).

Additional Capital Margin: 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 Concentration Risk: This Margin Requirement covers the risk that arises from sizeable positions which cannot, due to their size compared to the total of open positions in a product or a group of products, be liquidated within the pre-defined Close-out Period for the product or group of products, leading to a longer Close-out Period for that Clearing Member.

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 Uncovered Risk of Limited Clearing Members: This Margin Requirement covers the risk exposure that arises if the total value of the risk represented by an LCM 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 LCM 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 Mismatched Settlement Risk: This Margin Requirement covers the risk arising from a lag between the settlement of positions which otherwise result 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 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.

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

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 is calculated by the Risk Engine and 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.

Buckets: All Acceptable Securities of Fixed Income Transactions that behave in a similar manner are grouped together into “Buckets” and each Bucket behaves as a Combined Commodity. Acceptable Securities are bucketed according to their remaining time to maturity and issuer. Due to the nature of the bucketing process, the Acceptable Securities’ assignment will be dynamic in that they will change from one Bucket to the other as the Acceptable Security nears maturity.

Clearing Engine: The Corporation uses SOLA® Clearing as its Clearing Engine.

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

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

Close-out Period or Liquidation days: The period required by the Corporation to unwind the positions in a particular contract without moving the market due to the liquidation of positions.

Combined Commodity: The Risk Engine divides the positions in each portfolio into groupings called Combined Commodities. Each Combined Commodity may represent all positions on the same ultimate Underlying Interest.

Daily Ratio: 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.

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

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.

Floating Price Rate: has the meaning given thereto in Section D-601 of the Rules.

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.

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 Spread Charge: Portfolio containing offsetting positions (identified as "Inter-Commodity Spread") in highly correlated instruments are subject in the Risk Engine to credits which reduce the overall Base Initial Margin.

Intra-Commodity (Inter-Month) Spread Charge: Underlying Interests' prices, from a maturity month to another may not be perfectly correlated. Gains on a maturity month should not totally offset losses on another maturity month. To cover the risk of calendar spread positions, an Intra-Commodity (Inter-Month) Spread Charge can be set in the Risk Engine.

Limited Clearing Members (LCMs): has the meaning given thereto in Section A-102 of the Rules.

Liquidity Interval: The Liquidity Interval is calculated based on the historical bid-ask price spread of the Underlying Interest according to the same formula as for Margin Interval.

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

Margin Interval: Parameter established by the Corporation which reflects the maximum price fluctuation that the Underlying Interest could be expected to have during the liquidation period. The Margin Interval is used to calculate the Base Initial Margin of every Derivative Instrument.

Margin Requirement: Any amount of Margin that may be required under Rule A-7 in accordance with the methodology set forth in this Manual, including Initial Margin and Variation Margin.

Net Variation Margin Requirement: has the meaning given thereto in Section D-601 of the Rules.

Over-The-Counter Instrument (OTCI): has the meaning given thereto in Section A-102 of the Rules.

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

Risk Array: A Risk Array (RA) is a set of scenarios defined in the Risk Engine 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 Engine: The Corporation uses the Standard Portfolio Analysis system (SPAN®) as its Risk Engine.

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 Risk Engine chooses the difference between the current market value of an Underlying Interest and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions.

Short Option Minimum (SOM): 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 the SOM is higher than the result of the Risk Arrays.

Uncovered Residual Risk (URR): has the meaning given thereto in Section A-102 of the Rules.

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

Unsettled Item: Any delivery of the Underlying Interest that has not been settled at the Central Securities Depository.

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.

Volatility Scan Range: The maximum change reasonably likely to occur for the volatility of each Option's (including an OTCI Option's) Underlying Interest price.

Some of the terms and concepts herein defined, as used in this Risk Manual, are derived from the CME Group proprietary SPAN® margin system, adapted for CDCC's licensed use thereof.

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, 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 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 movements across the portfolio of each Clearing Member under normal market conditions. Specifically, the Corporation uses a volatility estimator and a confidence level over 99% under the Normal distribution or the Student's t-distribution assumption. The Corporation also considers a variable number of days as an acceptable liquidation period. The Base Initial Margin amount is calculated using the historical volatility of the daily price returns of the Underlying Interests for Options contracts and Share Futures, the daily price returns of the Futures prices for Futures contracts (excluding Share Futures) and the yield-to-maturity (YTM) daily variation of the on-the-run security for Fixed Income Transactions¹. Please refer to Section 6.1 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

¹ The same methodology used for Fixed Income Transactions is applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB).

Margin. Please refer to Section 6.2 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 Concentration 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 Variation Margin Delivery Risk
- (6) Additional Capital Margin
- (7) Additional Margin for Uncovered Risk of Limited Clearing Members
- (8) any other additional Margins as set out in the Rules (other than Margin required pursuant to Rule D-607).

ADDITIONAL MARGIN FOR CONCENTRATION RISK

As mentioned in Section 1.1.1.1, the Base Initial Margin requirement is intended to cover potential portfolio losses over an acceptable Close-out Period. Close-out Periods are set on a product specific basis and depend especially on their liquidity. For sizeable positions which cannot, due to their size compared to the total of open positions in a product or a group of products, be liquidated within the pre-defined Close-out Period for the product or group of products, leading to a longer Close-out Period for that Clearing Member, CDCC will require Additional Margin for Concentration Risk. The Concentration Risk methodology will add a number of liquidation day(s) to the pre-defined Close-out Period that will be applied to the incremental positions that are above a certain threshold. The thresholds are determined based on the average trading volume of the product.²

For example, let's assume that CDCC sets a threshold for a specific product with a default Close-out Period of two (2) days at 2500 contracts and the Clearing Member net position is 8000 contracts, CDCC will perform a first Margin run with a number of liquidation days equal to two

² For Real Return Bonds, the threshold is based on average amount of bids in the primary market auctions for Real Return Bonds.

(2) (the default Close-out Period of this product) for the first 5000 contracts ($5000 = 2500 * 2$) and a second Margin run with a number of liquidation days equal to 3 (the default Close-out Period of this product incremented by one (1) day) for 2500 contracts (i.e. the one day threshold) and a third Margin run with a number of liquidation days equal to 4 (the default Close-out Period of this product incremented by two (2) days) for 500 contracts (i.e. the remaining position: $500 = 8000 - 5000 - 2500$). The Additional Margin for Concentration Risk is the sum of the Margin runs.

The position thresholds are determined as described below:

Product	Threshold methodology
Options	Average trading volume of the Underlying Interest over a certain period of time.
Futures (excluding Share Futures)	Average trading volume of the product over a certain period of time.
Share Futures	Average trading volume of the Underlying Interest over a certain period of time.
Fixed Income Transactions (excluding Real Return Bonds)	Average trading volume of the product over a certain period of time.
Real Return Bonds ³	Average amount of bids in the primary market auctions for Real Return Bonds.

ADDITIONAL MARGIN FOR SPECIFIC WRONG-WAY RISK

The Specific Wrong-Way Risk arises when the exposure of a Clearing Member in its own products⁴ is adversely correlated with the credit worthiness of that Clearing Member.

CDCC has identified three particular situations where the Specific Wrong-Way Risk exists:

³ For Real Return Bonds, the threshold is applied at the asset class level.

⁴ 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.

- Put Options: When a Clearing Member holds a Short Put Option position on the shares of itself or its Affiliates, 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 on the shares of itself or its Affiliates, the full settlement value amount is charged as Additional Margin for Specific Wrong-Way Risk.
- Unsettled Items: The full strike value amount is charged as Additional Margin for Specific Wrong-Way Risk for Option products and the full settlement value amount is charged as Additional Margin for Specific Wrong-Way Risk for Share Futures when a Clearing Member holds a position on itself or its Affiliates.

ADDITIONAL MARGIN FOR MISMATCHED SETTLEMENT RISK

The Mismatched Settlement Risk is the risk arising from a lag between the settlement of positions which result 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 or a Variation Margin credit on the rest of the portfolio.

Given the fact that Margin offsets are granted when Fixed Income portfolios have both long and short positions, the Additional Margin charge will be calculated on a gross basis for the positions that could cause mismatched settlement exposure prior to a default.

In order to address the Mismatched Settlement Risk⁵, CDCC will perform forward looking analysis to forecast material changes in Margin Requirements⁶ as a result of end of day settlement for Fixed Income Transactions.

The Additional Margin for Mismatched Settlement Risk will be calculated by using the maximum of A or B, minus the total Margin Requirement for Fixed Income Transactions:

Where A represents the maximum of the Margin Requirement for buy transactions that settle on the current Business Day (t) or Margin Requirement for sell transactions that settle on the current Business Day

⁵ The Additional Margin for Mismatched Settlement Risk is not applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB).

⁶ For the purposes of this "Additional Margin for Mismatched Settlement Risk" section, the Margin Requirement includes the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be) and the Variation Margin.

(t), to which is added the remaining Margin Requirement for Fixed Income Transactions that settle on t+1 and beyond.

Where B represents the maximum of the Margin Requirement for buy transactions that settle on the next Business Day (t+1) or Margin Requirement for sell transactions that settle on the current Business Day (t) and the next Business Day (t+1), to which is added the remaining Margin Requirement for Fixed Income Transactions that settle on the second Business Day following the Transaction (t+2) and beyond.

ADDITIONAL MARGIN FOR INTRA-DAY VARIATION MARGIN RISK

The Intra-Day Variation Margin Risk arises when market volatility of cleared volumes produces unusually large Variation Margin exposures. In order to address the Intra-Day Variation Margin Risk, CDCC may call for additional Margin from each Clearing Member if it determines that the intra-day exposure for Futures and Fixed Income Transactions to the Clearing Member exceeds certain limits (thresholds expressed in percentage) in relation to the Clearing Member's respective Margin Requirement⁷ and Clearing Fund contribution. Additional Margin for Intra-Day Variation Margin Risk is subject to a minimum value (floor).

Since the Variation Margin for Fixed Income Transactions is calculated on a daily basis, the Intra-day Variation Margin will compare the previous Business Day's value to the current requirement. If the current requirement is less than the previous Business Day's requirement, no Additional Margin will be required.

The Additional Margin for Intra-day Variation Margin Risk requirement is 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.

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

⁷ For the purposes of this "Additional Margin for Intra-Day Variation Margin Risk" section, the Margin Requirement includes the Base Initial Margin, Additional Margin for Concentration Risk, Additional Margin for Specific Wrong-Way Risk and Variation Margin for Options and Unsettled Items.

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

On a daily basis, the Corporation measures 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 Additional Capital Margin is determined by the Corporation as part of the Daily Capital Margin Monitoring (DCMM) process intended to evaluate the credit risk of its Clearing Members (excluding Limited Clearing Members).

The Corporation compares the Clearing Member's capital amount to the sum of the Base Initial Margin for all products and Variation Margin requirements for Options and Unsettled Items.

In the event that the sum of the Base Initial Margin and Variation Margin requirements for Options and Unsettled Items 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 (NAA), 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 Margin Requirement covers the risk exposure that arises if the total value of the risk represented by an LCM 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 LCM 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.

1.1.2 Variation Margin

The Variation Margin requirement 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 since the previous evaluation in accordance with the Rules.

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

1.1.2.1 Options Contracts

For Options contracts, the Variation Margin is collateralized daily based on the Option Price reported by the Exchange, or the last OTCI Option Price⁸, 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 Contracts

For Futures contracts, the Variation Margin (Gains and Losses) 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 Requirement⁹ 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

⁸ Please refer to Section 6.1.4.3 for additional details on the theoretical price calculation of OTCI Options.

⁹ The Variation Margin Requirement for Fixed Income Transactions is not applied for physical delivery of Government of Canada Bond Futures (CGB, CGZ, CGF and LGB). The applicable Variation Margin Requirement for Fixed Income Transactions is rounded up to the nearest \$1 of nominal value.

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 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 Underlying Interest of an Option contract with physical delivery that has been exercised or assigned in the money, but is not yet settled (i.e. the Underlying Interest is not yet delivered) is considered an Unsettled Item. Similarly, the Underlying Interest of a Future contract with physical delivery that has expired is considered an Unsettled Item.

The Variation Margin for Unsettled Items with respect to both Options and Futures contracts is collateralized. With respect to Variation Margin for Unsettled Items related to Options contracts, 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 positions is calculated on a net basis for the Firm Account and the Multi-Purpose Account, but on a gross basis for the Client Accounts, which means that only short Options contracts are considered when computing the Initial Margin.

1.1.3.2 Margin Aggregation

The total Margin Requirement of each Clearing Member is composed of its Initial Margin requirement and its 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:

1. 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 is calculated at the account level and increased by both the Additional Margin for Concentration Risk and the Additional Margin for Specific Wrong-Way Risk.
- 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), the Additional Margin for Concentration Risk and the Additional Margin for Specific Wrong-Way Risk.
 - If the Variation Margin for Options and Unsettled Items is negative, this will result in a Margin credit¹⁰ decreasing the aggregate value of the Base Initial Margin (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Concentration Risk and Additional Margin for Specific Wrong-Way Risk.

¹⁰ For a given account, the Margin credit is capped to the aggregation of the Base Initial Margin and the Additional Margin for Concentration Risk.

- 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 (or Adjusted Base Initial Margin, as the case may be), Additional Margin for Concentration Risk and Additional Margin for Specific Wrong-Way Risk.
- 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), the Additional Margin for Concentration Risk, the Additional Margin for Specific Wrong-Way Risk and the Variation Margin for Options and Unsettled Items and (2) the following Additional Margins calculated at the Clearing Member level: Additional Margin for Mismatched Settlement Risk, Additional Margin for Intra-Day Variation Margin Risk, Additional Margin for Variation Margin Delivery Risk, Additional Capital Margin, Additional Margin for Uncovered Risk of Limited Clearing Members and any other Additional Margins.

2. VARIATION MARGIN FOR FUTURES CONTRACTS

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

3. 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 CM's prefunded financial resources do not cover its market exposure.

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

On a monthly basis, CDCC issues to each Clearing Member a statement indicating the amount required by such Clearing Member to meet its Clearing Fund Requirement based on the following elements:

- The size of the Clearing Fund is based on the largest Uncovered Residual Risk (“URR”) of all Clearing Members and of their Affiliate(s) (excluding LCMs) over the last sixty 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 Business Days multiplied by the total value 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.
- The Corporation monitors and controls the size of the Clearing Fund throughout the month and may adjust it upward between monthly re-evaluations. The whole or a specified part of this increase will be assumed by the Clearing Members, who would then receive a Margin call, depending on whether the Corporation determines that the size increase is directly influenced by specific Clearing Member(s) or by general market conditions. In the latter case, the increase will be allocated among Clearing Members in accordance with the above methodology. If the increase is attributable to both situations, the concerned Clearing Member will incur a specific increase on top of the standard allocated increase.

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
- 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.

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 on a regular basis and publishes the list of eligible Debt Securities on its website.

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 published on its website.

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").

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.
- This excludes stripped coupons and residual securities.
- Canada Savings Bonds are also excluded.

2.3.4.2 Debt Securities guaranteed by the Government of Canada:

- Treasury bills, bullet bonds and Debt Securities issued by Canada Housing Trust.
- This excludes stripped coupons and residual securities.

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.
- This excludes floating rate notes, stripped coupons and residual securities.

2.3.4.4 Debt Securities guaranteed by a provincial government:

- Bullet bonds issued by Financement Quebec, Hydro-Quebec and Ontario Electricity Financial Corporation.
- This excludes floating rate notes, stripped coupons and residual securities.

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 management framework takes a conservative approach to manage the forms of eligible collateral accepted. The framework includes 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 Cash, acceptable Treasury bills issued by the Government of Canada or any combination thereof after the application of Haircuts.

2.5.2.3 Limit on the Margin Requirements¹¹

For each Clearing Member, for all of its accounts combined, at least 25% of the Margin Requirements must be covered by 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.

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

¹¹ This excludes the Net Variation Margin Requirement.

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.

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 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 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 EWMA approach as defined in Section 6.1.1, 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 minimal floor for the EWMA volatility estimator is calculated as the 25th 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.

2.6.2 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.

2.6.3 Haircuts Policy

The Corporation reviews the Haircuts at least semi-annually and on an ad hoc basis if any market event occurs. The Clearing Members are informed of these reviews by written notice and the Haircuts related to Government Securities are also published on CDCC’s website with their effective dates.

Section 3: Monitoring Program

3.1 BACKTESTING

Backtesting is performed on a daily basis by the Corporation to assess the robustness of the existing models and measure the actual credit exposures. In order to have an efficient coverage, even at the introduction of new products, the Corporation performs a complete theoretical backtesting to calibrate the liquidation period and the volatility assumption. The results of the backtesting are communicated to the Risk Management and Advisory Committee (RMAC) on a regular basis.

The Corporation has put in place appropriate internal procedures if the backtesting results are not sufficient to reach the minimum coverage at the product level and at the portfolio level. As set out in Section A-702 of the Rules, the Corporation has the discretion to adjust the Margin that may be required from Clearing Members.

3.2 STRESS TESTING

The stress testing is also conducted on a daily basis. The Corporation uses different historical and theoretical stress scenarios, each of them designed to test different key parameters. The results of the stress tests help the Corporation to size the Clearing Fund. The Clearing Fund measures the capacity of the Corporation to address extreme, but plausible market conditions.

The results are communicated to the Risk Management and Advisory Committee (RMAC) on a regular basis.

3.3 CLEARING MEMBERS CREDIT RISK MONITORING

The Corporation performs a qualitative analysis of the financial statements of each Clearing Member. The Corporation has defined specific thresholds to analyze the profitability, the Margin required, 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 judge if it is necessary to take any additional actions and will report the situation to the Risk Management and Advisory Committee (RMAC).

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 Adjustments Committee as soon as possible. The Adjustments Committee acts in accordance with the provisions of Rule A-9.

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

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 quarterly 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 quarterly 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.

CDCC reviews and publishes quarterly on its website a list of Acceptable Underlying Interests for clearing OTCI Securities Options.

Between two quarterly 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, real return or zero (Treasury Bills are eligible);
 - The net amount outstanding¹²² 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.

¹² The net amount outstanding is defined as the outstanding amount issued on the market minus the stripped coupon bonds and issuer repurchases.

Section 6: Appendix

6.1 BASE INITIAL MARGIN CALCULATION

To calculate the Base Initial Margin, the Risk Engine uses the Price Scan Range (PSR) which is converted to the Scanning Risk parameter. The Scanning Risk parameter represents the difference between the current market value of a Derivative Instrument (for Exchange Transactions) or of an Acceptable Security (for Fixed Income Transactions) and its most unfavourable projected liquidation value obtained by varying the values of the Underlying Interest according to several scenarios representing adverse changes in normal market conditions. The Scanning Risk is always calculated at the Combined Commodity level.

For contracts belonging to the same Combined Commodity, the Risk Engine adds up the Risk Arrays results of all contracts under the same risk scenario. It should be noted that in the situation where the Risk Engine does not consider other variables, the Scanning Risk is the Base Initial Margin for the Combined Commodity.

However, in some cases other variables can increase or decrease the Scanning Risk. For example, variables such as the Intra-Commodity (Inter-Month) Spread Charge which tends to increase the Base Initial Margin and the Inter-Commodity Spread Charge which tends to decrease the Scanning Risk to take advantage of the correlations between the different constituents of the Combined Commodity. Another example is the specific case of short deeply out-of-the-money options wherein the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) which otherwise attracts little or no Base Initial Margin. Finally, in the case of OTCI with physical settlement/delivery, the Corporation calculates an additional Liquidity Interval and adds it to the Margin Interval.

It should also be noted that, as described in the following sections, the determination of the Base Initial Margin is slightly different for Options contracts, Futures contracts, Share Futures and Fixed Income Transactions. The following table summarizes the list of variables used to calculate the Base Initial Margin by cleared product category:

Input variables to calculate the Base Initial Margin	Options contracts (including OTCI Options)	Futures contracts and Share Futures	Fixed Income Transactions
Scanning Risk	•	•	•
Intra-Commodity (Inter-Month) Spread Charge		•	•

Inter-Commodity Spread Charge ¹³		•	•
Short Option Minimum (SOM) amount	•		
Liquidity Interval ¹⁴	•		

As fundamental inputs to calculate the Base Initial Margin, the Corporation uses the following parameters: 1) confidence level (to reflect normal market conditions), 2) assumed liquidation period and 3) historical volatility over a specific period. The historical volatility, combined with the liquidation period and the confidence level gives the Margin Interval (MI) as described below.

6.1.1 Margin Interval (MI) Calculation

The Margin Interval calculations are re-evaluated on a regular basis. However, the Corporation may use its discretion and update the Margin Intervals more frequently if necessary. The Margin Intervals are used to calculate the Base Initial Margin for each Derivative Instrument.

The Margin Interval (MI) is calculated using the following formula:

$$MI = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the next section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student's t-distribution with 4 degrees of freedom (applicable to the BAX Futures products). 'σ' 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:

$$\sigma_t = \sqrt{(1 - \lambda) \sum_{i=1}^{260} \lambda^{i-1} (R_{t-i} - \bar{R})^2 / (1 - \lambda^{260})}$$

Where *R* is the daily price returns of the Underlying Interests for Options contracts and Share Futures, the daily price returns of the Futures prices for

¹³ Not applicable for Share Futures contracts

¹⁴ Applicable for OTCI Options with physical settlement/delivery only.

Futures contracts (excluding Share Futures) and the yield-to-maturity (YTM) daily variation of the on-the-run security for Fixed Income Transactions, \bar{R} is the mean return over the specified period and λ is the decay factor. CDCC uses $\lambda = 0.99$.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI cannot be lower than the calculated floor.

6.1.2 Liquidation Period

The Corporation applies a different number of liquidation days “n” depending on the type of product. The Corporation uses quantitative and qualitative analysis, established according to the degree of liquidity of the product/Underlying Interest which is derived from parameters such as, but not limited to, traded volume, Government of Canada/provincial yield spreads and international guidelines. For all products, “n” is determined at least once a year and communicated to Clearing Members by a written notice.

Furthermore, in anticipation of Remembrance Day (the “Banking Holiday”), the Corporation will add one (1) more Business Day to the number of liquidation days “n” for Equity and Index products.

6.1.3 Price Scan Range (PSR) Calculation

In order to calculate the most unfavourable projected liquidation value, the Risk Engine uses the MI of the above formula to calculate the Price Scan Range (PSR) and to run several scenarios through its Risk Array calculation (for a detailed description refer to Section 6.1.4.1 on Risk Arrays below).

A Risk Array is a set of 16 scenarios defined for a particular contract specifying how a hypothetical single position will lose or gain value if the corresponding risk scenario occurs from the current situation to the near future (usually next day).

PSR is the maximum price movement reasonably likely to occur, for each Derivative Instrument or, for Options contracts, their Underlying Interest. The term PSR is used by the Risk Engine to represent the potential variation of the product value and it is calculated through the following formula:

$$\text{PSR} = \text{Price} \times \text{MI} \times \text{Contract Size}.$$

6.1.4 Base Initial Margin for Options Contracts

This section describes how the Base Initial Margin is calculated for the Options contracts, which include the equity options, index options, currency options, exchange-traded-fund options and options on futures.

The Risk Arrays are obtained by varying the Underlying Interest (eight scenarios) and the option's implied volatility (eight scenarios). The term PSR for Options contracts is calculated through the following formula:

$$\text{PSR} = \text{Underlying Interest Price} \times \text{MI} \times \text{Contract Size}$$

For equity options contracts, the contract size is usually equal to 100.

6.1.4.1 Risk Arrays

Each Risk Array scenario represents losses or gains due to hypothetical market conditions:

- The (underlying) price movement: upward (+) and downward (-) with corresponding scan range fraction (0, 1/3, 2/3, 3/3 or 2).
- The (underlying) volatility movement: upward (+) and downward (-) with corresponding scan range fraction (0 or 1).

Since some scenarios consider large movements on the Underlying Interest price, the whole difference (gain and loss) between the new (simulated) theoretical option price and the actual option price will not be considered. For scenarios 15 and 16, since their probability of occurrence is low, only a fraction of 35% of the difference is considered. The purpose of these two additional extreme scenarios is to reduce the problem of short option positions that are highly out of the money near expiration. If the Underlying Interest price varies sharply, these positions could then be in the money.

A scan range is a fluctuation range of the Underlying Interest price and volatility defined for each Combined Commodity.

The Risk Engine calculates 16 Risk Array scenarios as follows:

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

Each Risk Array value is calculated as the current contract price less the theoretical (simulated) contract price obtained for the corresponding scenario by using the valuation model. (The Risk Engine uses different valuation models including Black 76, Black-Scholes, Generic Merton, Barone-Adesi-Whaley (BAW) and others).

However, it should be noted that for all the intra-day Margin processes, CDCC relies on the previous Business Day's closing prices for those Option contracts for which it has an open interest.

However, since the Base Initial Margin driven by Option contracts is relatively small with respect to the total Base Initial Margin that includes all cleared products, the Corporation does not consider the Volatility Scan Range (VSR) in its risk model. This means that the Corporation does not vary the option implied volatility up and down (+1 and -1) eight times, but varies only the Underlying Interest price in order to simulate the potential losses for each position. Therefore, the Risk Engine produces eight different scenarios as shown in the table below.

Risk Scenarios	1	2	3	4	5	6	7	8
Underlying Price Variation*	1/3	-1/3	2/3	-2/3	1	-1	2	-2
Weight Fraction Considered	100%	100%	100%	100%	100%	100%	35%	35%

* Expressed in scan range

For Options contracts belonging to the same Combined Commodity, the Risk Engine first calculates the Risk Arrays for each Option contract and for each one of the eight risk scenarios. The Risk Engine then adds up the Risk Arrays results of all Options contracts under the same risk scenario. For example, for two Options contracts O1 and O2 on the Underlying Interest XX, the same scenarios are performed for each Option contract, and then, they are added up. Therefore, the Risk Array value for O1 under the risk scenario 1 is added up to the Risk Array value for O2 under the risk scenario 1, likewise the Risk Array value for O1 under the risk scenario 2 is added up to the Risk Array value for O2 under the risk scenario 2, and so on. The largest total Risk Array value amongst the eight values is the Scanning Risk of this Combined Commodity.

For a better explanation of the Risk Engine methodology used by the Corporation, here are the steps to calculate the Base Initial Margin for an Option contract using the Risk Array:

Example 1:

Let's assume that the price of an Option contract is X_0 , its Underlying Interest price is P_0 and its Margin Interval is MI . Using the formula described above, we can calculate the Price Scan Range (PSR) of the option which represents the fluctuation range of the Underlying Interest as follows:

$$PSR = MI \times P_0 \times \text{Contract Size.}$$

Since the contract size of an Option contract is generally 100, the formula becomes:

$$PSR = MI \times P_0 \times 100$$

For the clarity of the table below, please note that the PSR used in the following steps does not include the contract size, i.e. $PSR = MI \times P_0$.

Step 1: calculate the Underlying Interest price variation. To accomplish this, the Risk Engine varies the Underlying Interest price by 33% (or 1/3) to the upper range of its MI. If for example the MI is 30%, the Underlying Interest price moves to the upper range by 33% of the 30% which leads to a 10% increase. Therefore, the Underlying Interest price variation is +33% of the PSR.

Step 2: calculate the new (simulated) Underlying Interest price by adding the Underlying Interest price variation calculated in the last step to the original Underlying Interest price.

Step 3: calculate the new (simulated) theoretical option price with the selected model using the new (simulated) Underlying Interest price.

Step 4: calculate the option's gain or loss by subtracting the new (simulated) theoretical option price from the original option price.

Step 5: multiply the gain or loss by the considered weight fraction (the last row of the above table) to get the Risk Array amount associated to the scenario 1.

After repeating the above steps for the remaining seven scenarios, the Risk Engine chooses the largest amount of (the weighted) gain or loss as the most unfavourable projected liquidation value (worst case) of the option. This amount is called the Scanning Risk.

Here is the same table as before but with the formulas of each step:

Risk Scenarios	1	2	3	4	5	6	7	8
Underlying Price Variation	$1/3 * PSR$	$-1/3 * PSR$	$2/3 * PSR$	$-2/3 * PSR$	PSR	$-1 * PSR$	$2 * PSR$	$-2 * PSR$

New Underlying Price	$P_1 = P_0 + 1/3 * PSR$	$P_2 = P_0 - 1/3 * PSR$	$P_3 = P_0 + 2/3 * PSR$	$P_4 = P_0 - 2/3 * PSR$	$P_5 = P_0 + PSR$	$P_6 = P_0 - PSR$	$P_7 = P_0 + 2 * PSR$	$P_8 = P_0 - 2 * PSR$
New Option Price	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
Gain / Loss	$P\&L_1 = X_0 - X_1$	$P\&L_2 = X_0 - X_2$	$P\&L_3 = X_0 - X_3$	$P\&L_4 = X_0 - X_4$	$P\&L_5 = X_0 - X_5$	$P\&L_6 = X_0 - X_6$	$P\&L_7 = X_0 - X_7$	$P\&L_8 = X_0 - X_8$
Weight Fraction Considered	100%	100%	100%	100%	100%	100%	35%	35%
Risk Arrays Results	$RA_1 = 100\% * P\&L_1$	$RA_2 = 100\% * P\&L_2$	$RA_3 = 100\% * P\&L_3$	$RA_4 = 100\% * P\&L_4$	$RA_5 = 100\% * P\&L_5$	$RA_6 = 100\% * P\&L_6$	$RA_7 = 35\% * P\&L_7$	$RA_8 = 35\% * P\&L_8$

The table above shows all details about the Risk Engine method used by the Corporation to calculate the worst potential loss of an Option contract. The last row has the eight Risk Arrays outcomes. The largest amount (positive amount) amongst the eight amounts is the Scanning Risk which will be, in most cases, the Base Initial Margin of this position.

It is important to note that the above calculations are performed at the Combined Commodity level, implying that when there is more than a single contract with the same Underlying Interest, the Risk Engine method calculates the Risk Arrays for all contracts belonging to the same Combined Commodity and then sums up the Risk Arrays results thus calculated for all contracts for the same scenario. In other words, the RA_1 of the first contract is added up to the RA_1 of the second contract and to the RA_1 of the n^{th} contract that belong to the same Combined Commodity in order to get the Total RA_1 for the same Combined Commodity. Then, the RA_2 of the first contract is added up to the RA_2 of the second contract and to the RA_2 of the n^{th} contract that belong to the same Combined Commodity in order to get the total RA_2 for the Combined Commodity. Likewise we obtain the total RA_3 , RA_4 , RA_5 , RA_6 , RA_7 and RA_8 . Finally, the Risk Engine considers the largest amount of the eight total Risk Arrays as the Scanning Risk.

Example 2:

Let's assume a portfolio with three different positions: a short position in ten (10) Futures contracts on the S&P/TSX 60 Index, a long position in six (6) call Options contracts on the same index and a short position in three (3) put Options contracts on the same Underlying Interest (the expiry date for these three Options contracts might be the same or different).

In addition, the contract size and the price of the Futures contract are respectively 200 and F_0 and its Margin Interval is MI_F . The price of the call option is X_0 , the price of the put option is Y_0 and the contract size of

these two Option contracts is 100, whereas the price of the Underlying Interest S&P/TSX 60 Index is P_0 and its Margin Interval is MI_I . The MI_F and the MI_I values are almost the same but not exactly equal since the first is calculated using the historical volatility of the Future's returns, whereas the second is calculated using the historical volatility of the index's returns. However, since the index and the Futures contracts are strongly correlated, both Margin Interval values must be almost similar. Using the calculated Margin Intervals, we can calculate the Price Scan Range (PSR_F) of the Futures contract, which represents the fluctuation range of the Futures contract and the index Price Scan Range (PSR_I) which represents the fluctuation range of the underlying index as follows:

$$PSR_F = MI_F \times F_0 \times \text{Contract Size}$$

and,

$$PSR_I = MI_I \times P_0 \times \text{Contract Size}$$

Thus, since this Futures contract size is 200 and the contract size of the index option is 100, the previous formulas become:

$$PSR_F = MI_F \times F_0 \times 200$$

and,

$$PSR_I = MI_I \times P_0 \times 100$$

For the clarity of the table below, please note that the PSR_F and the PSR_I do not include the contract size, i.e. $PSR_F = MI_F \times F_0$ and $PSR_I = MI_I \times P_0$.

This is the Risk Arrays table of this example:

Risk Scenario	1	2	3	4	5	6	7	8
10 Index Futures contracts								
Futures Price Variation	10 x 200 x 1/3 x PSR_F	-10 x 200 x 1/3 x PSR_F	10 x 200 x 2/3 x PSR_F	-10 x 200 x 2/3 x PSR_F	10 x 200 x PSR_F	-10 x 200 x PSR_F	10 x 200 x 2 x PSR_F	-10 x 200 x 2 x PSR_F
Weight Fraction Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total Weighted Profit and Loss	$P\&L_{F1} =$ 2000 / 3 x PSR_F	$P\&L_{F2} =$ -2000 / 3 x PSR_F	$P\&L_{F3} =$ 4000 / 3 x PSR_F	$P\&L_{F4} =$ -4000 / 3 x PSR_F	$P\&L_{F5} =$ 2000 x PSR_F	$P\&L_{F6} =$ -2000 x PSR_F	$P\&L_{F7} =$ 1400 x PSR_F	$P\&L_{F8} =$ -1400 x PSR_F
6 Index Call Option Contracts								

Index Price Variation	$1/3 \times \text{PSR}_1$	$-1/3 \times \text{PSR}_1$	$2/3 \times \text{PSR}_1$	$-2/3 \times \text{PSR}_1$	PSR_1	$-\text{PSR}_1$	$2 \times \text{PSR}_1$	$-2 \times \text{PSR}_1$
New Index Price	$P_1 = P_0 + 1/3 * \text{PSR}_1$	$P_2 = P_0 - 1/3 * \text{PSR}_1$	$P_3 = P_0 + 2/3 * \text{PSR}_1$	$P_4 = P_0 - 2/3 * \text{PSR}_1$	$P_5 = P_0 + \text{PSR}_1$	$P_6 = P_0 - \text{PSR}_1$	$P_7 = P_0 + 2 * \text{PSR}_1$	$P_8 = P_0 - 2 * \text{PSR}_1$
New Call Option Price	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
Weight Fraction Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total (6 x 100) Weighted Profit and Loss	$\text{P\&L}_{X1} = 600 \times (X_0 - X_1)$	$\text{P\&L}_{X2} = 600 \times (X_0 - X_2)$	$\text{P\&L}_{X3} = 600 \times (X_0 - X_3)$	$\text{P\&L}_{X4} = 600 \times (X_0 - X_4)$	$\text{P\&L}_{X5} = 600 \times (X_0 - X_5)$	$\text{P\&L}_{X6} = 600 \times (X_0 - X_6)$	$\text{P\&L}_{X7} = 210 \times (X_0 - X_7)$	$\text{P\&L}_{X8} = 210 \times (X_0 - X_8)$
3 Index Put Option Contracts								
New put Option Price	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7	Y_8
Weight Fraction Considered	100%	100%	100%	100%	100%	100%	35%	35%
Total (-3 x 100) Weighted Profit and Loss	$\text{P\&L}_{Y1} = -300 \times (Y_0 - Y_1)$	$\text{P\&L}_{Y2} = -300 \times (Y_0 - Y_2)$	$\text{P\&L}_{Y3} = -300 \times (Y_0 - Y_3)$	$\text{P\&L}_{Y4} = -300 \times (Y_0 - Y_4)$	$\text{P\&L}_{Y5} = -300 \times (Y_0 - Y_5)$	$\text{P\&L}_{Y6} = -300 \times (Y_0 - Y_6)$	$\text{P\&L}_{Y7} = -105 \times (Y_0 - Y_7)$	$\text{P\&L}_{Y8} = -105 \times (Y_0 - Y_8)$
Combined Commodity Risk Arrays Results	$\text{RA}_1 = \text{P\&L}_{F1} + \text{P\&L}_{X1} + \text{P\&L}_{Y1}$	$\text{RA}_2 = \text{P\&L}_{F2} + \text{P\&L}_{X2} + \text{P\&L}_{Y2}$	$\text{RA}_3 = \text{P\&L}_{F3} + \text{P\&L}_{X3} + \text{P\&L}_{Y3}$	$\text{RA}_4 = \text{P\&L}_{F4} + \text{P\&L}_{X4} + \text{P\&L}_{Y4}$	$\text{RA}_5 = \text{P\&L}_{F5} + \text{P\&L}_{X5} + \text{P\&L}_{Y5}$	$\text{RA}_6 = \text{P\&L}_{F6} + \text{P\&L}_{X6} + \text{P\&L}_{Y6}$	$\text{RA}_7 = \text{P\&L}_{F7} + \text{P\&L}_{X7} + \text{P\&L}_{Y7}$	$\text{RA}_8 = \text{P\&L}_{F8} + \text{P\&L}_{X8} + \text{P\&L}_{Y8}$

The largest amount (positive number) of the eight Risk Arrays results is the Scanning Risk which will be the Base Initial Margin of a portfolio with these three positions.

By convention, Risk Array values are given for a single long position. For a short position, the calculated profit and loss is multiplied by the negative sign (-1). Losses for long positions are expressed as positive numbers and gains as negative numbers.

In the case of all the eight Risk Arrays values being negative (i.e. all corresponding to a gain) or zero (no risk), the Scanning Risk amount is set to zero.

The number of the Risk Arrays scenario that gives the largest amount (worst case scenario) for the option is called the Active Scenario. If two scenarios have the same figure, the one with the lowest scenario number is the Active Scenario. For example, if scenarios 5 and 7 give the largest and similar results, scenario 5 will be defined as the Active Scenario.

The Risk Engine calculates the Base Initial Margin for each Combined Commodity, for each member's account and sub-account. Thus, the Base Initial Margins calculated for each Combined Commodity account and sub-

account are then sent to CDCS in order to be aggregated at the Clearing Member level.

Risk Arrays values are denominated in the same currency as the specific contract.

The Corporation's Risk Arrays file is published every Business Day on CDCC's website.

6.1.4.2 Short Option Minimum

In the event of a significant variation of the Underlying Interest price, short option positions can lead to significant losses. Therefore, the Risk Engine calculates a minimum amount called Short Option Minimum (SOM) for short positions in each Combined Commodity. This amount will be called if it is higher than the result of the Risk Arrays.

In order to determine the appropriate SOM for every group of products, CDCC considers Out of The Money (OTM) call and put Options for every Underlying Interest.

After shocking the Underlying Interest price by its appropriate stress scenario, as set forth in the relevant notice to members, CDCC re-calculates the price of all OTM call and put Options using the new Underlying Interest price and the same other parameters of the Options. The difference between the actual Option price and the new Option price represents the potential loss of the Option. Then, the average of all Options' losses is calculated to determine the potential loss for every Underlying Interest. Finally, the average of the potential losses for all Underlying Interests of the same group of products is calculated to determine the potential loss of the Combined Commodity, which represents its SOM. The latter is then translated in a percentage of the Price Scan Range (PSR).

This SOM calculation is reviewed on a regular basis, at least annually, and communicated to Clearing Members by written notice.

6.1.4.3 OTCI Options

The Base Initial Margin calculation process for OTCI Options 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

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 on 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.

Then, the 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 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 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 Options, 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.

6.1.5 Base Initial Margin for Futures Contracts

This section describes how the Base Initial Margin is calculated for Futures contracts, which includes Index Futures, Interest Rate Futures, Government of Canada Bonds Futures and Share Futures.

The first part of example # 2 in Section 6.1.4.1 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 Base 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 Base Initial Margin for a Futures contract is always equal to its Price Scan Range (PSR).

With respect to the Three-Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC combines the contracts in different groups and applies the same charge to the contracts of a same group.

6.1.5.1 Intra-Commodity (Inter-Month) Spread Charge

The different Futures contracts belonging to the same Combined Commodity have in general positive correlated returns. For example, a portfolio composed of a long position and a short position of two Futures contracts that have the same Underlying Interest but different expiry dates, will be less risky than the sum of the two positions taken individually. Margins on correlated positions address this fact.

The Risk Engine automatically matches the long positions on Futures maturing in one month with the short positions on Futures maturing in another month. The resulting Margin Requirement on these two Futures contracts belonging to the same Combined Commodity, could be lower than the real risk associated with the combination of the two contracts. To address this issue, the Risk Engine allows the user to calculate and apply an additional charge relative to the inter-month spread risk, in order to cover the risk associated with these two positions. This Margin is called Inter-Month Spread Charge or Intra-Commodity (Inter-Month) Spread Charge (because it is calculated within the same Combined Commodity).

Intra-Commodity (Inter-Month) Spread Charge on correlated Futures positions is calculated by the Corporation's risk department and updated on a regular basis.

For the Futures contracts, the Intra-Commodity (Inter-Month) Spread Charge (ICSC) which is an additional dollar amount charge applied to each combination of two different Futures contracts, is determined as follows:

$$ICSC = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution (applicable to all products except for the BAX Futures products) or equal to the critical value equivalent to 99% of the cumulative Student's t-distribution with 4 degrees of freedom (applicable to the BAX Futures products). 'σ' is the volatility estimator of the Futures combination's daily profit and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC cannot be lower than the calculated floor.

With respect to the Three-Month Canadian Bankers' Acceptance Futures (BAX) contract, CDCC calculates the Intra-Commodity (Inter-Month) Spread Charge for all combinations of spreads and butterfly-strategies and applies a same charge for a same group of combinations with close maturities.

For all Futures contracts, in order to consider the highest economical correlation between the different Futures contracts and to offer the highest benefit to the Clearing Members, CDCC applies the different Intra-Commodity (Inter-Month) Spread Charges by considering the combinations with the lowest charges first and the ones with the highest charges will be considered at the end. If two different combinations or group of combinations will have the same charge, the one with the lowest maturity will be considered first. This is the same spread priority concept that is applied for Fixed- Income Transactions.

The Intra-Commodity (Inter-Month) Spread Charges and the spread priorities are updated and published on the CDCC website on a regular basis.

6.1.5.2 Inter-Commodity Spread Charge

Similarly, the Corporation considers the correlation that exists between different classes of Futures contracts when calculating the Base Initial Margin. For example, different interest rate Futures contracts are likely to react to the same market indicators, but at different degrees. For instance, a portfolio composed of a long position and a short position on

two different interest rate Futures contracts will be likely less risky than the sum of the two positions taken individually. The Corporation will grant a Margin relief according to the historical correlation of the returns of the two Futures contracts.

When calculating the Base Initial Margin on a portfolio with several long and short Futures positions, the Corporation matches the positions in accordance with predefined steps. For example, if the first matching step consists of matching long or short positions on the front month Futures contracts with long or short positions on the second front month Futures contract, the positions of both Futures contracts might not be equal. In this case, the Corporation determines, using the hedge ratio concept the exact position (number of contracts) of a Futures contract that can be offset by a position on the other Futures contract. Any position that has not been matched will be available for the second matching step. This is the same spread priority process also defined for Cash Buy or Sell Trades and Repurchase Transactions.

The Corporation regularly performs an analysis to determine the Margin reductions that are applied for all Futures contracts combinations.

The Corporation may also consider the positive (negative) correlation that exists between the different interest rate Futures contracts and the Fixed Income Transactions, and provides a Margin benefit for a combination of any Futures contracts with the opposite (same) Fixed Income Transactions.

6.1.5.3 Spread Priority

To determine the appropriate Margin reduction for each combination of two Futures contracts, the Corporation performs the following steps:

Use the yearly historical data of the different Futures contracts and calculate the correlation matrix.

For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represent the Futures contracts correlations with themselves). This closest diagonal usually contains the highest correlations because of the proximity of the maturities. Then, consider the second closest diagonal, then the third and so on until the last diagonal that has one correlation number.

Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the Margin reduction applied to the Clearing Members. Discounts are applied to all the matrix

correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.

If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.

Different Futures contracts that do not have the same contract size nor the same volatility yield would not have a Margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used to determine how much position of one contract in any combination can be matched with the other Futures contract of the same combination. The remaining position (or quantity of Futures contracts) of any contract of this first combination will be matched with another position to form another combination according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.

The Corporation allows a Margin reduction for two positively correlated Futures contracts with different directions and for two negatively correlated Futures contracts with same directions.

When the spread priority process is performed, the Corporation considers the combinations between interest rate Futures contracts first (Intra-Commodity (Inter-Month) Spread Charge). Any remaining (outright) positions in these Futures contracts positions will be considered for Inter-Commodity Spread Charge with Fixed Income Transactions.

6.1.6 Base Initial Margin for Fixed Income Transactions

A Fixed Income Transaction is defined as either a Repurchase Transaction or a Cash Buy or Sell Trade. A Cash Buy or Sell Trade is the sale of a security from one party to another. Depending on its maturity, the Fixed Income Security can be delivered one, two or three Business Days after the Fixed Income Transaction is completed. Between the Fixed Income Transaction novation date and the delivery date, the Corporation has to cover the counterparty risk.

In such Repurchase Transaction, there are two sources of risk that the Corporation needs to consider and cover, namely, the security price risk described in Section 6.1.6.1 below and the interest rate risk described in Section 6.1.6.2 below. However, in a Cash Buy or Sell Trade, there is only one source of risk that the Corporation needs to consider and cover, namely, the security price risk described in Section 6.1.6.1 below.

6.1.6.1 Security Price Risk

The methodology to calculate the Base Initial Margin for Fixed Income Transactions is slightly different from the Options contracts and Futures contracts. Indeed, the different types of securities that are accepted by the Corporation for clearing of a Fixed Income Transaction are separated in different Buckets depending on their remaining time to maturities and issuers. In addition, in its risk model, the Corporation assumes that all securities belonging to the same Bucket have the same yield volatility expressed in terms of Margin Interval (same concept of Margin Interval described before) which is calculated using the Yield-To-Maturity (YTM) of the on-the-run security of the Bucket. The Margin Interval is calculated as follows:

$$MI = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution. 'σ' is the volatility estimator of the YTM's daily variation of the on-the-run security over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the MI cannot be lower than the calculated floor.

It's important to note that for some particular Buckets, there may not be any on-the-run security. In this particular situation, a linear interpolation between the MIs of the two closest Buckets is performed to determine the MI of the particular bucket.

Each Bucket is considered as a Combined Commodity.

The Base Initial Margin amount related to the security's price of a Fixed Income Transaction on one security belonging to a Bucket is calculated as follows:

$$\text{Base Initial Margin 1} = \text{Security's Price} \times \text{MI} \times \text{D} \times \text{Contract Size}$$

Where D is the duration of the security and the contract size is the transaction's nominal value divided by 100. However, for all securities that belong to the 3-month, 6-month and 1-year buckets, CDCC uses a fixed duration which is set at 1.

Thus, all related Fixed Income Securities belonging to the same Bucket have the same Margin Interval but each specific Repurchase Transaction related security of the same Bucket has a different Base Initial Margin driven by its own price and its own duration.

6.1.6.2 Interest Rate Risk (Repurchase Transactions)

The Floating Price Rate changes continuously during the life of a Repurchase Transaction. On one hand, if the Floating Price Rate decreases and the Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to buy the Fixed Income Security at the expiry date with the new market conditions. In this case, the Corporation has to cover the potential decrease in the Floating Price Rate (negative variation for the seller) that could arise during the next specific period. On the other hand, if the Floating Price Rate increases and the Reverse Repo Party defaults, the Corporation, as a central counterparty, incurs market risk. The position may be transferred to any Fixed Income Clearing Member who agrees to sell the same Fixed Income Security at the expiry date with the new market conditions. In that case, the Corporation has to cover the potential increase in the Floating Price Rate (negative variation for the buyer) that could arise during the next specific period.

In order to properly quantify the risk related to the Floating Price Rate using the Risk Engine, it is necessary to model the Floating Price Rate into a Virtual Futures Contract (VFC) with a price equal to: $VFC's\ price = 100 - Floating\ Price\ Rate$. For an overnight Repurchase Transaction the Base Initial Margin is straightforwardly calculated by sending to the Risk Engine the determined VFC. However, in order to calculate the VFC's price for longer term Repurchase Transactions, the Corporation determines the appropriate interest rate using the overnight index swap (OIS) term structure.

The portion of the Base Initial Margin requirement that covers the Floating Price Rate related risk is then added to the portion of Base Initial Margin requirement that covers the security price related risk to get the total Base Initial Margin requirement for a Repurchase Transaction.

It's important to note that the portion of Base Initial Margin requirement that covers the Floating Price Rate related risk is very small with respect to the portion of Base Initial Margin requirement that covers the security price related risk.

6.1.6.3 Intra-Commodity (Inter-Month) Spread Charge

For Fixed Income Transactions, a portfolio composed of a short position and a long position on two different Acceptable Securities belonging to the same Bucket, will generate a lower Margin Requirement than if they were margined independently without considering their correlation.

The Risk Engine automatically matches the Seller and the Buyer of two different securities belonging to the same Bucket. The resulted Margin Requirement on these two Repurchase Transactions assumes a perfect correlation between the two Fixed Income Securities, thus the gain of one Fixed Income Security is offset by the loss of the other Fixed Income Security. However, the Acceptable Securities' prices are not perfectly correlated. Gains on one position should not totally offset losses of the other Fixed Income Security. To address this discrepancy, the Risk Engine allows to calculate and to apply a Margin charge relative to the inter-month spread risk in order to cover the risk of these two Fixed Income Transactions. This Margin is called the Intra-Commodity (Inter-Month) Spread Charge or Intra-Commodity (Inter-Month) Spread Charge (because it is calculated within the Combined Commodity).

The Intra-Commodity (Inter-Month) Spread Charge on correlated Acceptable Securities of each Bucket is calculated by the Corporation's risk department and updated regularly.

For Fixed Income Transactions, the Intra-Commodity (Inter-Month) Spread Charge (ICSC) which is an additional dollar amount charge applied to each combination of two different transactions on two different securities that belong to a same Bucket, is determined as follows:

$$ICSC = \alpha \times \sqrt{n} \times \sigma$$

Where 'n' is the number of liquidation days (see the Margin Interval (MI) Calculation section for more details). 'α' is equal to the critical value equivalent to 99.87% (three standard deviations) of the cumulative Normal distribution. 'σ' is the volatility estimator of the Fixed Income Transaction combination's daily profit and loss (P&L) over the reference period and is computed using the EWMA approach. The EWMA formula is described in the Margin Interval (MI) Calculation section.

In addition, CDCC considers a minimal 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. In other words, the volatility estimator that will be used to calculate the ICSC cannot be lower than the calculated floor.

6.1.6.4 Inter-Commodity Spread Charge

The Fixed Income Securities belonging to two different Buckets generally have a significant correlation. Inter-Commodity spread charge is a Margin amount generated for opposite or similar Fixed Income Transactions in two different Acceptable Securities belonging to two different Buckets.

Without any Margin relief, the Base Initial Margin for opposite or similar positions on two different Acceptable Securities belonging to different Buckets would be the sum of both Base Initial Margins. However, two different Fixed Income Transactions in different Acceptable Securities belonging to two different Buckets can benefit from a reduction in their Base Initial Margin requirements because of the consideration given to their correlation. The formula to get the portfolio's Base Initial Margin is:

Total Base Initial Margin = (Base Initial Margin Position 1 x Hedge Ratio Position 1 + Base Initial Margin Position 2 x Hedge Ratio Position 2) x (1 - Margin Relief)

The Margin relief is a percentage determined using the correlation matrix between the different on-the-run Fixed Income Securities of each Bucket.

The Inter-Commodity Margin relief percentages between the different Buckets are calculated by the Corporation's risk department and updated on a regular basis.

The Corporation also considers the positive (negative) correlation that exists between the different Fixed Income Transactions and the interest rate Futures contracts. The Corporation provides a Margin reduction for a combination of any Fixed Income Transactions with opposite or similar Futures contracts positions.

6.1.6.5 Spread Priority

To determine the appropriate Margin reduction for each combination of two Fixed Income Securities, the Corporation performs the following steps:

Use the yearly historical data of the different Fixed Income Securities and calculate the correlation matrix.

For the priority allowance, start by considering the closest diagonal to the leading one (the diagonal with the 100% correlations that represents the Fixed Income Securities correlations with themselves). The first diagonal usually contains the highest correlations because of the nearness of the maturities. Then, consider the second closest diagonal, then the third, and so on, until the last diagonal that has only one correlation number.

Amongst the numbers of each diagonal, consider the highest number first, then the second highest number, then the third and so on until the last number. This methodology's goal is to maximise the Margin reduction applied to the Clearing Members. Discounts are applied to all the matrix correlation numbers before the priority process. The discounts are meant to cover the potential daily variation of the correlations.

If there is one or some ties between the discounted numbers within the same diagonal, consider the one with the lowest maturity first, then the second, then the third and so on until the last one.

Different Fixed Income Securities that do not have the same price nor the same duration would not have a Margin reduction applied to their respective entire positions. By consequent, a hedge ratio is used to determine how much position of one contract in any combination can be matched with the other Fixed Income Transaction of the same combination. The remaining position (or quantity of Fixed Income Transaction) of any contract of this first combination will be matched with another position to form another combination, according to the above priority process. At the end of this process, there might be a single outright position that is left to be margined individually.

The Corporation allows a Margin reduction for two positively correlated Fixed Income Transactions with different directions and for two negatively correlated Fixed Income Transactions with same directions.

When the spread priority process is performed, the Corporation considers the combinations between Fixed Income Transactions first. Any remaining (outright) positions in these Fixed Income Transactions positions will be considered for Inter-Commodity spread charge with the Futures contracts. =

6.1.6.6 Spread Priority Example

Here is an example of the matrix correlation demonstrating the application of the spread priority process:

Correlation	3 months	6 months	1 year	2 years	3 years	5 years	7 years	10 years	15 years	20 years	30 years
3 months	100%	92%	88%	68%	11%	-1%	2%	4%	24%	24%	14%
6 months		100%	94%	81%	54%	42%	5%	7%	26%	26%	17%
1 year			100%	82%	68%	46%	20%	22%	39%	39%	29%
2 years				100%	76%	59%	68%	69%	78%	75%	69%
3 years					100%	82%	87%	86%	93%	90%	89%
5 years						100%	91%	55%	57%	89%	88%
7 years							100%	80%	91%	70%	94%

10 years								100%	82%	95%	43%
15 years									100%	69%	97%
20 years										100%	67%
30 years											100%

The numbers in the first diagonal (blue) on the right of the 100% diagonal should be considered first, then the numbers in the second diagonal (green), then the numbers in the third diagonal (yellow), and so on, until the last white diagonal which contains one single number (the number of this cell is 14%).

Amongst the numbers in the first diagonal in blue, the combination with the highest number is treated first. In this case, it is a combination of 1-year Fixed Income Security with 6-month Fixed Income Security which has the highest number (94%). The combination with a 92% correlation is considered, followed by the combination with a 91% correlation, and so on.

Out of the 10 numbers of this diagonal, there are three correlations with the same percentage of 82%. By subsequent, the correlation with a 1-year Fixed Income Security and a 2-year Fixed Income Security has to be considered first, then the correlation with a 3-year Fixed Income Security and a 5-year Fixed Income Security has to be considered thereafter and finally the correlation with a 10-year Fixed Income Security and a 15-year Fixed Income Security has to be considered.

6.2 RECALIBRATION OF THE EFFECTIVE RATIO

The Base Initial Margin requirement of each LCM is affected by a multiplication factor (the "Effective Ratio").

Objective: The Recalibration Methodology 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.

6.2.1 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:

$$\text{Lower Limit (LB)} = \min \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

$$\text{Upper Limit (UB)} = \max \left(\frac{\text{Total CF}_t}{\text{Total Base IM}_t} \right)$$

Where :

- *Total CF_t*: total amount of Clearing Fund Requirements on the Business Day t.
 - *Total Base IM_t*: 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 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:

$$\text{Lower Limit (LB)} = \min \left(\text{Total CF}_t / \text{Total Base IM}_t \right)$$

$$\text{Upper Limit (UB)} = \max \left(\text{Total CF}_t / \text{Total Base IM}_t \right)$$

Where :

- *Total CF_t*: total amount of Clearing Fund Requirements on the Business Day t.
- *Total Base IM_t*: 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.

6.2.2 Recalibration Governance

- On a quarterly basis, CDCC will report to 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 LCM will be notified in writing of the new ER, where applicable.

6.2.3 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 LCM 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 LCM of the new ER, and shall remain in force until a revised ER notified to the LCM either as a result of the ER annual review or subsequent to a Risk Model Change enters into force, in accordance with this section.

6.2.4 Recalibration Additional Information

- If the Corporation notifies an LCM of the new ER applicable to it, the Corporation shall provide the LCM 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 LCM 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.
- An LCM may dispute a Recalibration Event by notifying the Corporation that it requires it to be discussed at the next following quarterly RMAC meeting.
- If an LCM 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 LCM.

APPENDIX 4

DEFAULT MANUAL

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This Default Manual (the “Manual”) ~~is intended~~intends to summarize the Rules and provides certain details concerning the default management process of the Canadian Derivatives Clearing Corporation (“CDCC” or the “Corporation”) ~~and confirm certain details concerning which is comprised of~~ the actions, rights and remedies that the Corporation may take with respect to, and in connection with, Clearing Members in financial difficulty, ~~or~~ potentially in default ~~or in default of any or all~~ obligations under the Rules. ~~The Manual also address~~ as well as the governance, steps in implementing the default management and risk mitigation tools available to the Corporation (thereafter the “Default Management Process”). The Manual also addresses the actions, rights and remedies that the Corporation may take with respect to all Clearing Members upon the declaration of a Recovery Process, which also forms part of the Default Management Process. ~~This Manual describes the Corporation’s possible course of action, including management of a default situation, authority, communication with a Clearing Member and implementation.~~ In case of conflict between the provisions set out in this Manual and the Rules of the Corporation, the Rules will prevail. Terms with capitals which are not defined in this Manual have the meanings ascribed to them in the Rules.

A fundamental objective of a central counterparty is to ensure the integrity of payments and/or physical delivery of securities, even in the unlikely event of a Clearing Member default. Since the default of one or more Clearing Members may have an impact on the continuity of clearing operations, the Corporation must ensure that efficient mechanisms and processes are in place, capable of limiting the adverse impacts of such an event, with respect to monitoring and the determination of a Clearing Member’s Non-Conforming Member status and a Clearing Member’s suspension. As such, this Manual is meant to:

1. describe the grounds and events which may trigger the implementation of the ~~default management process~~Default Management Process and the enforcement actions that may be taken by the Corporation throughout the process;
2. describe the governance process followed by the Corporation; ~~and~~
3. describe the risk mitigation tools that can be used by the Corporation; ~~;~~ and
4. describe the Recovery Process and the related powers.

Section 1: Default Management Process - Triggers ~~And~~ and Implementation

The grounds and events which may trigger the implementation of the steps, decisions, enforcement actions or remedies that may be taken by the Corporation, ~~which shall be referred therein as the~~ as part of its Default Management Process, are described below. The Rules, notably Rule A-1A - Membership in the Corporation, Rule A-3 - Capital Requirements, Rule A-6 - Clearing Fund Deposits and Rule A-7 - Margin Requirements, support CDCC's authority in these actions and must be adhered to with extreme rigor.

1.1 OBJECTIVES OF DEFAULT MANAGEMENT

Participants in the Default Management Process should at all times bear in mind the objectives of the default management exercise. These are delineated below:

- To minimize Clearing Member losses deriving from an inability of the Corporation to make settlement payments, protect surviving Clearing ~~Member~~ Members' Margin ~~Deposit, or~~ Deposits, and otherwise manage its responsibilities in a manner consistent with orderly markets.
- To ensure the continued effective functioning of the clearing process both during and after the default of a Clearing Member.
- To use all available powers and resources to protect the financial assets and positions of Clearing Members not contributing to the ~~condition of~~ default. This includes, wherever possible, the comprehensive and efficient transfer of Client Accounts associated with a ~~defaulting~~ suspended Clearing Member, including any position maintained in such account and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member.
- To minimize the market impact of the Default Management Process.
- To ensure the continued solvency of the Corporation and timely access to liquidity both during and after the Default Management Process.
- To communicate with regulatory authorities on actions taken throughout the Default Management Process.

Corporation management, staff and agents should conduct themselves at all times during the Default Management Process in a manner consistent with these objectives, and in general without regard to other considerations.

4.2 TRIGGERS LEADING TO NON-CONFORMING OR SUSPENSION STATUS

Critical to the process of default management is, of course, defining the grounds and events which can lead a Clearing Member to default on its obligation and result in the Corporation declaring such member Non-Conforming or suspending it, where warranted. As a general rule, the Corporation views any situation which would, in its judgment, impede a Clearing Member's ability to meet its obligations, ~~as in the manner~~ specified in ~~the Rules, Section A-1A04,~~ as grounds to declare a Clearing Member Non-Conforming. Sections A-1A04 and A-1A05 of the Rules provide the details of the grounds and events that can lead the Corporation to declare a member Non-Conforming or suspend it, respectively.

For the avoidance of doubt, as indicated in the Rules, the Corporation may in advance of, or in anticipation of ~~a any~~ default ~~or, including a~~ breach of eligibility or standard of membership requirement which the Clearing Member is required to meet on an ongoing basis, declare a Clearing Member Non-Conforming.

Where the Non-Conforming ~~Clearing~~ Member is insolvent or is unable or likely to be unable to meet its obligations under the Rules on a continuing basis, and has no reasonable prospect of returning to good standing or curing its default within a reasonable timeframe, the Corporation ~~may~~ then suspend the Non-Conforming ~~Clearing~~ Member. The Corporation will act accordingly for any default, whether actual or imminent, that is of such a gravity that suspension would be warranted, taking into consideration the protection of the integrity of the market.

4.3 STATUS ASSOCIATED WITH A DEFAULT

The Rules specify two distinct status levels associated with the default of a Clearing Member. The first ~~such form~~ is Non-Conforming status. At any point when the Clearing Member is or may become insolvent or unable to meet its obligations, management of the Corporation may declare that Clearing Member to be a Non-Conforming Member. Section A-1A04 of the Rules provides the grounds on which the Corporation may do so. Upon a declaration of Non-Conforming status, the Corporation is empowered with the authority, as further specified below, to undertake a wide range of mitigating actions.

~~Considering~~After giving consideration to the gravity of the situation, ~~and~~ the likelihood of a remediation of the default by the Clearing Member and in order to protect the integrity of the market, the Board may, in its sole discretion, choose to suspend the Non-Conforming Member.

The Corporation's management is responsible to declare a Clearing Member Non-Conforming whereas a suspension decision must be taken by the Board. Please refer to sections A-1A04 and A-1A05 of the ~~CDCC~~ Rules which lay out the specificities of Non-Conforming and suspension statuses respectively.

~~1.4~~ POWERS OF THE CORPORATION IN THE DEFAULT MANAGEMENT PROCESS

~~1.1.1 Imposition of Additional Margin Call in Pre-Default~~ IMPOSITION OF ADDITIONAL MARGIN CALL IN PRE-DEFAULT

In accordance with Section A-702, the Corporation, following a management decision, may, without advance notice and at its sole discretion, impose an additional Margin on a Clearing Member, whether Non-Conforming or not, for an indeterminate period. While this may be necessary under a wide range of circumstances, it is particularly relevant in situations where the Corporation has reason to believe a default is imminent but has yet to take a decision on Non-Conforming status.

The Clearing Member will be informed and will have to meet ~~its additional~~such Additional Margin ~~requirements~~requirement within the same deadlines as regular Margin calls. ~~This additional Margin will be added to the amount of Margin.~~

~~1.1.2 Implementation of Default Management Process: Non-Conforming and Suspension~~ IMPLEMENTATION OF DEFAULT MANAGEMENT PROCESS: NON-CONFORMING AND SUSPENSION

In the event that the Corporation or the Board, as applicable, chooses to place a Clearing Member, in either Non-Conforming Member status or suspension, it must, as soon as practicable, assess the situation and ensure that any and all remedies available to it are at its immediate disposal. The Corporation must use any and all commercially reasonable efforts to manage the default process.

For further clarity, the Corporation may simultaneously declare a Member Non-Conforming and suspend such Member, without applying first the measures available under the Non-Conforming status.

Taking into consideration the context and materiality of the trigger event, and the ability of the Clearing Member to correct the situation within reasonable delay, the Corporation or the Board, as applicable, may therefore choose to undertake any of the following set of actions in its efforts to mitigate associated damage.

~~Enforcement Actions Pursuant to a Non-Conforming Status~~

1.1.3 ENFORCEMENT ACTIONS PURSUANT TO A NON-CONFORMING STATUS

- Prohibit and/or impose limitations on the acceptance and / or clearance of Transactions by the ~~defaulting Clearing~~Non-Conforming Member.
- Requiring such Clearing Member to reduce or close out existing Transactions in such Clearing Member’s accounts with the Corporation.
- Prevent or restrict the ~~defaulting Clearing~~Non-Conforming Member’s right to withdraw any excess in Margin Deposits pursuant to Section A-607 or Section A-704.
- Transferring, requiring to transfer or transferring on its behalf, all or any portion of a ~~defaulting Clearing~~Non-Conforming Member’s Client Account maintained by such Clearing Member with the Corporation, any position maintained in such account and any Margin Deposits held by the Corporation in respect of such Account, to another Clearing Member.
- Undertake any legal action against the ~~defaulting Clearing~~Non-Conforming Member that in the judgment of the Corporation may help to mitigate default-related losses.
- Sanction, reprimand, fine or impose a penalty on the ~~defaulting~~Non-Conforming Member.
- Suspend the Non-Conforming Member.

1.1.4 ~~Enforcement Actions Pursuant to a Suspension~~ ENFORCEMENT ACTIONS PURSUANT TO A SUSPENSION

In addition to the actions that the Corporation may take under the Non-Conforming Status, CDCC may ~~;~~, following the suspension of a Clearing Member:

- Seize all Margin Deposits posted to the Corporation by the ~~defaulting~~suspended Clearing Member, including ~~his~~its contribution to the Clearing Fund and use it to satisfy such Clearing Member's ~~obligation~~obligations.
- Seize control of all Open Positions held by the ~~defaulting~~suspended Clearing Member.
- Gain access, and, if necessary, control of the ~~defaulting~~suspended Clearing Member's prescribed records, so as to ensure the continued efficient processing of business, and to ensure the ~~defaulting~~suspended entity continues to comply with all Rules ~~and mandates~~.
- Neutralize market exposures through the use of hedging instruments where, as determined by the Corporation, market conditions do not allow for an orderly auctioning or closeout of a ~~defaulting~~suspended Clearing Member's Open Positions in a timeframe which is consistent with the Corporation's risk management model.
- Render a determination as to which Firm Accounts and Market Maker Accounts of the ~~defaulting~~suspended Clearing Member (subject to the objective of protecting to the largest extent possible, all Client Accounts) may have offsets which could be netted for risk reduction purposes.
- Place all accounts of the ~~defaulting~~suspended Clearing Member on liquidation only status.
- With respect to such accounts, effect liquidation of Open Positions, either directly by Corporation staff, or as appropriate, through appointed agents.
- Schedule an auction to transfer all remaining Open Positions to other Clearing Members at best available prices.

- Potentially postpone delivery obligations [in accordance with Rule A-8](#) if, in the judgement of the Corporation, not doing so would expose the Corporation and surviving Clearing Members to increased risk of financial loss.
- Apply any and all available financial resources, as further described below.

4.5 DEFAULT MANAGEMENT PERIOD

The Default Management Period defines the period during which Clearing Members' financial resources are ~~potentially~~ exposed to losses following a default from other Clearing ~~Members~~[Member\(s\)](#).

While the exact definition is provided in ~~the~~ Rule A-411, the intent is to define the Default Management Period as the period starting from the suspension of a Clearing Member and ending when this default ~~is~~[has](#) been completely managed and the Corporation declares the Default Management Process to be completed. A default is deemed to be completely managed when:

1. ~~i)~~ all obligations, losses and expenses are known or can reasonably be determined and have been successfully absorbed or otherwise settled; ~~or~~[and](#)
2. ~~ii)~~ the Corporation has successfully reestablished a matched book.

For example, if a second Clearing Member suspension occurs during the Default Management Period, this period is extended and will end when the two defaults have been completely managed. Hence, if ~~that~~[the](#) second default occurs while the Corporation is still managing a first one, the maximum amount of Clearing Members' financial resources potentially exposed to losses will remain the same for the duration of the Default Management Period whether one or several defaults are processed.

4.6 DEFAULT WATERFALL : APPLICATION OF FINANCIAL RESOURCES TO COVER DEFAULT-RELATED LOSSES

In implementing the Default Management Process, the Corporation will aim at minimizing, to the extent possible and on [a](#) best efforts basis, the losses to the Corporation and its stakeholders. If there are nonetheless losses to the Corporation, the Corporation must apply, in specified order, a series of financial resources to ensure its ongoing viability and financial solvency. The sections [\(i\)](#) to [\(iv\)](#) below describe the

financial resources which form the “Default Waterfall” and the order in which CDCC will apply them to cover losses associated with the liquidation of a ~~defaulting~~suspended Clearing Member. Elements (i) to (iii) are referred to as “Prefunded Financial Resources”.

i. ~~Defaulting~~Suspended Clearing Member Resources

- ~~Defaulting~~Suspended Clearing Member Margin Deposit (Other than Clearing Fund deposits). The first line of financial protection is the Margin Deposit posted by the ~~defaulting~~suspended Clearing Member as part of the Corporation’s routine collateralization process; and
- ~~Defaulting~~Suspended Clearing Member’s ~~Contribution to the~~ Clearing Fund deposits. As specified by the Rules, each Clearing Member (other than a Limited Clearing Member) must also post ~~an additional~~ contribution to the Clearing Fund. Once the Corporation has exhausted the ~~defaulting~~suspended Clearing Member’s Margin Deposit, it will next use ~~these resources~~the suspended Clearing Member’s contribution to the Clearing Fund in its loss absorption effort.

If after applying these resources of the ~~defaulting~~suspended Clearing Member, a shortfall still remains, the Corporation would, as indicated below, use the resources of the Corporation to cover the losses.

ii. Resources of the Corporation (Default Risk Capital - DRC)

- CDCC has capital reserves set aside specifically for the purpose of absorbing ~~Default Related Losses~~any loss outstanding after the exhaustion of the suspended Clearing Member’s resources. This capital, which is currently ~~of~~ \$5 million. ~~This capital therein, is~~ referred to herein as ~~it~~ “Default Risk Capital” or “DRC”.

If, after applying these resources of the ~~defaulting~~suspended Clearing Member, and of CDCC, a shortfall still remains, CDCC will, as indicated below, use the required Clearing Fund deposits (referred therein as “Clearing Fund Requirement”) of the other Clearing Members to cover the loss.

iii. ~~Non-Defaulting~~Surviving Clearing ~~Member~~Members Clearing Fund DepositsRequirements

- The Corporation ~~would next~~will subsequently use the ~~remaining balance of the Clearing Fund, on a pro-rata basis as determined by the size of each~~

~~non-defaulting Clearing Member's contribution.~~ Clearing Fund Requirements of the surviving Clearing Members (i.e. the Clearing Members that have not been suspended). For further details on the loss allocation, please refer to Appendix 2.

The above set of financial resources (listed in (i) to (iii)) which form the Prefunded Financial Resources of the Default Waterfall and are readily available for the Corporation to extinguish financial losses stemming from a ~~participant~~ Clearing Member's default are deemed highly reliable as they are under the control of CDCC and are held for this sole purpose. All Margin and Clearing Fund deposits are subject to a first ranking security interest granted by the Clearing Members to CDCC for such purpose.

iv. ~~Additional Clearing Fund Contribution of 2nd~~ Surviving Clearing Members' Clearing Fund Requirements

- If after applying all of the financial resources specified above, a loss still persists, the Corporation may request that the remaining Clearing Members (other than Limited Clearing Members) replenish their Clearing Fund ~~contributions~~ Requirements, in ~~at~~ the manner specified in Section A-610 of its Rules ~~and~~ The Corporation in total may apply up to a maximum of 200%¹ of the Clearing Fund ~~deposits required~~ Requirements of all such remaining Clearing Members, to satisfy the outstanding obligation as provided in Section A-609(5).

The Corporation ~~must act with rigor to ensure it follows~~ shall follow the prescribed order of the Default Waterfall, and communicate with all relevant parties in an effective fashion. In the event that the Corporation is ~~later~~ able to recover ~~from~~ any loss incurred from the ~~defaulting~~ suspended Clearing Member, it shall first reimburse any ~~contributions to the~~ other Clearing Member Clearing Fund ~~of the remaining Clearing Members~~ Requirements that were used to ~~cover the~~ extinguish losses, in the reverse order of their application, before reimbursing CDCC's own capital reserves used.

1.7 MAKING GOOD ON CHARGES TO CLEARING FUND

As described in Sub-section 1.6 above on the Default Waterfall, a ~~non-defaulting~~ surviving Clearing Member is potentially exposed to a loss representing 2 times its ~~required~~ Clearing Fund ~~deposits~~ Requirement during a Default Management Period.

¹ The maximum percentage of 200% includes the prefunded surviving Clearing Members Clearing Fund Requirements described in sub-section iii.

However, the Corporation must have the capacity to replenish promptly any depleted financial resources to ensure that CDCC maintains appropriate financial resources to continue to operate in a safe and prudent manner and maintain its Cover 1² status. As such, each Clearing Member (other than a Limited Clearing Member) is subject to an obligation to make good on charges to the Clearing Fund whenever an amount is paid out of the Clearing Fund ~~deposits.~~ Requirement. During a single Default Management Period, each Clearing Member is however only liable to make good ~~of~~ an additional 200% of its ~~required~~ Clearing Fund deposit required at the beginning of the Default Management Period. The additional contribution must be made no later than 2:00 p.m. on the Business Day following the date that the amount is paid out unless the Corporation issues a notice specifying a later date.

Section 2: Default Management Governance

In this section, the Corporation outlines the specific actions to be taken by its staff, management and the Board, in order to ensure that it quickly identifies, reacts to, and effectively manages a condition of default. The two sub-sections are:

1. Governance Structure; and
2. Roles and Responsibilities upon a Declaration of Non-Conforming or Suspension.

~~2.1~~ GOVERNANCE STRUCTURE

The Corporation's procedures for the management of a default are governed, under the auspices of its Board ~~and~~ by two Committees, presented below in their hierarchical order:

- Default Management Committee ("DMC")
- Emergency Committee ("EC")

In the default process, it is important for the Corporation to react in as timely a fashion as possible to identify the potential for a default by a Clearing Member. As such, under the authority of the President or his designee, if at any point the Corporation receives

² The Cover 1 regulatory standard requires the Corporation to have at all times sufficient financial resources to cover the default of the Clearing Member and its Affiliates representing the largest stressed aggregate credit exposure for the Corporation.

information which would, in its view, acting reasonably, likely lead to a default event by any Clearing Member, it will, as soon as practicable, convene a meeting of the Default Management Committee ~~(DMC)~~. The DMC is comprised of the individuals holding the following positions (or their delegates):

- President of CDCC
- Vice-President & Chief Risk Officer, CDCC
- [Vice-President & Chief Commercial Officer, CDCC](#)
- [Treasurer, CDCC](#)
- Director Risk Management, CDCC
- Vice-President Integrated Operations, GES
- Director Strategic Initiatives, CDCC
- Chief Legal Officer, CDCC
- Chief Compliance Officer, CDCC
- Head, Client Technology Delivery - Clearing Systems, GES

Each of these individuals, in managing their departments, must act with due rigor to assess issues, identify associated magnitudes, recommend actions and inform management, ~~to~~ the Board and other Corporation stakeholders, as appropriate.

The responsibility of the DMC is to make decisions related to the Default Management Process, e.g. the determination of the Non-Conforming status, and actions to be implemented to limit losses to the Corporation and the conforming Clearing Members. The DMC can count on the participation of a sub-committee to help ~~performing~~perform its mandate, namely the Emergency Committee (“EC”).

The EC, chaired by the VP and Chief Risk Officer or his designee, is composed of all DMC members plus the following specialists (and/or any other representatives or designees deemed appropriate to involve in the process):

- CDCC Treasurer
- MX Vice-President, Regulatory Division

- Head of Corporate Communications , TMX
- Director, Market Operations, MX
- Managers, Risk Management

It will be the responsibility of the EC to provide an ongoing assessment of the situation, and to report, as appropriate, to the DMC and the Board, so as to ensure these bodies are in a position to render informed decisions throughout the process.

2.2 ROLES AND RESPONSIBILITIES UPON A DECLARATION OF NON-CONFORMING OR SUSPENSION

The Rules provide for two statuses associated with the default ~~for~~of a Clearing Member: Non-Conforming Member status and suspension. Non-Conforming Member status can be determined by the Corporation’s management, while a suspension must be ~~ratified~~determined by the Board.

2.0.1 DECLARATION OF NON-CONFORMING MEMBER STATUS

Grounds

Section A-1A04 addresses the grounds upon which the Corporation may declare the Non-Conforming Member status. ~~The~~As expressed in Section A-1A04, these grounds are ~~however~~ not exhaustive.

Communication

The Clearing Member should notify the Corporation if it is insolvent or unable to ~~honour~~honor its obligations under the Rules.

However, in the event that the Clearing Member is declared as a Non-Conforming Member by the Corporation, the Corporation must inform the Clearing Member in writing or by telephone.

Authority

The Corporation may decide on Non-Conforming Member status.

Required Response by Non-Conforming Members

A Clearing Member which has experienced an event, technical or otherwise, as a result of which it fails or finds itself likely to fail to meet any of its day-to-day operational needs for its business must inform the Corporation immediately of such event. Failure to notify the appropriate Corporation staff members immediately may result in any actions contemplated under the Rules, including disciplinary actions. A Non-Conforming Member may in certain cases remedy its situation via wiring required funds or posting additional collateral to the Corporation.

Contemporaneous to the notification of Non-Conforming Member status to a Clearing Member, the Corporation will ask such Clearing Member to state in writing its assertions with respect to each of the following:

- Cause of the action which placed it in Non-Conforming Member status;
- Remedies for the immediate circumstance; and
- Changes in its financial profile and operating protocols to guard against recurrence.

Corporation staff will work with the Non-Conforming Member to secure and assess its written response. Contemporaneously, the EC will work with the DMC to determine any potential immediate additional actions, including recommendations to the Board regarding suspension.

In the event that a remedy occurs in a timely fashion, the Corporation will review the Non-Conforming Member's written explanation and will then determine next steps, including the potential removal of Non-Conforming Member status, or recommendations to the Board for suspension.

In executing these procedures, the Corporation must remain mindful of the narrow time window available to it to determine the next steps in the process. It is essential that all members of management and all Board members make themselves available as necessary to render timely and efficient decisions under these circumstances.

Implementation

The Corporation must work in concert with the Non-Conforming Member and the appropriate regulatory authorities to rectify the Clearing Member's Non-Conforming Member status.

The enforcement actions available to the Corporation, as set out under ~~section~~[Section](#) A-401 and as further explained in ~~the~~ Section 1 of this Manual, are not exhaustive and are not necessarily presented in chronological order, and can be adapted as required by the Corporation according to the circumstances that prevail during the period the Clearing Member is a Non-Conforming Member.

Notifications

Once the Corporation has declared a Clearing Member to be a Non-Conforming Member, the Corporation will immediately consider its notice obligations. Those entities whose notification is considered include:

- The Clearing Members
- Appropriate regulatory authorities
- Exchanges and central clearing organizations ("CCOs")

While it will be the prerogative of the Corporation to determine the timing and content of its outside disclosures, it will nonetheless immediately inform any CCOs with which the Corporation has in place a Memorandum of Understanding for such information sharing.

2.0.2 DECLARATION OF A SUSPENSION

Grounds

A Non-Conforming Member may be suspended in accordance with Section A-1A~~04~~~~or 05~~ [including](#) any ~~other~~ conditions that the Corporation may [reasonably](#) deem relevant. ~~in accordance with~~ [Section A-1A05. Sub-section 1.2](#) of this Manual also discusses the triggers which may lead to a suspension. In effect, the Corporation, upon approval of the Board, may decide to suspend a Clearing Member without [it](#) first ~~declaring it~~ [having been declared](#) Non-Conforming.

Communication

The Corporation will communicate to the Clearing Member a written statement setting out the grounds for its suspension.

Authority

The Board has the authority regarding the suspension and lifting of a Clearing Member's suspension.

Implementation

Once the Board approves a suspension, the Corporation ceases to act on behalf of the Clearing Member.

According to Section A-1A05, the Corporation may then implement any of the enforcement actions set out under Section A-401 and as described in ~~the~~ Section 1 of this Manual.

As mentioned in Section A-1A05, the suspension may be total or may be for any function with respect to a particular security or class of securities, with respect to a particular Transaction or class of Transactions, or with respect to securities or Transactions generally.

The Board may lift a Clearing Member's suspension at any time.

Notifications

Once the Board has declared a Clearing Member to be suspended, the Board will immediately consider its notice obligations. Those entities whose notification is considered include:

- The ~~general population of~~ Clearing Members
- Appropriate regulatory authorities
- Exchanges and CCOs

While it will be the prerogative of the Board to determine the timing and content of its outside disclosures, it will nonetheless immediately inform any CCOs with which the Corporation has in place a Memorandum of Understanding for such information sharing.

Appeal

According to Section A-1A07, the Clearing Member may appeal a suspension decision. Such appeal does not impede the actions of the Corporation in the Default Management Process.

~~Section 3:~~ Risk Mitigation Tools

Once a Clearing Member has been suspended, the Corporation shall take specific actions in order to protect the Corporation and the ~~non-defaulting~~surviving Clearing Members. Conceptually, these actions can be aggregated into three categories and are normally executed in the order presented. While some actions might have been initiated by the Corporation pursuant to a declaration of Non-Conforming status, including, namely, the transfer of Client Accounts, this section details how the Corporation will implement the risk mitigation tools, upon the suspension of the Clearing Member.

- **Prevention:** ~~Preventing~~Prevention controls are the starting point of the management of a default under the suspension status. They are focused on preventing new transactions to be cleared in the suspended Clearing Member's books.
- **Control:** Such actions are focused on taking control over the suspended Clearing Member's assets and positions.
- **Risk mitigation:** Such actions are focused on transferring risks, re-establishing a matched book, and neutralizing risks, at the lowest cost possible for the Corporation and the ~~conforming~~surviving Clearing Members, while managing the liquidity risk associated with the Default Management Process.

This section provides more information on the risk mitigation tools available to the Corporation.

~~3.1~~ TRANSFER OF CLIENT ACCOUNTS

The Corporation will attempt to transfer Client Accounts, in whole or in part, to the books of other Clearing Members. Note that, as specified in ~~the~~ Sub-section 1.1 (Objectives-section) of this Manual, the efficient and comprehensive transfer of all Client Accounts is an identified objective of the ~~default management exercise.~~ Default Management Process. For the avoidance of doubt, this includes transferring any position maintained in such account, or any account carried by such Clearing Member and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member.

2.1 LIQUIDATION

Upon a Clearing Member suspension, the Corporation may either liquidate, close-out, and/or auction the suspended Clearing Member's positions as a means to crystallize their value and re-establish a matched book. The liquidation process may take place before, in parallel or subsequent to any auction(s) if the Corporation is not satisfied with the auction(s) outcome. For example, the liquidation could be preferred to the auction if the suspended Clearing Member's portfolio is small and liquid. A portfolio that was successfully liquidated shall be referred to as a "Liquidated Portfolio".

2.2 ~~3.2~~ DEFAULT AUCTION ~~AND LIQUIDATION~~

~~In order to manage a default situation and~~

CDCC may also choose to organize one or more Default Auctions as a means to re-establish a matched book following the suspension of a Clearing Member,~~the Corporation must re-establish a matched book. In order to do so, the Corporation can hold an auction for.~~ The auction may affect a portion or the entirety of the suspended Clearing Member~~positions or liquidate its positions.~~

~~Immediately subsequent to the declaration of a suspension of a Non-Conforming Member, the Corporation must take the appropriate and following steps to conducting an auction designed to transfer the remaining collateral and positions to those of another Clearing Member.~~ 's unmatched positions. The terms and the procedure governing the Default Auction are summarized below:

2.2.1 PRE-AUCTION PROCEDURE

Before proceeding with the suspended Clearing Member's portfolio auction, the Corporation must:

- Identify the Clearing Members which can be invited to participate in the auction.
- ~~• The President of the Corporation will call the most senior available representative of the defaulting Clearing Member, to notify the organization of its intent to hold an auction.~~ Determine which positions of the suspended

Clearing Member will be part of the auction and distribute such positions into different portfolios (thereafter “Auction Portfolios”).

- ~~The Corporation will execute a Non-Disclosure Agreement with the defaulting Clearing Member, enabling it, among other things, to show position and collateral information to potential auction participants.~~ Determine the value of the surviving Clearing Members’ financial resources at risk in each Auction Portfolio.

a) Invitation to participate in the auction

- ~~The Corporation will identify potential participants in the auction process.— Note that these entities can include other Clearing Members and/or other investment enterprises.~~ For each Auction Portfolio, the Corporation will identify a set of “Eligible Clearing Members” which are Clearing Members that clear the asset class³ contained in such Auction Portfolio (including hedged positions if applicable), either directly, through their CDCC membership, or indirectly⁴, through a pre-existing clearing relationship with another CDCC Clearing Member whose membership covers the relevant asset class(es) with CDCC.
- Participation to the Default Auction is voluntary for all Eligible Clearing Members. However, the participation in the Corporation’s annual default simulation is mandatory for all Clearing Members.
- For each Auction Portfolio, the Corporation will invite all Eligible Clearing Members to confirm their intention to participate in the upcoming auction. Clearing Members who wish to participate in the auction shall send such confirmation in the prescribed time period specified in the invitation notification. Clearing Members who confirmed their intention to participate in the auction are referred to as “Auction Participant”.
- All Auction Participants understand and acknowledge, for the purpose of the auction, that they will receive certain confidential information, including confidential information related to the suspended Clearing

³ An asset class is a category of products sharing similar characteristics. Three different asset classes are cleared at CDCC, namely Futures, Options and Fixed Income.

⁴ An indirect participant must, as part of the CDCC annual due diligence process, demonstrate that it is an active participant in the relevant market with a pre-established relationship with another Clearing Member acting as its Clearing Member for that relevant asset class.

Member, and agree to treat such information with the highest standard of confidentiality.

- ~~The Risk and Operations Departments will conduct an analysis to determine the ability of potential auction participants to participate in the auction without causing financial or operational impairment to their businesses. Only those enterprises that, in the judgment of the Corporation meet this suitability test, will be eligible for participation in the auction. Note that in the event that Non-Clearing Member participants request to participate in the auction process, the Risk and Operations Departments must perform the suitability test not only on the potential participant, but upon its Clearing Member as well.~~ All Auction Participants shall participate in the auction in good faith, and any loss suffered by the Corporation as a result of any dishonest or fraudulent act of any of the Auction Participants whether committed alone or in collusion with others shall be charged to the wrongdoer.

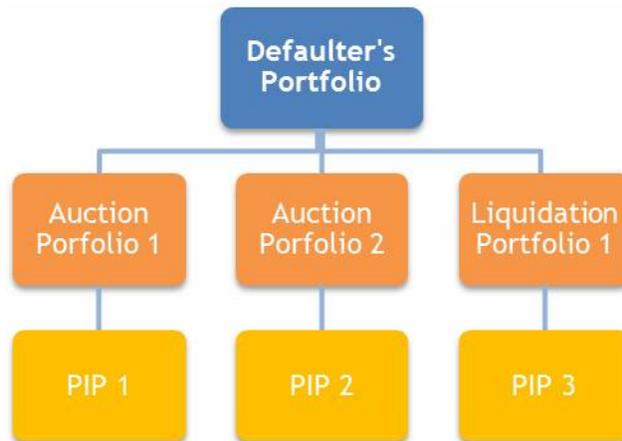
b) Auction Portfolio determination

- The Corporation may auction the suspended Clearing Member's portfolio in whole or in part, by decomposing it into smaller Auction Portfolios, if deemed necessary.

c) Allotment of financial resources to Portfolio Incentive Pools

- Before conducting an auction, the Corporation will allot, on a preliminary basis⁵, the Prefunded Financial Resources to each Portfolio Incentive Pool related to each Auction Portfolio or Liquidated Portfolio.

⁵ The final allocation of financial resources to absorb losses, i.e. to discharge CDCC of obligations or losses, can only be done once the amount of losses are known and final, as described in section 3.6.



- A Portfolio Incentive Pool (“PIP”) represents a pool of financial resources allotted by CDCC to one specific portfolio to be auctioned or liquidated.
- A detailed description of such process is provided in Appendix 1. This step will allow CDCC to:
 - ≡ Estimate the amount of Prefunded Financial Resources allotted to each portfolio which could be used to absorb losses in connection with the liquidation or the auction of each portfolio, and
 - ≡ Inform each Eligible Clearing Member of the portion of its Clearing Fund Requirement attributed to each Auction Portfolio which could be at risk of being used to extinguish losses.

2.2.2 PORTFOLIO AUCTION

The portfolio auction process is comprised of three main components:

- The divulgation of the necessary information required by any Auction Participant to provide a bid;
- The procedure by which an Auction Participant must provide a bid; and
- The determination of the prevailing bidder.

a) Information provided

CDCC needs to provide sufficient information to all Auction Participants to enable them to submit a bid.

- The Corporation will provide all the relevant information for each Auction Portfolio, e.g. ISINs, prices, expiry dates/settlement dates. The Corporation will also indicate if the portfolio has been hedged and will give the details on the hedges which form part of the Auction Portfolio.
- ~~Potential participants in the auction process must sign a Non-Disclosure Agreement, as a precursor to examining the portfolio and collateral content of the defaulting Clearing Member.~~The Corporation will also inform each Eligible Clearing Member of the preliminary amount of its Clearing Fund Requirement allotted to each Auction Portfolio. This information is important to assess the potential amount at risk in case the costs associated with the close-out, auction or liquidation of this portfolio were to exceed the suspended Clearing Member’s resources and the CDCC Default Risk Capital.
- ~~The Corporation will then hold an individual auction separately for each asset class.~~Finally, the Corporation will also provide the detailed procedure by which an Auction Participant must provide a bid, as summarized in the sub-section below (bidding process).

b) Bidding process

- Auction Participants may bid on one or more ~~asset classes,~~Auction Portfolios and ~~will~~must submit their bids ~~on~~specifying the ~~basis~~value of ~~how much collateral they would require~~collateral they want to receive to assume the positions ~~of the defaulting Clearing Member~~and the ~~settlement of all the positions contained in each Auction Portfolio.~~
- The Corporation shall specify in the auction documentation the time limit for Auction Participants to submit their bids from the time of the distribution of the relevant information on the auctioned portfolio, the “Bidding Window”. The Bidding Window shall be of a minimum of two hours. No bids shall be accepted after the end of the Bidding Window.
- ~~The bids will be submitted on a sealed basis, and should be in the hands of the Corporation by the close of business on the date designated for~~

~~auction-~~Corporation shall confidentially notify the prevailing bidder within 10 minutes of the closing of the Bidding Window.

c) Prevailing Bidder determination

- The Corporation will determine the winner of the auction for each Auction Portfolio on the basis of which ~~participant~~Auction Participant has requested the least amount of collateral to ~~support the position transfer process with priority to bidders whose risk profile improves (i.e. reduced or minimal marginal increase in risk exposure) subsequent to the inclusion of the defaulting Clearing Members~~accept all the positions associated with the Auction Portfolio.
- Notwithstanding the above, the Corporation has full discretion in accepting or rejecting a bid.
- The Corporation will notify the Auction Participant that submitted the prevailing bid (“Prevailing Bidder”) that its bid has been retained.

2.2.3 POST AUCTION PROCEDURE

Upon notification, the Prevailing Bidder will be deemed beneficial owner of the portfolio and hedges, and will become fully liable for the auctioned portfolio, including meeting any Margin Requirements associated with the auctioned portfolio. The Margin Requirement impact of the incremental positions contained in the auctioned portfolio is considered immediately, but the amount agreed to be paid by the Corporation to the Prevailing Bidder in relation to the Auction Portfolio will be considered as collateral covering this Margin Requirement. Any failure by the Prevailing Bidder to accept the transfer of positions or meet any obligations associated with the portfolio will be deemed a breach of obligations and such Clearing Member shall become liable for all fees, expenses and obligations incurred by the Corporation in connection with such Clearing Member’s failure to honor its obligations. A failure by such Clearing Member to pay the costs and damages will automatically result in the determination by the Corporation of a Non-Conforming status.

The Corporation will also notify all Clearing Members of the successful completion, or failure, as the case may be, of the auction in addition to communicating to each Eligible Clearing Member the bidding category they fall into (e.g. Low-bidder or Non-bidder).

- The Corporation will transfer all positions and associated collateral to the Prevailing Bidder no earlier than by the ~~close~~end of ~~business the following day,~~ as marked under the Corporation's routine settlement cycle, the next following Business Day and no later than the end of the second Business Day after the notification to the Prevailing Bidder.

~~In the event that the auction process unfolds in such a way as to create a residual balance on the books of the defaulting Clearing Member, the Corporation will freeze this collateral, and await further instructions as to its disposition, from both the Legal Department and the Board. In the event that the auction proceeds in such a way as to generate a residual shortfall, then the Corporation, as determined by the Board, has the right to reject all bids, accept some bids and reject others, or accept the best bids submitted. Under these circumstances, the Corporation will then proceed with the implementation of additional mitigants, as set forth below:~~

- ~~A negotiated allocation of existing Open Positions and associated Margin Deposits amongst surviving Clearing Members.~~
- ~~By invoking Section A-404, CDCC may elect to closeout remaining Open Positions at a price(s) that it deems reasonable based on best available market information.~~

2.3 ~~3.3~~ PORTFOLIO HEDGING

At any time during the Default Management Process, the Corporation may, if it deems appropriate, hedge the portfolio of the suspended Clearing Member in order to limit the accumulation of market and credit losses. Note that in such cases, the Corporation may consider as hedges the use of instruments not part of the organization's clearing universe, including cash securities.

~~3.4~~ 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 ~~of~~ liquidity through ~~out-rights~~ outright sales and/or Repurchase Transactions involving Securities of the defaulting Clearing Member.
- ~~Through~~ Raising liquidity through the ~~exercising~~ exercise of its rights of re-pledging/re-hypothecation of ~~defaulter~~ suspended Clearing Member’s Margin Deposits (including without limitation Margin and Clearing Fund deposits).
- ~~Through~~ Raising liquidity through the ~~exercising~~ exercise of its rights of re-pledging/re-hypothecation of ~~defaulter’s and survivors~~ surviving Clearing Members’ Clearing Fund ~~Deposits~~ Requirements.

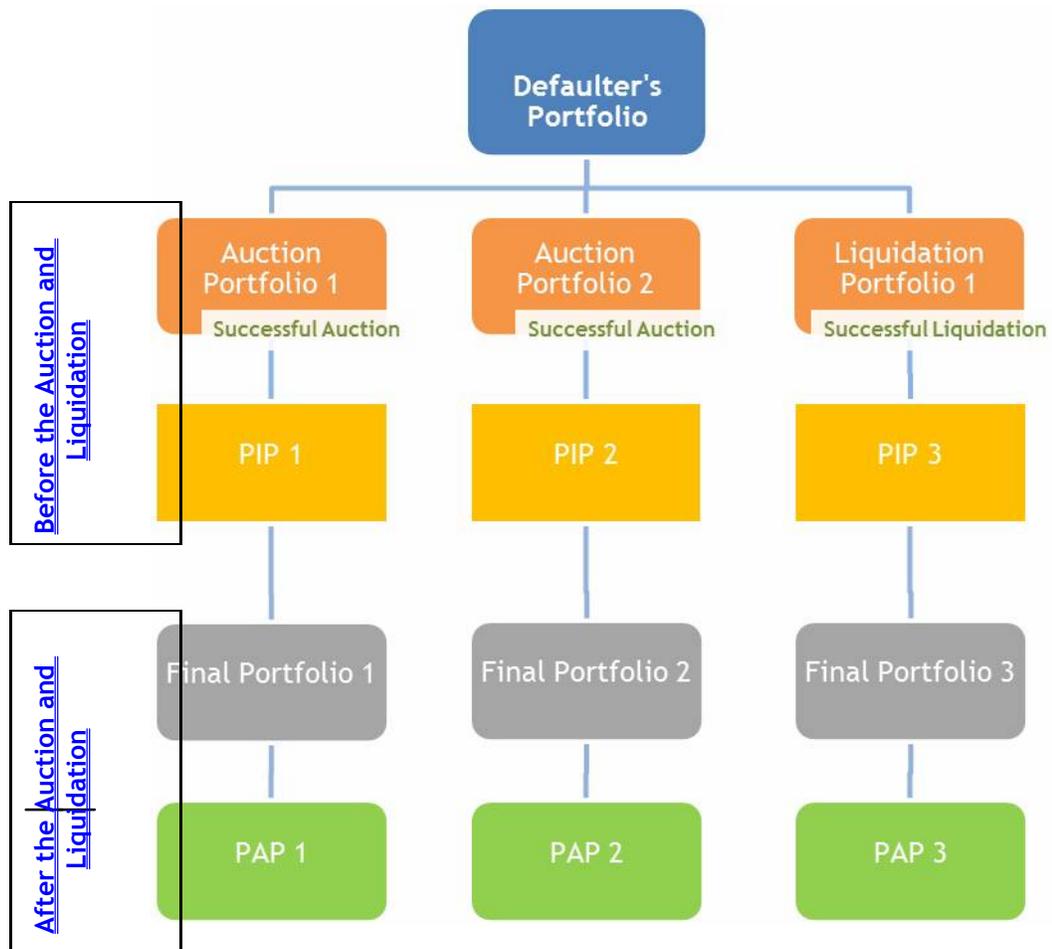
~~The management of this process is one that should ensue across the entire course of the liquidation efforts, and the Corporation must make routine, periodic judgments as to how and when this funding merits deployment.~~

~~3.5 LOSS ABSORPTION MECHANISM~~ LOSS ALLOCATION METHODOLOGY

In implementing the Default Management Process, the Corporation will aim at minimizing, ~~to the extent possible and on best efforts basis,~~ the losses to the Corporation and its stakeholders. ~~If there are nonetheless losses to the Corporation, the Corporation must apply, in specified order, a series of financial resources to ensure its ongoing viability and financial solvency. The loss absorption mechanism, also referred as Default Waterfall, is described in Sub-section 1.6.~~

- After the end of the Default Management Period, the Corporation will assess the total losses incurred or sustained by it. These losses include, but are not limited to, all default related obligations, costs or expenses incurred or sustained by the Corporation in connection with the administration, auction, closing-out, liquidation, hedging, financing or transfer of positions.
- For each auctioned or liquidated portfolio, the Corporation will allocate the financial resources contained in the Default Waterfall to the relevant Portfolio Allocation Pool (“PAP”). While the complete methodology is provided in Appendix 2, the loss allocation methodology follows these principles:
 - The Corporation must extinguish the losses with the financial resources contained in the Default Waterfall in the order specified in Sub-section 1.6.

- The suspended Clearing Member’s resources and the CDCC Default Risk Capital are allocated pro rata, based on the proportion of each PAP’s Base Initial Margin to the aggregate Base Initial Margin of all PAPs. Losses are then attributed to these resources.
- The Clearing Fund Requirement of each surviving Clearing Member is allocated to each PAP in a two-steps process as explained in Appendix 2. Afterwards, losses are attributed to the Clearing Fund Requirements of surviving Clearing Members based on their bidding behavior in the Default Auction(s) (please refer to Appendix 3 - Bidding Incentives). If no auction was performed, the losses are attributed on a pro rata basis among the allocated Clearing Fund Requirements of the surviving Clearing Members to such PAP, in accordance with Appendix 2 - Loss Allocation Methodology.



- In the event that the Corporation is later able to recover from the suspended Clearing Member any amount, such amount shall be returned to the other Clearing Members to compensate for any amount charged to them and for the financial resources levied from them as part of the Default Management Process in the reverse order that these resources were used to cover the losses.

2.4 IMPACT OF THE UNSUCCESSFUL APPLICATION OF MITIGATION TOOLS

In the event that the Corporation has been unable to return to a matched book, or if the losses incurred in connection with the Default Management Process exceed the Default Waterfall, each of which, a Recovery Event, as defined in the Rules, the Corporation may then apply a set of Recovery Powers following the declaration by the Board of the initiation of the Recovery Process. The Recovery Process is described in Section A-10 of the Rules and in Section 4 below.

Section 4: Recovery Plan

The Default Management Process described above ensures that the Corporation has in place tools and processes to appropriately manage the risks following the default of a Clearing Member. Supplementing the Default Management Process, the Corporation has in place a ~~Recovery Plan~~recovery plan which provides for a defined set of actions to address any uncovered ~~loss~~losses, liquidity shortfall or capital inadequacy, arising from ~~participant~~the Clearing Member(s)' default ~~in in(s)~~ in the unlikely event ~~where~~that the Default Waterfall proves insufficient.

Rule A-10 ~~in the Rules~~ governs the Corporation and ~~the Participants~~Clearing Members' obligations in a Recovery Process. The section below provides for general information with respect to the triggers of the Recovery Process, a description of the Recovery Powers that may be used by the Corporation upon a declaration of Recovery Process, the governance supporting such process and the ~~financial resources that may be used by the Corporation to supplement its loss absorption~~Recovery Loss⁶ allocation methodology.

4.4 TRIGGERS FOR THE RECOVERY PROCESS

The Corporation management may recommend to the Board to trigger the implementation of the Recovery Process, after the suspension of a Non-Conforming Member, in either of the following situations:

- ~~1.~~ The Corporation, acting reasonably ~~believes, determines~~ that ~~payments obligations~~, losses ~~and/or~~ expenses incurred or sustained by the Corporation as a result of, or in connection with, the suspension of one or more Clearing Members ~~are or will be in excess of the total value of~~may exceed the Default Waterfall~~; or~~
- ~~2.~~ After ~~the suspension of a Non-Conforming Clearing Member and~~ the exercise of the normal default management tools (powers contemplated in Rule A-4) or any rights or remedies provided under the Rules, the Corporation ~~has been, or~~ reasonably ~~believes~~determines that it has been, or will likely be, unable to ~~close-out all the positions of such Clearing Member~~re-establish a matched book.

⁶ Recovery Loss has the meaning given thereto in Section A-102 of the Rules.

Some extreme financial stress could lead the Corporation to have insufficient resources as part of the Default Waterfall ~~resources~~ to absorb losses or ~~support~~settle expenses, payments or obligations in connection with the default of a Clearing Member. For example, the most favorable ~~bids~~bid received in the course of ~~the auction~~a Default Auction may be significantly in excess of the ~~margin~~Margin associated with the positions contained in ~~the auction~~an Auction Portfolio as a result of market uncertainty, ~~or the defaulter.~~ Another illustration would be the case where the suspended Clearing Member's portfolio value may be negatively impacted by the occurrence of a market event that is greater than the market scenario that was planned for as part of the daily risk management activities. CDCC can also face a short-term liquidity pressure arising from an unexpectedly high settlement amount incurred by CDCC as a result of the ~~defaulter's fixed income positions~~suspended Clearing Member's Fixed Income Transactions.

~~Alternatively~~In parallel, CDCC could also have sufficient financial resources but be unable to close-out all the positions of the ~~defaulter~~suspended Clearing Member following a series of failed ~~auctions~~Default Auctions in the absence of ~~bidder~~bids.

4.2 RECOVERY POWERS

Upon the declaration by the Corporation of the commencement of a Recovery Process, CDCC may exercise extraordinary remedies against its Clearing Members in good standing to ensure that the Corporation ~~can continue~~continues to operate on an ongoing basis and to address uncovered losses or a liquidity shortfall. Such extraordinary remedies, referred to as Recovery Powers, are listed below and detailed in the Rules and can be applied in the manner set out in the applicable sections.

Recovery Powers aim at achieving two distinct objectives and can be classified as follows: 1) Recovery Powers which can extinguish uncovered losses or a liquidity shortfall, and 2) Recovery Powers which can re-establish a matched book.

2.0.1 RECOVERY POWERS TO EXTINGUISH UNCOVERED LOSSES OR A LIQUIDITY SHORTFALL

The exercise by the Corporation of the Recovery Powers of this Sub-section 4.2.1 is applicable to all Clearing Members, except Limited Clearing Members for which only the Reduced Amounts Distribution applies as specified below.

2.0.1.1 Reduced Amounts Distribution

During a Default Management Period, after the commencement of the Recovery Process, the Corporation may withhold the payment of all or a portion of certain amounts (defined as the “Qualified Amounts” under the Rules) owed by the Corporation to the Clearing Members, a process referred therein as “Reduced Amounts Distribution” or “RAD”. As defined in the Rules, the Qualified Amounts include the payment of certain amounts in cash and/or the transfer of securities for Net Variation Margin Requirement purposes, pursuant to D-607.

The purpose of the RAD is to withhold certain gains from Clearing Members to allow the Corporation to absorb certain losses. This tool aims at reducing liquidity pressure on Clearing Members while helping the Corporation extinguish losses.

QUALIFIED AMOUNTS

Consistent with the purpose of this tool, the Qualified Amounts are payments or obligations and are specific to each asset class.

For Futures and Options, the Qualified Amounts are the net amount owed by the Corporation of:

- (1) The net value of the Gains and Losses for that day in respect of all such Clearing Member’s Open Positions in Futures;
- (2) The Net Daily Premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation and purchased or sold on the Exchange; and
- (3) The net agreed premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation, bilaterally negotiated, or entered into on any Acceptable Marketplaces.

For Fixed Income Transactions, the Qualified Amounts calculation is based on the following concepts:

(1) For all Clearing Members, except the Limited Clearing Members, any decrease in Variation Margin Requirement since the last Business Day prior to the commencement of RAD will be subject to RAD for all Fixed Income Transactions still outstanding as of the day of the calculation.

(2) For Limited Clearing Members, any decrease in Variation Margin Requirement since last Business Day prior to the commencement of RAD will be subject to RAD for the Fixed Income Transactions which were, before submission for clearing with the Corporation, originally entered into by the Limited Clearing Member and the suspended Clearing Member and which are still outstanding as of the day of the calculation.

The detailed Qualified Amounts methodology is described in Sub-sections A-1005(3) b) and c) of the Rules.

RAD PROCESS

The exercise of the Reduced Amounts Distribution by the Corporation requires that certain conditions be met:

- Trigger: If in the reasonable judgment of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses and expenses in an amount in excess of the Default Waterfall;
- Maximum Duration: The Corporation may not exercise the RAD power for more than four (4) consecutive Business Days during a single Default Management Period and shall resume the payment of Qualified Amounts after the end of that period;
- Permitted Use: The Corporation will only use the Retained Amounts for satisfying or otherwise settling Recovery Losses⁷, after the exhaustion of the Default Waterfall; and
- Notice and Implementation: The Corporation will communicate to all Clearing Members that RAD will be applied during the payment cycles. On each day of the Reduced Amounts Distribution Period, the

⁷ The Retained Amounts withheld on an LCM Fixed Income Transaction in relation to the suspension of a Clearing Member shall only be used to extinguish losses incurred in connection with such suspended Clearing Member.

Corporation will notify each Clearing Member of its relevant Retained Amount which will be withheld. The Corporation shall also communicate to all Clearing Members the end of the Reduced Amounts Distribution Period.

More information on the Reduced Amounts Distribution can be found in Section A-1005 of the Rules.

2.0.1.2 ~~4.2.1~~ Recovery Loss Cash Payment

During a Default Management Period, subsequent to the commencement of the Recovery Process, the Corporation may require ~~from~~ its Clearing Members excluding Limited Clearing Members, to meet a Recovery Loss Cash Payment. The use of such tool is limited to certain conditions:

- **Trigger:** If in the reasonable judgment of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses and expenses in an amount in excess of the sum of the Default Waterfall and the Retained Amounts and such amount is known or can reasonably be determined ;
- **Maximum Amount:** The maximum aggregate amount which may be required from a Clearing Member during a single Default Management Period cannot exceed such Clearing Member's ~~required~~ Clearing Fund ~~deposits~~ Requirement as of the commencement of the Default Management Period;
- **Limited Use:** The Corporation will use the financial resources accumulated through Recovery Loss Cash Payments to extinguish any outstanding ~~loss~~ losses or obligations incurred by the Corporation in connection with the Recovery Event ~~on a pro rata basis, based on the quotient obtained by dividing the amount of each Clearing Member's Clearing Fund deposit required at the beginning of the Default Management Period divided by the aggregate amount of Clearing Fund deposits required at the beginning of the Default Management Period of all Clearing Members other than the suspended Clearing Members~~ after the exhaustion of the Default Waterfall and the resources retained as part of the RAD; and

- **Notice and Implementation:** The Corporation will communicate to each Clearing Member ~~its~~the proportional amount ~~which should be provided by~~that such Clearing Member must pay at the next Settlement Time.

The Recovery Powers form part of the rights and remedies that may be exercised by the Corporation pursuant to a declaration of the commencement of a Recovery Process, therefore ~~the non-payment of a failure to pay by a Clearing Member its~~ Recovery Loss Cash Payment is a ground for the Non-Conforming status and may lead to the suspension of ~~a~~such Clearing Member.

[More information on the Recovery Loss Cash Payment can be found in Section A-1006 of the Rules.](#)

[2.0.2 RECOVERY TOOLS TO RE-ESTABLISH A MATCHED BOOK](#)

[All Recovery Powers of this section are based on Clearing Members' voluntary participation.](#)

[2.0.2.1 Recovery Auction](#)

[At any point in time during the Recovery Process, the Corporation may choose to hold one \(or several\) Recovery Auction\(s\) as a means to re-establish a matched book following the suspension of a Clearing Member. The Recovery Auction\(s\) only relates to the suspended Clearing Member's Fixed Income Transactions. The Recovery Auction relies on the same participation and bidding rules and principles governing the Default Auction as set out in Sub-section 3.3. However, the Recovery Auction does not take into consideration bidding behavior to determine the impact on the loss allocation methodology. The complete loss allocation methodology is detailed in Appendix 2.](#)

[More information on the Recovery Auction can be found in Section A-1007 of the Rules.](#)

[2.0.2.2 Voluntary Contract Tear-Up](#)

In order to return to a matched book, the Corporation may also ask the surviving Clearing Members to agree, on a voluntary basis, to tear-up outstanding positions. The purpose of a Voluntary Contract Tear-Up is to close-out the remaining suspended Clearing Member's positions by terminating simultaneously the offsetting positions held by the surviving Clearing Members. The use of such tool is limited to certain conditions:

Trigger: Voluntary Contract Tear-Up will only be used after declaration of a Recovery Process and if the Corporation determines that it has been unable to transfer, close-out, or liquidate all the positions of the suspended Clearing Member with the standard default management tools as described in Rule A-4 or section 3 of this Manual. Moreover, for Fixed Income Transactions, the Voluntary Contract Tear-Up can only be offered following the holding of a Recovery Auction.

- Notice and Implementation: The Corporation will notify Clearing Members in advance of its intention to implement Voluntary Contract Tear-Up. At the Close of Business, the Corporation will communicate to each Clearing Member the suggested proportion of Open Positions which could be torn-up along with the Tear-Up Value of such Open Positions. This notification will occur after the notification to the Clearing Members regarding the Retained Amounts if applicable.
- For each Clearing Member, the suggested proportion to be torn-up is calculated by allocating the suspended Clearing Member's Open Positions pro rata, based on the proportion of the Clearing Member's opposite net Open Positions to the opposite net Open Positions of all surviving Clearing Members.
- The Tear-Up Value of Open Positions will be determined at the prevailing end-of-day market price as explained in Sub-section A-1008 (4) of the Rules.

IMPLEMENTATION IMPACT FOR FIXED INCOME TRANSACTIONS

For a Fixed Income Transaction, the impact of tearing-up is the following:

- At the date of the Voluntary Contract Tear-Up, any Variation Margin that is owed by the surviving Clearing Member to CDCC will become payable in accordance with the ordinary Variation Margin Settlement Time and any Variation Margin owed by CDCC to the surviving Clearing Member which is not otherwise subject to a Reduced Amount Distribution will become due in accordance with the ordinary Variation Margin Settlement Time.

For further clarity, where the Corporation concurrently exercises its power under the RAD on a Transaction that is also subject to Voluntary Contract Tear-Up, the interaction between the Retained Amount and the amount payable following the Voluntary Contract Tear-Up of a Fixed Income Transaction is as follows:

- If at the date of the Voluntary Contract Tear-Up, for each Fixed Income Transaction to be torn-up, the associated Retained Amount is notified to the Clearing Member, the net amount payable by CDCC for such Fixed Income Transaction will be equal to the Variation Margin owed by CDCC to the surviving Clearing Member less the Retained Amount.
- Any future outstanding payment or delivery obligations in respect of all the Fixed Income Transactions which a Clearing Member has consented to terminate will be terminated. This implies that upon termination, any Coupon Income owed by the Corporation to a surviving Clearing Member will not be distributed. It also means that the Repo Party that sold the Purchased Securities and received the Purchase Price in the Open Leg, will not receive the Purchased Securities and will not pay the Repurchase Price in the Close Leg. Similarly, the Reverse Repo Party that bought the Purchased Securities in the Open Leg and paid the Purchase Price, will not deliver the Purchased Securities and will not receive the Repurchase Price in the Close Leg. Equally, the Buyer who initially agreed to pay the Purchase Price will not receive the Purchased Securities and the Seller will retain the Purchased Securities and will not receive the Purchase Price.
- Any securities pledged to a Clearing Member in respect of a Variation Margin Requirement in connection with the torn-up Fixed

Income Transactions, in possession of either party prior to the date of the Voluntary Contract Tear-Up, shall remain the possession of such party.

- Any Initial Margin pledged in support of the torn-up Transactions by the non-defaulting Clearing Member shall become excess Margin and be retrievable by such Clearing Member after the date of the Voluntary Contract Tear-Up.

IMPLEMENTATION IMPACT FOR OPTIONS AND FUTURES CONTRACTS

- At the date of the Voluntary Contract Tear-Up, any net Gains and Losses on Futures or Option Premium that is owed by the non-defaulting Clearing Member to CDCC will become payable in accordance with the ordinary Settlement Time and any Variation Margin or Option Premium owed by CDCC to the surviving Clearing Member which is not otherwise subject to Reduced Amount Distribution will become due in accordance with the ordinary Settlement Time.
- Any Initial Margin pledged in support of Futures or Options positions by the non-defaulting Clearing Member shall become excess Margin and be retrievable by such Clearing Member after the date of the Voluntary Contract Tear-Up.
- The Corporation shall terminate any future outstanding payment or delivery obligations in respect of all Futures and Options positions which a Clearing Member has consented to terminate. In other terms, from the moment the contract is terminated, the positions cease to exist and no exercise or assignment could be performed.

More information on the Voluntary Contract Tear-Up can be found in Section A-1008 of the Rules.

2.1 LIQUIDITY MANAGEMENT

In managing its liquidity, the Corporation can use, after the financial resources of the Default Waterfall, the available financial resources levied through the exercise of its Recovery Powers such as the Reduced Amounts Distribution and the Recovery Loss Cash

Payment for temporary liquidity funding. Indeed, these recovery tools can be similarly used in accordance with the Rules for either (1) credit purposes to cover any market-driven losses related to a default, or (2) liquidity purposes to cover any liquidity-driven obligation related to the liquidation of the suspended Clearing Member's collateral and positions.

4.3 RECOVERY GOVERNANCE

Following the declaration by the Corporation, and as approved by the Board, of the commencement of a Recovery Process (see Sub-section 4.1), the Board shall delegate to CDCC's management the authority to make any reasonable decision regarding the timing and use of Recovery Powers to ~~allocate~~address uncovered losses or a liquidity shortfall caused by ~~participants~~Clearing Member(s)' ~~defaults~~default(s) and re-establish a matched book, in accordance with the powers entrusted to the Corporation in the Rules. The decision-making ~~around~~respecting the application of recovery tools is a natural extension of the existing Default Management Process. As such, the governance in place for the Default Management Process and set out under Section 2 of this Manual will be extended for the Recovery Process. The Default Management Committee will be responsible to make decisions related to the application of the Recovery Powers with the support of the Emergency Committee.

Notifications

Upon the declaration of a Recovery Process, the Corporation will notify all Clearing Members, the Exchange, all regulatory organizations or agencies having oversight of the Corporation, the Bank of Canada and any such other Entities that the Corporation considers appropriate.

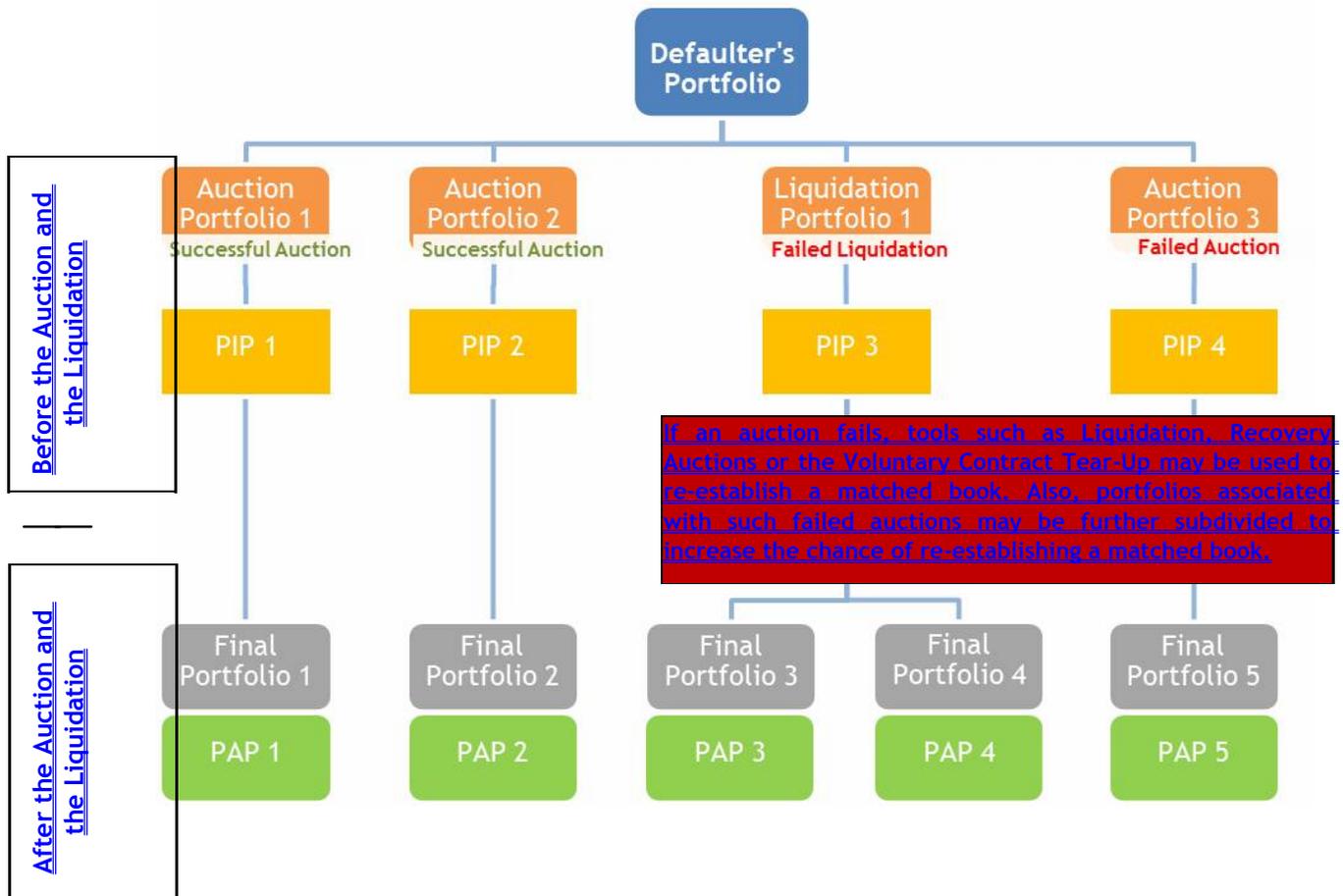
As it is the case while the Corporation is managing a default pre-Recovery Process, appropriate and timely communication will be maintained between CDCC, the Board, its Risk Management Advisory Committee and its regulators.

4.4 RECOVERY LOSS ~~ABSORPTION MECHANISM~~ALLOCATION METHODOLOGY

The Corporation's capacity to absorb ~~loss~~losses increases with the addition of the ~~availability of~~Recovery Powers. The loss allocation methodology that starts with the application of the Default Waterfall, as described in Sub-section 1.6, is supplemented by any financial resources levied by the Reduced Amounts Distribution and then the Recovery Loss Cash Payment(s). However, in ~~absorbing~~extinguishing default-related

losses, CDCC must use the financial resources in the prescribed order. ~~As such, the loss-absorption mechanism that starts with the application of the Default Waterfall, as described in Sub-section 1.6, is supplemented by any financial resources levied by Recovery Loss Cash Payment, as described in Appendix 2.~~

In the event that the Corporation is later able to recover from the ~~defaulting~~suspended Clearing Member any ~~loss incurred by the Corporation in managing the default, it shall reimburse the financial resources of any Clearing Members and the Corporation amount, such amount shall be returned to the other Clearing Members to compensate for any amount charged to them and for the financial resources levied from them as part of the Recovery Process~~ in the reverse order that these ~~financial resources~~ were used to cover the ~~losses~~.Recovery Losses.



Appendix 1: Allotment of Prefunded Financial Resources to Portfolio Incentives Pools (“PIPs”)

Before conducting an auction, the Corporation will calculate and allot, on a preliminary basis, the Prefunded Financial Resources to each PIP related to each Auction Portfolio or Liquidated Portfolio.

A Portfolio Incentive Pool (“PIP”) represents a pool of financial resources allotted by CDCC to one specific portfolio to be auctioned or liquidated.

This step will allow CDCC to:

- Estimate the amount of Prefunded Financial Resources available to extinguish losses for each portfolio; and
- Inform each Eligible Clearing Member of the portion of its Clearing Fund Requirement attributed to each Auction Portfolio which could be at risk of being used to extinguish losses.

The Prefunded Financial Resources will be preliminarily allotted to each PIP, based on the proportion of the Base Initial Margin of each portfolio of the suspended Clearing Member to the Base Initial Margin of all portfolios of the suspended Clearing Member. The allotment methodology for each tranche of Prefunded Financial Resources is described below:

I. Suspended Clearing Member’s resources

The suspended Clearing Member’s resources shall be allotted to each PIP pro rata, based on the proportion of the Base Initial Margin of such PIP to the aggregate Base Initial Margin of all PIPs.

II. CDCC Default Risk Capital (“DRC”)

CDCC DRC's financial resources shall be allotted to each PIP pro rata, based on the proportion of the Base Initial Margin of such PIP to the aggregate Base Initial Margin of all PIPs.

III. Surviving Clearing Members Clearing Fund Requirements

As a first step, the Corporation shall calculate the proportion of each surviving Clearing Member's Clearing Fund Requirement attributed to each asset class, based on the proportion of each Clearing Member's Base Initial Margin for such asset class to the aggregate Base Initial Margin of such Clearing Member.

In a second step, for each asset class, the Corporation shall further sub-divide the amount of Clearing Fund Requirement obtained in the first step above, pro rata, based on the proportion of each PIP's Base Initial Margin to the aggregate Base Initial Margin of all PIPs of that asset class.

Appendix 2: Loss Allocation Methodology

This appendix describes how the Corporation will allocate losses amongst Clearing Members and CDCC, or, in other words, what resources will be used to extinguish losses. As outlined in Sub-sections 1 and 2 below, the loss allocation methodology differs depending on the type of financial resources used to extinguish losses, e.g. CDCC Default Risk Capital, Clearing Fund Requirements, etc.

This loss allocation process can only be done after the end of the Default Management Period, when losses are known. These losses include all default related obligations, costs or expenses, incurred or sustained by the Corporation in connection with the administration, auction, closing-out, liquidation, hedging, financing or transfer of positions or collateral.

The final loss allocation process does not take into account the preliminary allotment of financial resources and PIP as described in Appendix 1, which is performed for information purposes only.

The loss allocation methodology is based on the four following steps:

1. Determination the composition of each Final Portfolio
2. Creation of the Portfolio Allocation Pools (“PAPs”)
3. Determination of the amount of losses for each PAP
4. Allocation of financial resources to each PAP

I. Determination of the composition of each Final Portfolio

The Corporation shall first group together a suspended Clearing Member’s positions which have been closed-out together, whether as an auctioned portfolio, a liquidated portfolio or a group of torn-up positions (each, a “Final Portfolio”).

The Final Portfolio shall only be composed of positions of a single suspended Clearing Member and of the same asset class, except for any positions from other asset classes which have been added by CDCC for hedging purposes.

II. Creation of the Portfolio Allocation Pools (PAPs)

For each Final Portfolio, a Portfolio Allocation Pool shall be created. A Portfolio Allocation Pool (“PAP”) represents, in relation to a Final Portfolio, a pool of losses that arose in connection with such Final Portfolio and financial resources (allocated by the Corporation) to extinguish such losses.

III. Determination of the losses associated with each PAP

For each PAP, the Corporation shall determine what are the losses related to the Final Portfolio, based on the specific losses, expenses and obligations associated with the Default Management Process of such Final Portfolio. For example, for a specific Auction Portfolio which has been successfully auctioned, the direct cost of the auction shall be attributed to its PAP, i.e. the bid amount.

Costs that are generated in the Default Management Process of multiple Final Portfolios and shared between them, should be proportionally allocated to PAPs related to these Final Portfolios.

IV. Allocation of financial resources to each PAP

Once all losses are allocated to all PAPs, the next step is to allocate financial resources to these PAPs to extinguish the losses in a pre-established manner. The sub-sections below provide the detailed methodology to allocate financial resources to each PAP.

1. Default Waterfall Resources

In each PAP, the Corporation will allocate the financial resources contained in the Default Waterfall in the following order:

a) Suspended Clearing Member’s resources

Step 1. The Corporation shall allocate the suspended Clearing Member’s resources to each PAP pro rata, based on the proportion of the PAP’s Base Initial Margin to the aggregate Base Initial Margin of all PAPs.

Step 2. In each PAP, the Corporation shall extinguish the losses with the allocated suspended Clearing Member’s resources.

Step 3. For each asset class, if there remains a loss in a PAP after the allocation of the suspended Clearing Member's resources, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess resources of the suspended Clearing Member pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses.

Step 4. Across all asset classes, if there remains a loss in a PAP after the allocation of the suspended Clearing Member's resources, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess resources of the suspended Clearing Member's pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses.

- Suspended Clearing Member's resources should be fully exhausted across all PAPs and all asset classes before applying CDCC Default Risk Capital to cover losses as described below. If the suspended Clearing Member's resources have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

b) CDCC DRC

Step 1. CDCC shall allocate CDCC DRC to each PAP pro rata, based on the proportion of such PAP's Base Initial Margin to the aggregate Base Initial Margin of all PAPs.

Step 2. In each PAP, the Corporation shall extinguish the loss with the allocated CDCC DRC.

Step 3. For each asset class, if there remains a loss in a PAP after the allocation of CDCC DRC, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess resources of CDCC DRC pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated CDCC DRC has proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated CDCC DRC has proven insufficient to cover their respective losses.

Step 4. Across all asset classes, if there remains a loss in a PAP after the allocation of CDCC DRC, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess CDCC DRC pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the CDCC DRC has proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated CDCC DRC has proven insufficient to cover their respective losses.

- CDCC DRC should be fully exhausted across all PAPs and all asset classes before allocating the surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the CDCC DRC has proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

c) Surviving Clearing Members' Clearing Fund Requirements

Step 1. Initial Allocation

Sub-Step.1 CDCC shall allocate the surviving Clearing Members' Clearing Fund Requirements to each PAP in the following manner:

- As a first step, the Corporation shall calculate the portion of each surviving Clearing Member's Clearing Fund Requirement attributed to each asset class pro rata, based on the proportion of each Clearing Member's Base Initial Margin for such asset class

relative to the aggregate Base Initial Margin of such Clearing Member; and

- In a second step, for each asset class, the Corporation shall further sub-divide the amount of Clearing Fund Requirement obtained in the first step above, pro rata, based on the proportion of each PAP's Base Initial Margin on the aggregate Base Initial Margin of all PAPs of that asset class.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata, based on the proportion of (1) each Clearing Member's allocated Clearing Fund Requirement to such PAP, to (2) the aggregate Clearing Fund Requirements of all Clearing Members to such PAP, with the use of allocated surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- However, for PAPs related to Final Portfolios that were successfully auctioned, the loss allocation shall be subject to the subordination of each surviving Clearing Member's Clearing Fund Requirement based on such Clearing Member's bidding behavior in the PAPs where the loss is absorbed (please refer to Appendix 3-Bidding Incentives).

Step 2. Intra-Class Allocation

Sub-Step.1 For each asset class, if there remains a loss in a PAP after the allocation of the surviving Clearing Members' Clearing Fund Requirements, while there is still an excess of resources in other PAPs, such outstanding losses will be extinguished by these excess surviving Clearing Members' Clearing Fund Requirements. This will be performed by allocating, for each Clearing Member its aggregated excess Clearing Fund Requirements pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated surviving Clearing Members' Clearing Fund

Requirements have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Clearing Fund Requirement to such PAP, on (2) the aggregate allocated excess Clearing Fund Requirements of all Clearing Members to such PAP, with the allocated excess surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- However, for PAPs related to Final Portfolios that were successfully auctioned, the loss allocation shall be subject to the subordination of each surviving Clearing Member's Clearing Fund Requirement based on such Clearing Member's bidding behavior in the PAPs where the loss is absorbed (please refer to Appendix 3-Bidding Incentives).

Step 3. Inter-Class Allocation

Sub-Step.1 Across all asset classes, if there remains a loss in a PAP after the allocation of the surviving Clearing Members' Clearing Fund Requirements, while there is still an excess of resources in other PAPs, those outstanding losses will be extinguished by these excess surviving Clearing Members' Clearing Fund Requirements. This will be performed by allocating, for each Clearing Member, its aggregated excess Clearing Fund Requirements pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Clearing Fund Requirement to such PAP, on (2) the aggregate allocated excess Clearing Fund Requirements of

all Clearing Members to such PAP with the allocated excess surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- Surviving Clearing Members' Clearing Fund Requirements should be fully exhausted across all PAPs and all asset classes before allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the suspended Clearing Member's resources have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

- The surviving Clearing Members' Clearing Fund Requirements of all Clearing Members should be fully exhausted across all PAPs and all asset classes before allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the surviving Clearing Members' Clearing Fund Requirements have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

d) 2nd surviving Clearing Members' Clearing Fund Requirements

- The methodology for allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to each PAP shall follow the same allocation methodology used for the allocation of the surviving Clearing Members' Clearing Fund Requirements and described in the previous section 1(c).

2. Recovery Power Resources

In the event that a Recovery Process has been declared by CDCC and that Recovery Powers are used to extinguish uncovered losses, the loss allocation methodology provides for the usage of financial resources levied by the RAD and the Recovery Loss Cash Payment after the application of the Default Waterfall.

a) Retained Amounts

Step 1. Initial Allocation

Sub-Step.1 CDCC shall allocate the sum of Retained Amounts to each PAP, in the following manner:

- As a first step, the Corporation shall calculate the portion of each surviving Clearing Member's Retained Amounts attributed to each asset class, based on the proportion of each Clearing Member's Base Initial Margin for such asset class to the aggregate Base Initial Margin of such Clearing Member; and
- In a second step, for each asset class, the Corporation shall further sub-divide each Clearing Member Retained Amounts obtained in the first step above pro rata, based on the proportion of each PAP's Base Initial Margin to the aggregate Base Initial Margin of all PAPs of that asset class. Provided however that, in the case of the suspension of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata, based on the proportion of (1) each Clearing Member's allocated Retained Amounts to such PAP, to (2) the aggregate Retained Amounts of all Clearing Members to such PAP, with the use of the allocated Retained Amounts calculated in Sub-Step 1.

Step 2. Intra-Class Allocation

Sub-Step.1 For each asset class, if there remains a loss in a PAP after the allocation of the Retained Amounts, while there is still an excess of resources in other PAPs, such outstanding losses will be extinguished by these excess Retained Amounts. This will be performed by allocating, for each Clearing Member, its aggregated excess Retained Amounts pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated Retained Amounts

have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated Retained Amounts have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Retained Amounts to such PAP, on (2) the aggregate excess Retained Amounts of all Clearing Members to such PAP, with the use of the allocated excess Retained Amounts calculated in Sub-Step 1. Provided however that, in the case of the suspension of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

Step 3. Inter-Class Allocation

Sub-Step.1 Across all asset classes, if there remains a loss in a PAP after the allocation of the Retained Amounts, while there is still an excess of resources in other PAPs, those outstanding losses will be extinguished by these excess Retained Amounts. This will be performed by allocating, for each Clearing Member, its aggregated excess Retained Amounts pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated Retained Amounts have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated Retained Amounts have proven insufficient to cover their respective losses. Provided however that, in the case of the suspension of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

For further clarity, the Inter-Class Allocation methodology permits the use of any Retained Amounts levied from any

Clearing Member, without regard to the asset class that such Clearing Member's membership covers, to be used to absorb losses stemming from any PAP in any asset class. This implies that Retained Amounts levied from an LCM or another Fixed Income Clearing Member may be allocated to PAPs of Futures or Options asset classes.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses on pro rata of (1) each Clearing Member allocated excess Retained Amounts to such PAP, on (2) the aggregate excess Retained Amounts of all Clearing Members to such PAP, with the use of the allocated excess Retained Amounts calculated in Sub-Step 1.

- Subject to the requirement that LCM Retained Amounts in connection with the suspension of one Clearing Member be used only to absorb losses incurred by the Corporation in relation to the same suspended Clearing Member, in the case of the suspension of more than one Clearing Member, Retained Amounts should be fully exhausted across all PAPs and all asset classes before allocating the Recovery Loss Cash Payment to cover losses as described below. If the Retained Amounts have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

b) Recovery Loss Cash Payment

After the complete exhaustion of Retained Amounts, the outstanding losses across all PAPs are extinguished with the Recovery Loss Cash Payment pro rata, based on the proportion of each surviving Clearing Member's Clearing Fund Requirement to the aggregate Clearing Fund Requirements of all Clearing Members.

Appendix 3: Bidding Incentives and the Loss Allocation Methodology

For each PAP where the portfolio has been successfully auctioned, and where losses remain after the allocation of the suspended Clearing Member financial resources and CDCC DRC, the loss allocation to the surviving Clearing Members' Clearing Fund Requirements will be based on the bidding behavior of the Eligible Clearing Members. This appendix describes:

1. How CDCC will categorize each Eligible Clearing Member based on their bidding behavior.
2. How CDCC will allocate losses, related to each PAP, to each Eligible Clearing Member and then extinguish such losses with their allocated surviving Clearing Members' Clearing Fund Requirements.
3. How CDCC will allocate losses to non-Eligible Clearing Members.

I. Bidding Behavior Assessment

For each successfully auctioned portfolio, the Corporation will categorize each Eligible Clearing Member (other than a Limited Clearing Member) based on its bidding behavior in the Default Auction in order to subordinate their Clearing Fund Requirements in the following order:

1. Non-bidders: Eligible Clearing Members that did not submit any bid⁸;
2. Low-bidders: Eligible Clearing Members that submitted a higher bid relative to the prevailing bid; and
3. High-bidders: The prevailing bidder plus any Eligible Clearing Member that submitted an equal bid relative to the prevailing bid.

II. Loss Allocation Methodology:

⁸ For further clarity, an Eligible Clearing Member which indicated that it will not be participating in the auction will be considered a Non-bidder.

After the categorization of the Eligible Clearing Members based on their bidding behavior, losses are first allocated and then extinguished with the surviving Clearing Members' Clearing Fund Requirements within each category of bidders in the following order:

1. Non-bidders:

For each PAP, after the exhaustion of CDCC DRC, the total amount of outstanding losses, shall be extinguished pro rata, based on the proportion of (1) its Clearing Fund Requirements in respect of such PAP, to (2) the aggregate amount of Non-bidders' Clearing Fund Requirements in respect of such PAP, with the use of each Non-bidder's resources as calculated in Appendix 2:

$$Allocation_Prorata_Non_Bidder_CMi = \frac{CF_{NB_CMi}}{\sum CF_{NB_CMi}}$$

Where:

CF_{NB_CMi} is the Clearing Fund Requirements of the Non-bidder Clearing Member i that is allocated to a PAP.

Within each PAP, all Non-bidders' Clearing Fund Requirements should be fully exhausted before applying Low-bidders' Clearing Fund Requirements to cover losses as described below.

2. Low-bidders:

For each PAP with outstanding losses, the total amount of associated losses shall be extinguished based on its bid variance in respect of the winning bid, with the use of each Low-bidder's resources. In other terms, losses are allocated to each Low-bidder pro rata, based on the proportion of (1) the difference between its provided bid and the prevailing bid in respect of such PAP ("Bid Variance"), to (2) the sum of all Low-bidders' Bid Variances in respect of such PAP:

$$Allocation_Prorata_Low_Bidder_CMi = \frac{BID_{LB_CMi} - BID_{winner}}{\sum (BID_{LB_CMi} - BID_{winner})}$$

Where:

BID_{LB_CMi} is the provided bid of the Low-bidder Clearing Member i; and

BID_{winner} is the prevailing bid for the auction.

Within each PAP, all Low-bidders' Clearing Fund Requirements should be fully exhausted before applying High-bidders' Clearing Fund Requirements to cover losses as described below.

Therefore, if there remains a loss after the first loss allocation to the Low-bidders' Clearing Fund Requirements, while there are still some Clearing Members in the Low-Bidders category with excess resources, such outstanding losses will be extinguished with the use of those excess Clearing Fund Requirements according to the same allocation methodology described in this Low-bidders Section. Such procedure shall be repeated until all the Low-bidders' Clearing Fund Requirements are exhausted.

3. High-bidders:

For each PAP with outstanding losses, the total amount of associated losses shall be extinguished pro rata, based on the proportion of (1) its Clearing Fund Requirement in respect of such PAP, to (2) the aggregate amount of High-bidders' Clearing Fund Requirements in respect of such PAP with the use of each High-bidder's resources:

$$Allocation_Prorata_High_Bidder_CMi = \frac{CF_{HB_CMi}}{\sum CF_{HB_CMi}}$$

Where:

CF_{HB_CMi} is the Clearing Fund Requirements of the High-bidder Clearing Member i that is allocated to a PAP.

III. Loss Allocation to Non-Eligible Clearing Member:

Within a PAP in a specific asset class, Clearing Members (excluding Limited Clearing Members) who are not eligible to participate in the auction will be exposed to losses once all the surviving Clearing Members' Clearing Fund Requirements of Eligible

Clearing Members allocated to such asset class have been exhausted. In other terms, non-Eligible Clearing Members will be exposed to losses in the Inter-Class Allocation step, i.e. when losses are extinguished across all asset classes, as described in appendix 2, section IV) 1. c) Step 3 Inter-Class Allocation.



DEFAULT MANUAL

30 AUGUST 2017

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This Default Manual (the “Manual”) intends to summarize the Rules and provides certain details concerning the default management process of the Canadian Derivatives Clearing Corporation (“CDCC” or the “Corporation”) which is comprised of the actions, rights and remedies that the Corporation may take with respect to, and in connection with, Clearing Members in financial difficulty or potentially in default of any or all obligations under the Rules as well as the governance, steps in implementing the default management and risk mitigation tools available to the Corporation (thereafter the “Default Management Process”). The Manual also addresses the actions, rights and remedies that the Corporation may take with respect to all Clearing Members upon the declaration of a Recovery Process, which also forms part of the Default Management Process. In case of conflict between the provisions set out in this Manual and the Rules of the Corporation, the Rules will prevail. Terms with capitals which are not defined in this Manual have the meanings ascribed to them in the Rules.

A fundamental objective of a central counterparty is to ensure the integrity of payments and/or physical delivery of securities, even in the unlikely event of a Clearing Member default. Since the default of one or more Clearing Members may have an impact on the continuity of clearing operations, the Corporation must ensure that efficient mechanisms and processes are in place, capable of limiting the adverse impacts of such an event, with respect to monitoring and the determination of a Clearing Member’s Non-Conforming Member status and a Clearing Member’s suspension. As such, this Manual is meant to:

1. describe the grounds and events which may trigger the implementation of the Default Management Process and the enforcement actions that may be taken by the Corporation throughout the process;
2. describe the governance process followed by the Corporation;
3. describe the risk mitigation tools that can be used by the Corporation; and
4. describe the Recovery Process and the related powers.

Section 1: Default Management Process - Triggers and Implementation

The grounds and events which may trigger the implementation of the steps, decisions, enforcement actions or remedies that may be taken by the Corporation as part of its Default Management Process are described below. The Rules, notably Rule A-1A - Membership in the Corporation, Rule A-3 - Capital Requirements, Rule A-6 - Clearing Fund Deposits and Rule A-7 - Margin Requirements, support CDCC's authority in these actions and must be adhered to with extreme rigor.

1.1 OBJECTIVES OF DEFAULT MANAGEMENT

Participants in the Default Management Process should at all times bear in mind the objectives of the default management exercise. These are delineated below:

- To minimize Clearing Member losses deriving from an inability of the Corporation to make settlement payments, protect surviving Clearing Members' Margin Deposits, and otherwise manage its responsibilities in a manner consistent with orderly markets.
- To ensure the continued effective functioning of the clearing process both during and after the default of a Clearing Member.
- To use all available powers and resources to protect the financial assets and positions of Clearing Members not contributing to the default. This includes, wherever possible, the comprehensive and efficient transfer of Client Accounts associated with a suspended Clearing Member, including any position maintained in such account and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member.
- To minimize the market impact of the Default Management Process.
- To ensure the continued solvency of the Corporation and timely access to liquidity both during and after the Default Management Process.
- To communicate with regulatory authorities on actions taken throughout the Default Management Process.

Corporation management, staff and agents should conduct themselves at all times during the Default Management Process in a manner consistent with these objectives, and in general without regard to other considerations.

1.2 TRIGGERS LEADING TO NON-CONFORMING OR SUSPENSION STATUS

Critical to the process of default management is, of course, defining the grounds and events which can lead a Clearing Member to default on its obligation and result in the Corporation declaring such member Non-Conforming or suspending it, where warranted. As a general rule, the Corporation views any situation which would, in its judgment, impede a Clearing Member's ability to meet its obligations in the manner specified in

Section A-1A04, as grounds to declare a Clearing Member Non-Conforming. Sections A-1A04 and A-1A05 of the Rules provide the details of the grounds and events that can lead the Corporation to declare a member Non-Conforming or suspend it, respectively.

For the avoidance of doubt, as indicated in the Rules, the Corporation may in advance of, or in anticipation of, any default, including a breach of eligibility or standard of membership requirement which the Clearing Member is required to meet on an ongoing basis, declare a Clearing Member Non-Conforming.

Where the Non-Conforming Member is insolvent or is unable or likely to be unable to meet its obligations under the Rules on a continuing basis, and has no reasonable prospect of returning to good standing or curing its default within a reasonable timeframe, the Corporation, may then suspend the Non-Conforming Member. The Corporation will act accordingly for any default, whether actual or imminent, that is of such a gravity that suspension would be warranted, taking into consideration the protection of the integrity of the market.

1.3 STATUS ASSOCIATED WITH A DEFAULT

The Rules specify two distinct status levels associated with the default of a Clearing Member. The first is Non-Conforming status. At any point when the Clearing Member is or may become insolvent or unable to meet its obligations, management of the Corporation may declare that Clearing Member to be a Non-Conforming Member. Section A-1A04 of the Rules provides the grounds on which the Corporation may do so. Upon a declaration of Non-Conforming status, the Corporation is empowered with the authority, as further specified below, to undertake a wide range of mitigating actions.

After giving consideration to the gravity of the situation and the likelihood of a remediation of the default by the Clearing Member and in order to protect the integrity of the market, the Board may, in its sole discretion, choose to suspend the Non-Conforming Member.

The Corporation's management is responsible to declare a Clearing Member Non-Conforming whereas a suspension decision must be taken by the Board. Please refer to sections A-1A04 and A-1A05 of the Rules which lay out the specificities of Non-Conforming and suspension statuses respectively.

1.4 POWERS OF THE CORPORATION IN THE DEFAULT MANAGEMENT PROCESS

1.4.1 IMPOSITION OF ADDITIONAL MARGIN CALL IN PRE-DEFAULT

In accordance with Section A-702, the Corporation, following a management decision, may, without advance notice and at its sole discretion, impose an additional Margin on a Clearing Member, whether Non-Conforming or not, for an indeterminate period. While this may be necessary under a wide range of

circumstances, it is particularly relevant in situations where the Corporation has reason to believe a default is imminent but has yet to take a decision on Non-Conforming status.

The Clearing Member will be informed and will have to meet such Additional Margin requirement within the same deadlines as regular Margin calls.

1.4.2 IMPLEMENTATION OF DEFAULT MANAGEMENT PROCESS: NON-CONFORMING AND SUSPENSION

In the event that the Corporation or the Board, as applicable, chooses to place a Clearing Member in either Non-Conforming Member status or suspension, it must, as soon as practicable, assess the situation and ensure that any and all remedies available to it are at its immediate disposal. The Corporation must use any and all commercially reasonable efforts to manage the default process.

For further clarity, the Corporation may simultaneously declare a Member Non-Conforming and suspend such Member, without applying first the measures available under the Non-Conforming status.

Taking into consideration the context and materiality of the trigger event and the ability of the Clearing Member to correct the situation within reasonable delay, the Corporation or the Board, as applicable, may therefore choose to undertake any of the following set of actions in its efforts to mitigate associated damage.

1.4.3 ENFORCEMENT ACTIONS PURSUANT TO A NON-CONFORMING STATUS

- Prohibit and/or impose limitations on the acceptance and / or clearance of Transactions by the Non-Conforming Member.
- Requiring such Clearing Member to reduce or close out existing Transactions in such Clearing Member's accounts with the Corporation.
- Prevent or restrict the Non-Conforming Member's right to withdraw any excess in Margin Deposits pursuant to Section A-607 or Section A-704.
- Transferring, requiring to transfer or transferring on its behalf, all or any portion of a Non-Conforming Member's Client Account maintained by such Clearing Member with the Corporation, any position maintained in such account and any Margin Deposits held by the Corporation in respect of such Account, to another Clearing Member.
- Undertake any legal action against the Non-Conforming Member that in the judgment of the Corporation may help to mitigate default-related losses.
- Sanction, reprimand, fine or impose a penalty on the Non-Conforming Member.
- Suspend the Non-Conforming Member.

1.4.4 ENFORCEMENT ACTIONS PURSUANT TO A SUSPENSION

In addition to the actions that the Corporation may take under the Non-Conforming Status, CDCC may, following the suspension of a Clearing Member:

- Seize all Margin Deposits posted to the Corporation by the suspended Clearing Member, including its contribution to the Clearing Fund and use it to satisfy such Clearing Member's obligations.
- Seize control of all Open Positions held by the suspended Clearing Member.
- Gain access, and, if necessary, control of the suspended Clearing Member's prescribed records, so as to ensure the continued efficient processing of business, and to ensure the suspended entity continues to comply with all Rules.
- Neutralize market exposures through the use of hedging instruments where, as determined by the Corporation, market conditions do not allow for an orderly auctioning or closeout of a suspended Clearing Member's Open Positions in a timeframe which is consistent with the Corporation's risk management model.
- Render a determination as to which Firm Accounts and Market Maker Accounts of the suspended Clearing Member (subject to the objective of protecting to the largest extent possible, all Client Accounts) may have offsets which could be netted for risk reduction purposes.
- Place all accounts of the suspended Clearing Member on liquidation only status.
- With respect to such accounts, effect liquidation of Open Positions, either directly by Corporation staff, or as appropriate, through appointed agents.
- Schedule an auction to transfer all remaining Open Positions to other Clearing Members at best available prices.
- Potentially postpone delivery obligations in accordance with Rule A-8 if, in the judgement of the Corporation, not doing so would expose the Corporation and surviving Clearing Members to increased risk of financial loss.
- Apply any and all available financial resources, as further described below.

1.5 DEFAULT MANAGEMENT PERIOD

The Default Management Period defines the period during which Clearing Members' financial resources are exposed to losses following a default from other Clearing Member(s).

While the exact definition is provided in Rule A-411, the intent is to define the Default Management Period as the period starting from the suspension of a Clearing Member and ending when this default has been completely managed and the Corporation declares the Default Management Process to be completed. A default is deemed to be completely managed when:

1. all obligations, losses and expenses are known or can reasonably be determined and have been successfully absorbed or otherwise settled; and
2. the Corporation has successfully reestablished a matched book.

For example, if a second Clearing Member suspension occurs during the Default Management Period, this period is extended and will end when the two defaults have been completely managed. Hence, if the second default occurs while the Corporation is still managing a first one, the maximum amount of Clearing Members' financial resources potentially exposed to losses will remain the same for the duration of the Default Management Period whether one or several defaults are processed.

1.6 DEFAULT WATERFALL: APPLICATION OF FINANCIAL RESOURCES TO COVER DEFAULT-RELATED LOSSES

In implementing the Default Management Process, the Corporation will aim at minimizing, to the extent possible and on a best efforts basis, the losses to the Corporation and its stakeholders. If there are nonetheless losses to the Corporation, the Corporation must apply, in specified order, a series of financial resources to ensure its ongoing viability and financial solvency. The sections (i) to (iv) below describe the financial resources which form the Default Waterfall and the order in which CDCC will apply them to cover losses associated with the liquidation of a suspended Clearing Member. Elements (i) to (iii) are referred to as "Prefunded Financial Resources".

i. Suspended Clearing Member Resources

- **Suspended Clearing Member Margin Deposit (Other than Clearing Fund deposits).** The first line of financial protection is the Margin Deposit posted by the suspended Clearing Member as part of the Corporation's routine collateralization process; and
- **Suspended Clearing Member's Clearing Fund deposits.** As specified by the Rules, each Clearing Member (other than a Limited Clearing Member) must also post a contribution to the Clearing Fund. Once the Corporation has exhausted the suspended Clearing Member's Margin Deposit, it will next use the suspended Clearing Member's contribution to the Clearing Fund in its loss absorption effort.

If after applying these resources of the suspended Clearing Member, a shortfall still remains, the Corporation would, as indicated below, use the resources of the Corporation to cover the losses.

ii. Resources of the Corporation (Default Risk Capital - DRC)

- CDCC has capital reserves set aside specifically for the purpose of absorbing any loss outstanding after the exhaustion of the suspended Clearing Member's resources. This capital, which is currently \$5 million, is referred to herein as "Default Risk Capital" or "DRC".

If, after applying these resources of the suspended Clearing Member and of CDCC, a shortfall still remains, CDCC will, as indicated below, use the required Clearing Fund deposits (referred therein as "Clearing Fund Requirement") of the other Clearing Members to cover the loss.

iii. Surviving Clearing Members Clearing Fund Requirements

- The Corporation will subsequently use the Clearing Fund Requirements of the surviving Clearing Members (i.e. the Clearing Members that have not been suspended). For further details on the loss allocation, please refer to Appendix 2.

The above set of financial resources (listed in (i) to (iii)) which form the Prefunded Financial Resources of the Default Waterfall and are readily available for the Corporation to extinguish financial losses stemming from a Clearing Member's default are deemed highly reliable as they are under the control of CDCC and are held for this sole purpose. All Margin and Clearing Fund deposits are subject to a first ranking security interest granted by the Clearing Members to CDCC for such purpose.

iv. 2nd Surviving Clearing Members' Clearing Fund Requirements

- If after applying all of the financial resources specified above, a loss still persists, the Corporation may request that the remaining Clearing Members (other than Limited Clearing Members) replenish their Clearing Fund Requirements, in the manner specified in Section A-610 of its Rules. The Corporation in total may apply up to a maximum of 200%¹ of the Clearing Fund Requirements of all such remaining Clearing Members, to satisfy the outstanding obligation as provided in Section A-609(5).

The Corporation shall follow the prescribed order of the Default Waterfall, and communicate with all relevant parties in an effective fashion. In the event that the Corporation is able to recover any loss incurred from the suspended Clearing Member, it shall first reimburse any other Clearing Member Clearing Fund Requirements that were used to extinguish losses, in the reverse order of their application, before reimbursing CDCC's own capital reserves used.

1.7 MAKING GOOD ON CHARGES TO CLEARING FUND

¹ The maximum percentage of 200% includes the prefunded surviving Clearing Members Clearing Fund Requirements described in sub-section iii.

As described in Sub-section 1.6 above on the Default Waterfall, a surviving Clearing Member is potentially exposed to a loss representing 2 times its Clearing Fund Requirement during a Default Management Period.

However, the Corporation must have the capacity to replenish promptly any depleted financial resources to ensure that CDCC maintains appropriate financial resources to continue to operate in a safe and prudent manner and maintain its Cover 1² status. As such, each Clearing Member (other than a Limited Clearing Member) is subject to an obligation to make good on charges to the Clearing Fund whenever an amount is paid out of the Clearing Fund Requirement. During a single Default Management Period, each Clearing Member is however only liable to make good an additional 200% of its Clearing Fund deposit required at the beginning of the Default Management Period. The additional contribution must be made no later than 2:00 p.m. on the Business Day following the date that the amount is paid out unless the Corporation issues a notice specifying a later date.

Section 2: Default Management Governance

In this section, the Corporation outlines the specific actions to be taken by its staff, management and the Board, in order to ensure that it quickly identifies, reacts to, and effectively manages a condition of default. The two sub-sections are:

1. Governance Structure; and
2. Roles and Responsibilities upon a Declaration of Non-Conforming or Suspension.

2.1 GOVERNANCE STRUCTURE

The Corporation's procedures for the management of a default are governed, under the auspices of its Board, by two Committees, presented below in their hierarchical order:

- Default Management Committee ("DMC")
- Emergency Committee ("EC")

In the default process, it is important for the Corporation to react in as timely a fashion as possible to identify the potential for a default by a Clearing Member. As such, under the authority of the President or his designee, if at any point the Corporation receives information which would, in its view, acting reasonably, likely lead to a default event by any Clearing Member, it will, as soon as practicable, convene a meeting of the Default Management Committee. The DMC is comprised of the individuals holding the following positions (or their delegates):

² The Cover 1 regulatory standard requires the Corporation to have at all times sufficient financial resources to cover the default of the Clearing Member and its Affiliates representing the largest stressed aggregate credit exposure for the Corporation.

- President of CDCC
- Vice-President & Chief Risk Officer, CDCC
- Vice-President & Chief Commercial Officer, CDCC
- Treasurer, CDCC
- Director Risk Management, CDCC
- Vice-President Integrated Operations, GES
- Director Strategic Initiatives, CDCC
- Chief Legal Officer, CDCC
- Chief Compliance Officer, CDCC
- Head, Client Technology Delivery - Clearing Systems, GES

Each of these individuals, in managing their departments, must act with due rigor to assess issues, identify associated magnitudes, recommend actions and inform management, the Board and other Corporation stakeholders, as appropriate.

The responsibility of the DMC is to make decisions related to the Default Management Process, e.g. the determination of the Non-Conforming status and actions to be implemented to limit losses to the Corporation and the conforming Clearing Members. The DMC can count on the participation of a sub-committee to help perform its mandate, namely the Emergency Committee (“EC”).

The EC, chaired by the VP and Chief Risk Officer or his designee, is composed of all DMC members plus the following specialists (and/or any other representatives or designees deemed appropriate to involve in the process):

- CDCC Treasurer
- MX Vice-President, Regulatory Division
- Head of Corporate Communications , TMX
- Director, Market Operations, MX
- Managers, Risk Management

It will be the responsibility of the EC to provide an ongoing assessment of the situation, and to report, as appropriate, to the DMC and the Board, so as to ensure these bodies are in a position to render informed decisions throughout the process.

2.2 ROLES AND RESPONSIBILITIES UPON A DECLARATION OF NON-CONFORMING OR SUSPENSION

The Rules provide for two statuses associated with the default of a Clearing Member: Non-Conforming Member status and suspension. Non-Conforming Member status can be determined by the Corporation's management, while a suspension must be determined by the Board.

2.2.1 DECLARATION OF NON-CONFORMING MEMBER STATUS

Grounds

Section A-1A04 addresses the grounds upon which the Corporation may declare the Non-Conforming Member status. As expressed in Section A-1A04, these grounds are not exhaustive.

Communication

The Clearing Member should notify the Corporation if it is insolvent or unable to honor its obligations under the Rules.

However, in the event that the Clearing Member is declared as a Non-Conforming Member by the Corporation, the Corporation must inform the Clearing Member in writing or by telephone.

Authority

The Corporation may decide on Non-Conforming Member status.

Required Response by Non-Conforming Members

A Clearing Member which has experienced an event, technical or otherwise, as a result of which it fails or finds itself likely to fail to meet any of its day-to-day operational needs for its business must inform the Corporation immediately of such event. Failure to notify the appropriate Corporation staff members immediately may result in any actions contemplated under the Rules, including disciplinary actions. A Non-Conforming Member may in certain cases remedy its situation via wiring required funds or posting additional collateral to the Corporation.

Contemporaneous to the notification of Non-Conforming Member status to a Clearing Member, the Corporation will ask such Clearing Member to state in writing its assertions with respect to each of the following:

- Cause of the action which placed it in Non-Conforming Member status;
- Remedies for the immediate circumstance; and

- Changes in its financial profile and operating protocols to guard against recurrence.

Corporation staff will work with the Non-Conforming Member to secure and assess its written response. Contemporaneously, the EC will work with the DMC to determine any potential immediate additional actions, including recommendations to the Board regarding suspension.

In the event that a remedy occurs in a timely fashion, the Corporation will review the Non-Conforming Member's written explanation and will then determine next steps, including the potential removal of Non-Conforming Member status, or recommendations to the Board for suspension.

In executing these procedures, the Corporation must remain mindful of the narrow time window available to it to determine the next steps in the process. It is essential that all members of management and all Board members make themselves available as necessary to render timely and efficient decisions under these circumstances.

Implementation

The Corporation must work in concert with the Non-Conforming Member and the appropriate regulatory authorities to rectify the Clearing Member's Non-Conforming Member status.

The enforcement actions available to the Corporation, as set out under Section A-401 and as further explained in Section 1 of this Manual, are not exhaustive and are not necessarily presented in chronological order, and can be adapted as required by the Corporation according to the circumstances that prevail during the period the Clearing Member is a Non-Conforming Member.

Notifications

Once the Corporation has declared a Clearing Member to be a Non-Conforming Member, the Corporation will immediately consider its notice obligations. Those entities whose notification is considered include:

- The Clearing Members
- Appropriate regulatory authorities
- Exchanges and central clearing organizations ("CCOs")

While it will be the prerogative of the Corporation to determine the timing and content of its outside disclosures, it will nonetheless immediately inform any CCOs with which the Corporation has in place a Memorandum of Understanding for such information sharing.

2.2.2 DECLARATION OF A SUSPENSION

Grounds

A Non-Conforming Member may be suspended in accordance with Section A-1A05 including any conditions that the Corporation may reasonably deem relevant in accordance with Section A-1A05. Sub-section 1.2 of this Manual also discusses the triggers which may lead to a suspension. In effect, the Corporation, upon approval of the Board, may decide to suspend a Clearing Member without it first having been declared Non-Conforming.

Communication

The Corporation will communicate to the Clearing Member a written statement setting out the grounds for its suspension.

Authority

The Board has the authority regarding the suspension and lifting of a Clearing Member's suspension.

Implementation

Once the Board approves a suspension, the Corporation ceases to act on behalf of the Clearing Member.

According to Section A-1A05, the Corporation may then implement any of the enforcement actions set out under Section A-401 and as described in Section 1 of this Manual.

As mentioned in Section A-1A05, the suspension may be total or may be for any function with respect to a particular security or class of securities, with respect to a particular Transaction or class of Transactions, or with respect to securities or Transactions generally.

The Board may lift a Clearing Member's suspension at any time.

Notifications

Once the Board has declared a Clearing Member to be suspended, the Board will immediately consider its notice obligations. Those entities whose notification is considered include:

- The Clearing Members
- Appropriate regulatory authorities
- Exchanges and CCOs

While it will be the prerogative of the Board to determine the timing and content of its outside disclosures, it will nonetheless immediately inform any CCOs with which the Corporation has in place a Memorandum of Understanding for such information sharing.

Appeal

According to Section A-1A07, the Clearing Member may appeal a suspension decision. Such appeal does not impede the actions of the Corporation in the Default Management Process.

Section 3: Risk Mitigation Tools

Once a Clearing Member has been suspended, the Corporation shall take specific actions in order to protect the Corporation and the surviving Clearing Members. Conceptually, these actions can be aggregated into three categories and are normally executed in the order presented. While some actions might have been initiated by the Corporation pursuant to a declaration of Non-Conforming status, including, namely, the transfer of Client Accounts, this section details how the Corporation will implement the risk mitigation tools, upon the suspension of the Clearing Member.

- **Prevention:** Prevention controls are the starting point of the management of a default under the suspension status. They are focused on preventing new transactions to be cleared in the suspended Clearing Member’s books.
- **Control:** Such actions are focused on taking control over the suspended Clearing Member’s assets and positions.
- **Risk mitigation:** Such actions are focused on transferring risks, re-establishing a matched book, and neutralizing risks, at the lowest cost possible for the Corporation and the surviving Clearing Members, while managing the liquidity risk associated with the Default Management Process.

This section provides more information on the risk mitigation tools available to the Corporation.

3.1 TRANSFER OF CLIENT ACCOUNTS

The Corporation will attempt to transfer Client Accounts, in whole or in part, to the books of other Clearing Members. Note that, as specified in Sub-section 1.1 (Objectives) of this Manual, the efficient and comprehensive transfer of all Client Accounts is an identified objective of the Default Management Process. For the avoidance of doubt, this includes transferring any position maintained in such account, or any account carried by such Clearing Member and any Margin Deposits held by the Corporation in respect of such account, to another Clearing Member.

3.2 LIQUIDATION

Upon a Clearing Member suspension, the Corporation may either liquidate, close-out, and/or auction the suspended Clearing Member’s positions as a means to crystallize their value and re-establish a matched book. The liquidation process may take place before, in parallel or subsequent to any auction(s) if the Corporation is not satisfied with the auction(s) outcome. For example, the liquidation could be preferred to the auction if the suspended Clearing Member’s portfolio is small and liquid. A portfolio that was successfully liquidated shall be referred to as a “Liquidated Portfolio”.

3.3 DEFAULT AUCTION

CDCC may also choose to organize one or more Default Auctions as a means to re-establish a matched book following the suspension of a Clearing Member. The auction may affect a portion or the entirety of the suspended Clearing Member's unmatched positions. The terms and the procedure governing the Default Auction are summarized below:

3.3.1 PRE-AUCTION PROCEDURE

Before proceeding with the suspended Clearing Member's portfolio auction, the Corporation must:

- Identify the Clearing Members which can be invited to participate in the auction.
- Determine which positions of the suspended Clearing Member will be part of the auction and distribute such positions into different portfolios (thereafter "Auction Portfolios").
- Determine the value of the surviving Clearing Members' financial resources at risk in each Auction Portfolio.

a) Invitation to participate in the auction

- For each Auction Portfolio, the Corporation will identify a set of "Eligible Clearing Members" which are Clearing Members that clear the asset class³ contained in such Auction Portfolio (including hedged positions if applicable), either directly, through their CDCC membership, or indirectly⁴, through a pre-existing clearing relationship with another CDCC Clearing Member whose membership covers the relevant asset class(es) with CDCC.
- Participation to the Default Auction is voluntary for all Eligible Clearing Members. However, the participation in the Corporation's annual default simulation is mandatory for all Clearing Members.
- For each Auction Portfolio, the Corporation will invite all Eligible Clearing Members to confirm their intention to participate in the upcoming auction. Clearing Members who wish to participate in the auction shall send such confirmation in the prescribed time period specified in the invitation notification. Clearing Members who confirmed their intention to participate in the auction are referred to as "Auction Participants".

³ An asset class is a category of products sharing similar characteristics. Three different asset classes are cleared at CDCC, namely Futures, Options and Fixed Income.

⁴ An indirect participant must, as part of the CDCC annual due diligence process, demonstrate that it is an active participant in the relevant market with a pre-established relationship with another Clearing Member acting as its Clearing Member for that relevant asset class.

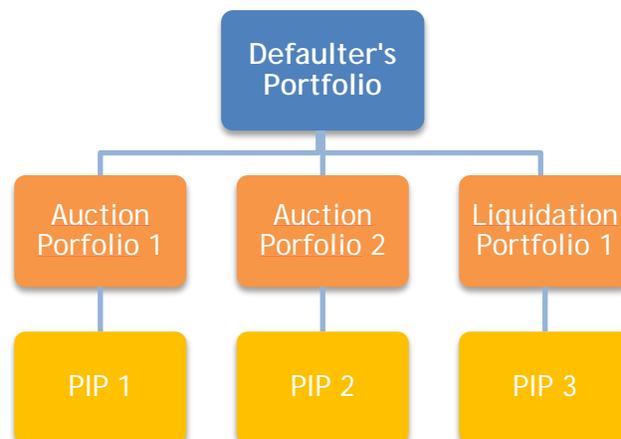
- All Auction Participants understand and acknowledge, for the purpose of the auction, that they will receive certain confidential information, including confidential information related to the suspended Clearing Member, and agree to treat such information with the highest standard of confidentiality.
- All Auction Participants shall participate in the auction in good faith, and any loss suffered by the Corporation as a result of any dishonest or fraudulent act of any of the Auction Participants whether committed alone or in collusion with others shall be charged to the wrongdoer.

b) Auction Portfolio determination

- The Corporation may auction the suspended Clearing Member’s portfolio in whole or in part, by decomposing it into smaller Auction Portfolios, if deemed necessary.

c) Allotment of financial resources to Portfolio Incentive Pools

- Before conducting an auction, the Corporation will allot, on a preliminary basis⁵, the Prefunded Financial Resources to each Portfolio Incentive Pool related to each Auction Portfolio or Liquidated Portfolio.



- A Portfolio Incentive Pool (“PIP”) represents a pool of financial resources allotted by CDCC to one specific portfolio to be auctioned or liquidated.
- A detailed description of such process is provided in Appendix 1. This step will allow CDCC to:

⁵ The final allocation of financial resources to absorb losses, i.e. to discharge CDCC of obligations or losses, can only be done once the amount of losses are known and final, as described in section 3.6.

- Estimate the amount of Prefunded Financial Resources allotted to each portfolio which could be used to absorb losses in connection with the liquidation or the auction of each portfolio, and
- Inform each Eligible Clearing Member of the portion of its Clearing Fund Requirement attributed to each Auction Portfolio which could be at risk of being used to extinguish losses.

3.3.2 PORTFOLIO AUCTION

The portfolio auction process is comprised of three main components:

- The divulgation of the necessary information required by any Auction Participant to provide a bid;
- The procedure by which an Auction Participant must provide a bid; and
- The determination of the prevailing bidder.

a) Information provided

CDCC needs to provide sufficient information to all Auction Participants to enable them to submit a bid.

- The Corporation will provide all the relevant information for each Auction Portfolio, e.g. ISINs, prices, expiry dates/settlement dates. The Corporation will also indicate if the portfolio has been hedged and will give the details on the hedges which form part of the Auction Portfolio.
- The Corporation will also inform each Eligible Clearing Member of the preliminary amount of its Clearing Fund Requirement allotted to each Auction Portfolio. This information is important to assess the potential amount at risk in case the costs associated with the close-out, auction or liquidation of this portfolio were to exceed the suspended Clearing Member's resources and the CDCC Default Risk Capital.
- Finally, the Corporation will also provide the detailed procedure by which an Auction Participant must provide a bid, as summarized in the subsection below (bidding process).

b) Bidding process

- Auction Participants may bid on one or more Auction Portfolios and must submit their bids specifying the value of collateral they want to receive to assume the positions and the settlement of all the positions contained in each Auction Portfolio.
- The Corporation shall specify in the auction documentation the time limit for Auction Participants to submit their bids from the time of the distribution of the relevant information on the auctioned portfolio, the

“Bidding Window”. The Bidding Window shall be of a minimum of two hours. No bids shall be accepted after the end of the Bidding Window.

- The Corporation shall confidentially notify the prevailing bidder within 10 minutes of the closing of the Bidding Window.

c) Prevailing Bidder determination

- The Corporation will determine the winner of the auction for each Auction Portfolio on the basis of which Auction Participant has requested the least amount of collateral to accept all the positions associated with the Auction Portfolio.
- Notwithstanding the above, the Corporation has full discretion in accepting or rejecting a bid.
- The Corporation will notify the Auction Participant that submitted the prevailing bid (“Prevailing Bidder”) that its bid has been retained.

3.3.3 POST AUCTION PROCEDURE

Upon notification, the Prevailing Bidder will be deemed beneficial owner of the portfolio and hedges, and will become fully liable for the auctioned portfolio, including meeting any Margin Requirements associated with the auctioned portfolio. The Margin Requirement impact of the incremental positions contained in the auctioned portfolio is considered immediately, but the amount agreed to be paid by the Corporation to the Prevailing Bidder in relation to the Auction Portfolio will be considered as collateral covering this Margin Requirement. Any failure by the Prevailing Bidder to accept the transfer of positions or meet any obligations associated with the portfolio will be deemed a breach of obligations and such Clearing Member shall become liable for all fees, expenses and obligations incurred by the Corporation in connection with such Clearing Member’s failure to honor its obligations. A failure by such Clearing Member to pay the costs and damages will automatically result in the determination by the Corporation of a Non-Conforming status.

The Corporation will also notify all Clearing Members of the successful completion, or failure, as the case may be, of the auction in addition to communicating to each Eligible Clearing Member the bidding category they fall into (e.g. Low-bidder or Non-bidder).

The Corporation will transfer all positions and associated collateral to the Prevailing Bidder no earlier than by the end of the next following Business Day and no later than the end of the second Business Day after the notification to the Prevailing Bidder.

3.4 PORTFOLIO HEDGING

At any time during the Default Management Process, the Corporation may, if it deems appropriate, hedge the portfolio of the suspended Clearing Member in order to limit the accumulation of market and credit losses. Note that in such cases, the Corporation may consider as hedges the use of instruments not part of the organization's clearing universe, including cash securities.

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:

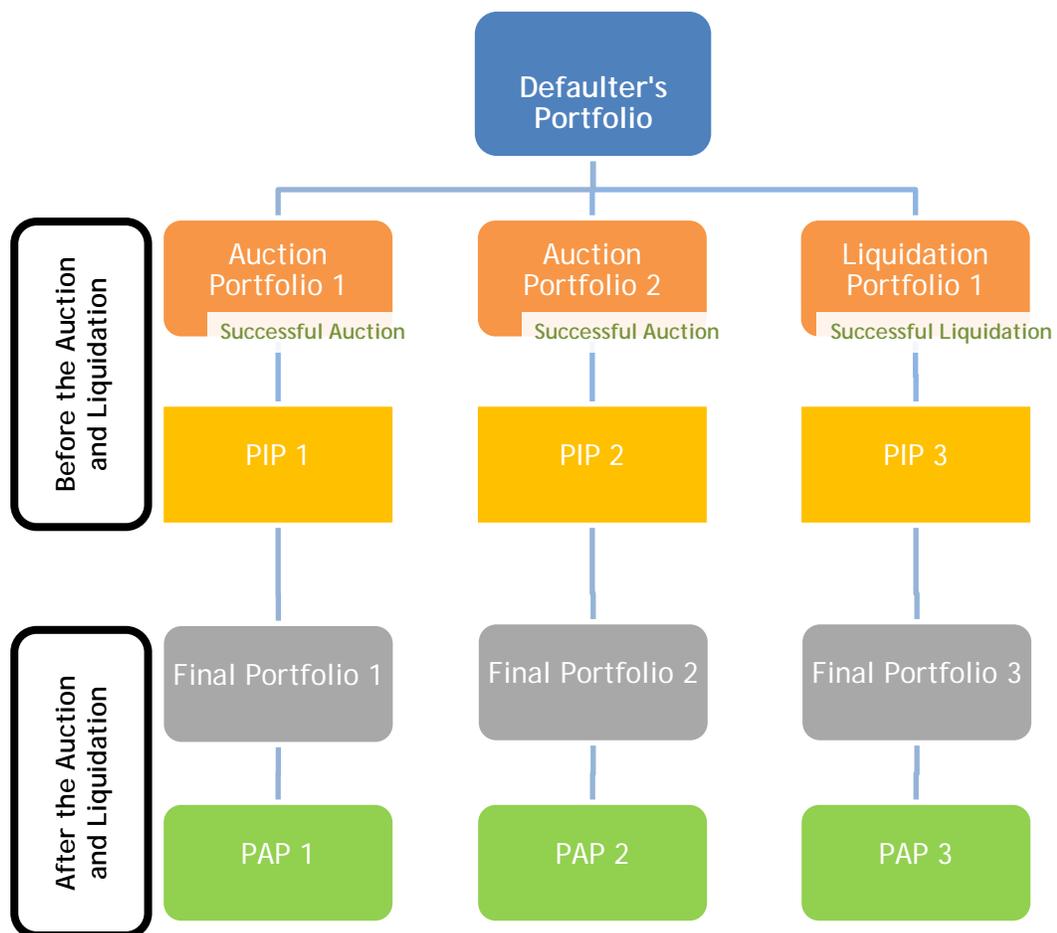
- Drawing upon the Corporation's commercial bank liquidity lines, in whole or in part.
- Raising liquidity through outright sales and/or Repurchase Transactions involving Securities of the defaulting Clearing Member.
- Raising liquidity through the exercise of its rights of re-pledging/re-hypothecation 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.

3.6 LOSS ALLOCATION METHODOLOGY

In implementing the Default Management Process, the Corporation will aim at minimizing the losses to the Corporation and its stakeholders.

- After the end of the Default Management Period, the Corporation will assess the total losses incurred or sustained by it. These losses include, but are not limited to, all default related obligations, costs or expenses incurred or sustained by the Corporation in connection with the administration, auction, closing-out, liquidation, hedging, financing or transfer of positions.
- For each auctioned or liquidated portfolio, the Corporation will allocate the financial resources contained in the Default Waterfall to the relevant Portfolio Allocation Pool ("PAP"). While the complete methodology is provided in Appendix 2, the loss allocation methodology follows these principles:
 - The Corporation must extinguish the losses with the financial resources contained in the Default Waterfall in the order specified in Sub-section 1.6.

- The suspended Clearing Member’s resources and the CDCC Default Risk Capital are allocated pro rata, based on the proportion of each PAP’s Base Initial Margin to the aggregate Base Initial Margin of all PAPs. Losses are then attributed to these resources.
- The Clearing Fund Requirement of each surviving Clearing Member is allocated to each PAP in a two-steps process as explained in Appendix 2. Afterwards, losses are attributed to the Clearing Fund Requirements of surviving Clearing Members based on their bidding behavior in the Default Auction(s) (please refer to Appendix 3 - Bidding Incentives). If no auction was performed, the losses are attributed on a pro rata basis among the allocated Clearing Fund Requirements of the surviving Clearing Members to such PAP, in accordance with Appendix 2 - Loss Allocation Methodology.



- In the event that the Corporation is later able to recover from the suspended Clearing Member any amount, such amount shall be returned to the other Clearing Members to compensate for any amount charged to them and for the financial resources levied

from them as part of the Default Management Process in the reverse order that these resources were used to cover the losses.

3.7 IMPACT OF THE UNSUCCESSFUL APPLICATION OF MITIGATION TOOLS

In the event that the Corporation has been unable to return to a matched book, or if the losses incurred in connection with the Default Management Process exceed the Default Waterfall, each of which, a Recovery Event, as defined in the Rules, the Corporation may then apply a set of Recovery Powers following the declaration by the Board of the initiation of the Recovery Process. The Recovery Process is described in Section A-10 of the Rules and in Section 4 below.

Section 4: Recovery Plan

The Default Management Process described above ensures that the Corporation has in place tools and processes to appropriately manage the risks following the default of a Clearing Member. Supplementing the Default Management Process, the Corporation has in place a recovery plan which provides for a defined set of actions to address any uncovered losses, liquidity shortfall or capital inadequacy, arising from the Clearing Member(s)' default(s) in the unlikely event that the Default Waterfall proves insufficient.

Rule A-10 governs the Corporation and Clearing Members' obligations in a Recovery Process. The section below provides for general information with respect to the triggers of the Recovery Process, a description of the Recovery Powers that may be used by the Corporation upon a declaration of Recovery Process, the governance supporting such process and the Recovery Loss⁶ allocation methodology.

4.1 TRIGGERS FOR THE RECOVERY PROCESS

The Corporation management may recommend to the Board to trigger the implementation of the Recovery Process, after the suspension of a Non-Conforming Member, in either of the following situations:

- The Corporation, acting reasonably, determines that obligations, losses or expenses incurred or sustained by the Corporation as a result of, or in connection with, the suspension of one or more Clearing Members may exceed the Default Waterfall; or
- After the exercise of the normal default management tools (powers contemplated in Rule A-4) or any rights or remedies provided under the Rules, the Corporation reasonably determines that it has been, or will likely be, unable to re-establish a matched book.

Some extreme financial stress could lead the Corporation to have insufficient resources as part of the Default Waterfall to absorb losses or settle expenses, payments or obligations in connection with the default of a Clearing Member. For example, the most favorable bid received in the course of a Default Auction may be significantly in excess of the Margin associated with the positions contained in an Auction Portfolio as a result of market uncertainty. Another illustration would be the case where the suspended Clearing Member's portfolio value may be negatively impacted by the occurrence of a market event that is greater than the market scenario that was planned for as part of the daily risk management activities. CDCC can also face a short-term liquidity pressure arising from an unexpectedly high settlement amount incurred by CDCC as a result of the suspended Clearing Member's Fixed Income Transactions.

⁶ Recovery Loss has the meaning given thereto in Section A-102 of the Rules.

In parallel, CDCC could also have sufficient financial resources but be unable to close-out all the positions of the suspended Clearing Member following a series of failed Default Auctions in the absence of bids.

4.2 RECOVERY POWERS

Upon the declaration by the Corporation of the commencement of a Recovery Process, CDCC may exercise extraordinary remedies against its Clearing Members in good standing to ensure that the Corporation continues to operate on an ongoing basis and to address uncovered losses or a liquidity shortfall. Such extraordinary remedies, referred to as Recovery Powers, are listed below and detailed in the Rules and can be applied in the manner set out in the applicable sections.

Recovery Powers aim at achieving two distinct objectives and can be classified as follows: 1) Recovery Powers which can extinguish uncovered losses or a liquidity shortfall, and 2) Recovery Powers which can re-establish a matched book.

4.2.1 RECOVERY POWERS TO EXTINGUISH UNCOVERED LOSSES OR A LIQUIDITY SHORTFALL

The exercise by the Corporation of the Recovery Powers of this Sub-section 4.2.1 is applicable to all Clearing Members, except Limited Clearing Members for which only the Reduced Amounts Distribution applies as specified below.

4.2.1.1 Reduced Amounts Distribution

During a Default Management Period, after the commencement of the Recovery Process, the Corporation may withhold the payment of all or a portion of certain amounts (defined as the “Qualified Amounts” under the Rules) owed by the Corporation to the Clearing Members, a process referred therein as “Reduced Amounts Distribution” or “RAD”. As defined in the Rules, the Qualified Amounts include the payment of certain amounts in cash and/or the transfer of securities for Net Variation Margin Requirement purposes, pursuant to D-607.

The purpose of the RAD is to withhold certain gains from Clearing Members to allow the Corporation to absorb certain losses. This tool aims at reducing liquidity pressure on Clearing Members while helping the Corporation extinguish losses.

QUALIFIED AMOUNTS

Consistent with the purpose of this tool, the Qualified Amounts are payments or obligations and are specific to each asset class.

For Futures and Options, the Qualified Amounts are the net amount owed by the Corporation of:

- (1) The net value of the Gains and Losses for that day in respect of all such Clearing Member's Open Positions in Futures;
- (2) The Net Daily Premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation and purchased or sold on the Exchange; and
- (3) The net agreed premium payable or receivable by such Clearing Member on that day, in respect of Options issued by the Corporation, bilaterally negotiated, or entered into on any Acceptable Marketplaces.

For Fixed Income Transactions, the Qualified Amounts calculation is based on the following concepts:

- (1) For all Clearing Members, except the Limited Clearing Members, any decrease in Variation Margin Requirement since the last Business Day prior to the commencement of RAD will be subject to RAD for all Fixed Income Transactions still outstanding as of the day of the calculation.
- (2) For Limited Clearing Members, any decrease in Variation Margin Requirement since last Business Day prior to the commencement of RAD will be subject to RAD for the Fixed Income Transactions which were, before submission for clearing with the Corporation, originally entered into by the Limited Clearing Member and the suspended Clearing Member and which are still outstanding as of the day of the calculation.

The detailed Qualified Amounts methodology is described in Sub-sections A-1005(3) b) and c) of the Rules.

RAD PROCESS

The exercise of the Reduced Amounts Distribution by the Corporation requires that certain conditions be met:

- **Trigger:** If in the reasonable judgment of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses and expenses in an amount in excess of the Default Waterfall;
- **Maximum Duration:** The Corporation may not exercise the RAD power for more than four (4) consecutive Business Days during a single Default Management Period and shall resume the payment of Qualified Amounts after the end of that period;

- **Permitted Use:** The Corporation will only use the Retained Amounts for satisfying or otherwise settling Recovery Losses⁷, after the exhaustion of the Default Waterfall; and
- **Notice and Implementation:** The Corporation will communicate to all Clearing Members that RAD will be applied during the payment cycles. On each day of the Reduced Amounts Distribution Period, the Corporation will notify each Clearing Member of its relevant Retained Amount which will be withheld. The Corporation shall also communicate to all Clearing Members the end of the Reduced Amounts Distribution Period.

More information on the Reduced Amounts Distribution can be found in Section A-1005 of the Rules.

4.2.1.2 Recovery Loss Cash Payment

During a Default Management Period, subsequent to the commencement of the Recovery Process, the Corporation may require its Clearing Members, excluding Limited Clearing Members, to meet a Recovery Loss Cash Payment. The use of such tool is limited to certain conditions:

- **Trigger:** If in the reasonable judgment of the Corporation, the Recovery Event may result in the Corporation incurring obligations, losses and expenses in an amount in excess of the sum of the Default Waterfall and the Retained Amounts and such amount is known or can reasonably be determined;
- **Maximum Amount:** The maximum aggregate amount which may be required from a Clearing Member during a single Default Management Period cannot exceed such Clearing Member's Clearing Fund Requirement as of the commencement of the Default Management Period;
- **Limited Use:** The Corporation will use the financial resources accumulated through Recovery Loss Cash Payments to extinguish any outstanding losses or obligations incurred by the Corporation in connection with the Recovery Event after the exhaustion of the Default Waterfall and the resources retained as part of the RAD; and
- **Notice and Implementation:** The Corporation will communicate to each Clearing Member the proportional amount that such Clearing Member must pay at the next Settlement Time.

⁷ The Retained Amounts withheld on an LCM Fixed Income Transaction in relation to the suspension of a Clearing Member shall only be used to extinguish losses incurred in connection with such suspended Clearing Member.

The Recovery Powers form part of the rights and remedies that may be exercised by the Corporation pursuant to a declaration of the commencement of a Recovery Process, therefore a failure to pay by a Clearing Member its Recovery Loss Cash Payment is a ground for the Non-Conforming status and may lead to the suspension of such Clearing Member.

More information on the Recovery Loss Cash Payment can be found in Section A-1006 of the Rules.

4.2.2 RECOVERY TOOLS TO RE-ESTABLISH A MATCHED BOOK

All Recovery Powers of this section are based on Clearing Members' voluntary participation.

4.2.2.1 Recovery Auction

At any point in time during the Recovery Process, the Corporation may choose to hold one (or several) Recovery Auction(s) as a means to re-establish a matched book following the suspension of a Clearing Member. The Recovery Auction(s) only relates to the suspended Clearing Member's Fixed Income Transactions. The Recovery Auction relies on the same participation and bidding rules and principles governing the Default Auction as set out in Sub-section 3.3. However, the Recovery Auction does not take into consideration bidding behavior to determine the impact on the loss allocation methodology. The complete loss allocation methodology is detailed in Appendix 2.

More information on the Recovery Auction can be found in Section A-1007 of the Rules.

4.2.2.2 Voluntary Contract Tear-Up

In order to return to a matched book, the Corporation may also ask the surviving Clearing Members to agree, on a voluntary basis, to tear-up outstanding positions. The purpose of a Voluntary Contract Tear-Up is to close-out the remaining suspended Clearing Member's positions by terminating simultaneously the offsetting positions held by the surviving Clearing Members. The use of such tool is limited to certain conditions:

Trigger: Voluntary Contract Tear-Up will only be used after declaration of a Recovery Process and if the Corporation determines that it has been unable to transfer, close-out, or liquidate all the positions of the suspended Clearing Member with the standard default management tools as described in Rule A-4 or section 3 of this Manual. Moreover, for Fixed Income Transactions, the Voluntary Contract

Tear-Up can only be offered following the holding of a Recovery Auction.

- **Notice and Implementation:** The Corporation will notify Clearing Members in advance of its intention to implement Voluntary Contract Tear-Up. At the Close of Business, the Corporation will communicate to each Clearing Member the suggested proportion of Open Positions which could be torn-up along with the Tear-Up Value of such Open Positions. This notification will occur after the notification to the Clearing Members regarding the Retained Amounts if applicable.
 - For each Clearing Member, the suggested proportion to be torn-up is calculated by allocating the suspended Clearing Member's Open Positions pro rata, based on the proportion of the Clearing Member's opposite net Open Positions to the opposite net Open Positions of all surviving Clearing Members.
 - The Tear-Up Value of Open Positions will be determined at the prevailing end-of-day market price as explained in Sub-section A-1008 (4) of the Rules.

IMPLEMENTATION IMPACT FOR FIXED INCOME TRANSACTIONS

For a Fixed Income Transaction, the impact of tearing-up is the following:

- At the date of the Voluntary Contract Tear-Up, any Variation Margin that is owed by the surviving Clearing Member to CDCC will become payable in accordance with the ordinary Variation Margin Settlement Time and any Variation Margin owed by CDCC to the surviving Clearing Member which is not otherwise subject to a Reduced Amount Distribution will become due in accordance with the ordinary Variation Margin Settlement Time.

For further clarity, where the Corporation concurrently exercises its power under the RAD on a Transaction that is also subject to Voluntary Contract Tear-Up, the interaction between the Retained Amount and the amount payable following the Voluntary Contract Tear-Up of a Fixed Income Transaction is as follows:

- If at the date of the Voluntary Contract Tear-Up, for each Fixed Income Transaction to be torn-up, the associated Retained Amount is notified to the Clearing Member, the net amount payable by CDCC for such Fixed Income Transaction will be equal to the Variation Margin owed by CDCC to the surviving Clearing Member less the Retained Amount.

- Any future outstanding payment or delivery obligations in respect of all the Fixed Income Transactions which a Clearing Member has consented to terminate will be terminated. This implies that upon termination, any Coupon Income owed by the Corporation to a surviving Clearing Member will not be distributed. It also means that the Repo Party that sold the Purchased Securities and received the Purchase Price in the Open Leg, will not receive the Purchased Securities and will not pay the Repurchase Price in the Close Leg. Similarly, the Reverse Repo Party that bought the Purchased Securities in the Open Leg and paid the Purchase Price, will not deliver the Purchased Securities and will not receive the Repurchase Price in the Close Leg. Equally, the Buyer who initially agreed to pay the Purchase Price will not receive the Purchased Securities and the Seller will retain the Purchased Securities and will not receive the Purchase Price.
- Any securities pledged to a Clearing Member in respect of a Variation Margin Requirement in connection with the torn-up Fixed Income Transactions, in possession of either party prior to the date of the Voluntary Contract Tear-Up, shall remain the possession of such party.
- Any Initial Margin pledged in support of the torn-up Transactions by the non-defaulting Clearing Member shall become excess Margin and be retrievable by such Clearing Member after the date of the Voluntary Contract Tear-Up.

IMPLEMENTATION IMPACT FOR OPTIONS AND FUTURES CONTRACTS

- At the date of the Voluntary Contract Tear-Up, any net Gains and Losses on Futures or Option Premium that is owed by the non-defaulting Clearing Member to CDCC will become payable in accordance with the ordinary Settlement Time and any Variation Margin or Option Premium owed by CDCC to the surviving Clearing Member which is not otherwise subject to Reduced Amount Distribution will become due in accordance with the ordinary Settlement Time.
- Any Initial Margin pledged in support of Futures or Options positions by the non-defaulting Clearing Member shall become excess Margin and be retrievable by such Clearing Member after the date of the Voluntary Contract Tear-Up.
- The Corporation shall terminate any future outstanding payment or delivery obligations in respect of all Futures and Options positions

which a Clearing Member has consented to terminate. In other terms, from the moment the contract is terminated, the positions cease to exist and no exercise or assignment could be performed.

More information on the Voluntary Contract Tear-Up can be found in Section A-1008 of the Rules.

4.3 LIQUIDITY MANAGEMENT

In managing its liquidity, the Corporation can use, after the financial resources of the Default Waterfall, the available financial resources levied through the exercise of its Recovery Powers such as the Reduced Amounts Distribution and the Recovery Loss Cash Payment for temporary liquidity funding. Indeed, these recovery tools can be similarly used in accordance with the Rules for either (1) credit purposes to cover any market-driven losses related to a default, or (2) liquidity purposes to cover any liquidity-driven obligation related to the liquidation of the suspended Clearing Member's collateral and positions.

4.4 RECOVERY GOVERNANCE

Following the declaration by the Corporation, and as approved by the Board, of the commencement of a Recovery Process (see Sub-section 4.1), the Board shall delegate to CDCC's management the authority to make any reasonable decision regarding the timing and use of Recovery Powers to address uncovered losses or a liquidity shortfall caused by Clearing Member(s)' default(s) and re-establish a matched book, in accordance with the powers entrusted to the Corporation in the Rules. The decision-making respecting the application of recovery tools is a natural extension of the existing Default Management Process. As such, the governance in place for the Default Management Process and set out under Section 2 of this Manual will be extended for the Recovery Process. The Default Management Committee will be responsible to make decisions related to the application of the Recovery Powers with the support of the Emergency Committee.

Notifications

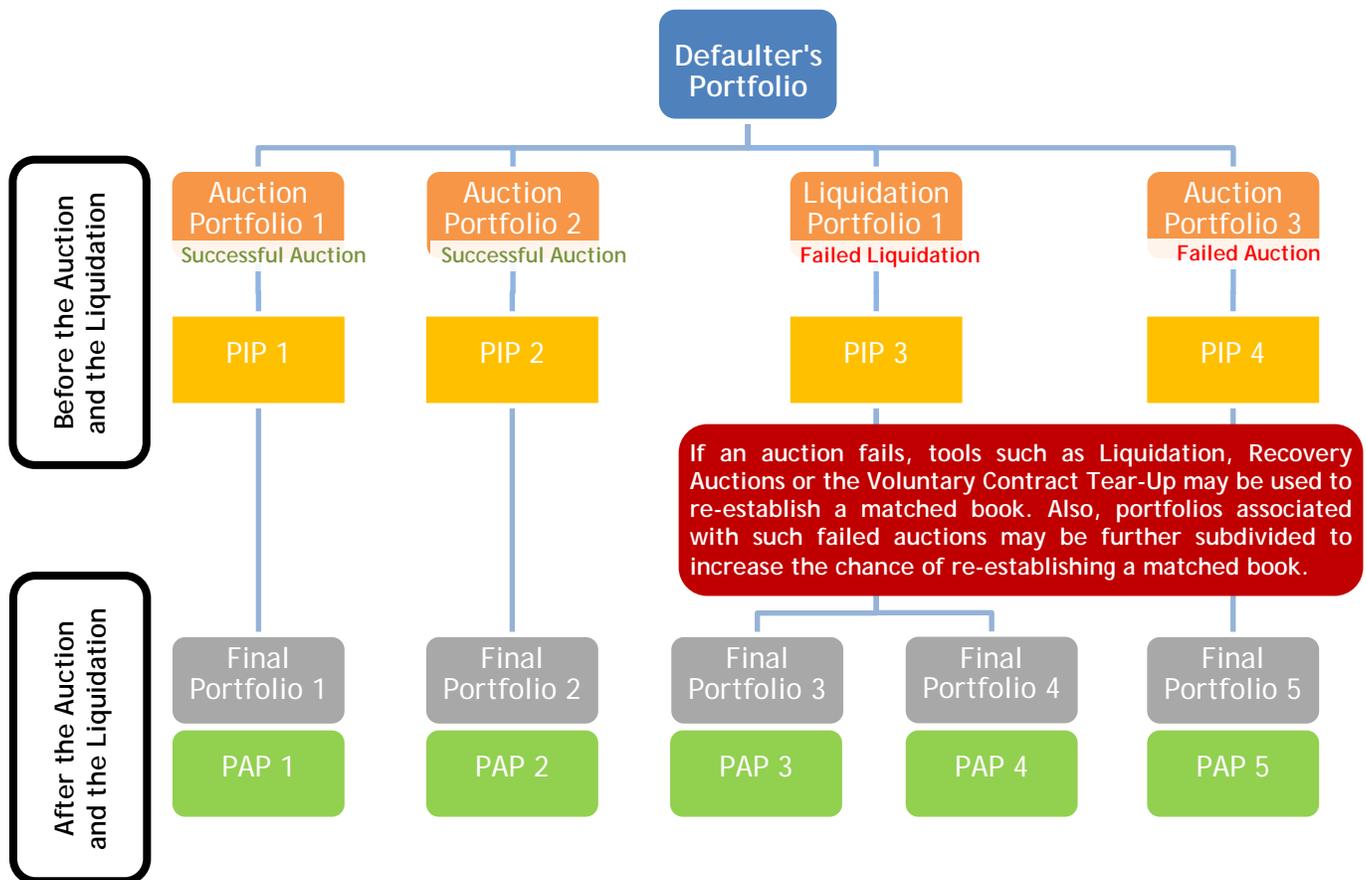
Upon the declaration of a Recovery Process, the Corporation will notify all Clearing Members, the Exchange, all regulatory organizations or agencies having oversight of the Corporation, the Bank of Canada and any such other Entities that the Corporation considers appropriate.

As it is the case while the Corporation is managing a default pre-Recovery Process, appropriate and timely communication will be maintained between CDCC, the Board, its Risk Management Advisory Committee and its regulators.

4.5 RECOVERY LOSS ALLOCATION METHODOLOGY

The Corporation’s capacity to absorb losses increases with the addition of the Recovery Powers. The loss allocation methodology that starts with the application of the Default Waterfall, as described in Sub-section 1.6, is supplemented by any financial resources levied by the Reduced Amounts Distribution and then the Recovery Loss Cash Payment. However, in extinguishing default-related losses, CDCC must use the financial resources in the prescribed order, as described in Appendix 2.

In the event that the Corporation is later able to recover from the suspended Clearing Member any amount, such amount shall be returned to the other Clearing Members to compensate for any amount charged to them and for the financial resources levied from them as part of the Recovery Process in the reverse order that these were used to cover the Recovery Losses.



Appendix 1: Allotment of Prefunded Financial Resources to Portfolio Incentives Pools (“PIPs”)

Before conducting an auction, the Corporation will calculate and allot, on a preliminary basis, the Prefunded Financial Resources to each PIP related to each Auction Portfolio or Liquidated Portfolio.

A Portfolio Incentive Pool (“PIP”) represents a pool of financial resources allotted by CDCC to one specific portfolio to be auctioned or liquidated.

This step will allow CDCC to:

- Estimate the amount of Prefunded Financial Resources available to extinguish losses for each portfolio; and
- Inform each Eligible Clearing Member of the portion of its Clearing Fund Requirement attributed to each Auction Portfolio which could be at risk of being used to extinguish losses.

The Prefunded Financial Resources will be preliminarily allotted to each PIP, based on the proportion of the Base Initial Margin of each portfolio of the suspended Clearing Member to the Base Initial Margin of all portfolios of the suspended Clearing Member. The allotment methodology for each tranche of Prefunded Financial Resources is described below:

I. Suspended Clearing Member’s resources

The suspended Clearing Member’s resources shall be allotted to each PIP pro rata, based on the proportion of the Base Initial Margin of such PIP to the aggregate Base Initial Margin of all PIPs.

II. CDCC Default Risk Capital (“DRC”)

CDCC DRC’s financial resources shall be allotted to each PIP pro rata, based on the proportion of the Base Initial Margin of such PIP to the aggregate Base Initial Margin of all PIPs.

III. Surviving Clearing Members Clearing Fund Requirements

As a first step, the Corporation shall calculate the proportion of each surviving Clearing Member’s Clearing Fund Requirement attributed to each asset class, based on the proportion of each Clearing Member’s Base Initial Margin for such asset class to the aggregate Base Initial Margin of such Clearing Member.

In a second step, for each asset class, the Corporation shall further sub-divide the amount of Clearing Fund Requirement obtained in the first step above, pro rata, based on the

proportion of each PIP's Base Initial Margin to the aggregate Base Initial Margin of all PIPs of that asset class.

Appendix 2: Loss Allocation Methodology

This appendix describes how the Corporation will allocate losses amongst Clearing Members and CDCC, or, in other words, what resources will be used to extinguish losses. As outlined in Subsections 1 and 2 below, the loss allocation methodology differs depending on the type of financial resources used to extinguish losses, e.g. CDCC Default Risk Capital, Clearing Fund Requirements, etc.

This loss allocation process can only be done after the end of the Default Management Period, when losses are known. These losses include all default related obligations, costs or expenses, incurred or sustained by the Corporation in connection with the administration, auction, closing-out, liquidation, hedging, financing or transfer of positions or collateral.

The final loss allocation process does not take into account the preliminary allotment of financial resources and PIP as described in Appendix 1, which is performed for information purposes only.

The loss allocation methodology is based on the four following steps:

1. Determination the composition of each Final Portfolio
2. Creation of the Portfolio Allocation Pools (“PAPs”)
3. Determination of the amount of losses for each PAP
4. Allocation of financial resources to each PAP

I. Determination of the composition of each Final Portfolio

The Corporation shall first group together a suspended Clearing Member's positions which have been closed-out together, whether as an auctioned portfolio, a liquidated portfolio or a group of torn-up positions (each, a “Final Portfolio”).

The Final Portfolio shall only be composed of positions of a single suspended Clearing Member and of the same asset class, except for any positions from other asset classes which have been added by CDCC for hedging purposes.

II. Creation of the Portfolio Allocation Pools (PAPs)

For each Final Portfolio, a Portfolio Allocation Pool shall be created. A Portfolio Allocation Pool (“PAP”) represents, in relation to a Final Portfolio, a pool of losses that arose in connection with such Final Portfolio and financial resources (allocated by the Corporation) to extinguish such losses.

III. Determination of the losses associated with each PAP

For each PAP, the Corporation shall determine what are the losses related to the Final Portfolio, based on the specific losses, expenses and obligations associated with the Default Management Process of such Final Portfolio. For example, for a specific Auction Portfolio which has been successfully auctioned, the direct cost of the auction shall be attributed to its PAP, i.e. the bid amount.

Costs that are generated in the Default Management Process of multiple Final Portfolios and shared between them, should be proportionally allocated to PAPs related to these Final Portfolios.

IV. Allocation of financial resources to each PAP

Once all losses are allocated to all PAPs, the next step is to allocate financial resources to these PAPs to extinguish the losses in a pre-established manner. The sub-sections below provide the detailed methodology to allocate financial resources to each PAP.

1. Default Waterfall Resources

In each PAP, the Corporation will allocate the financial resources contained in the Default Waterfall in the following order:

a) Suspended Clearing Member's resources

- Step 1.** The Corporation shall allocate the suspended Clearing Member's resources to each PAP pro rata, based on the proportion of the PAP's Base Initial Margin to the aggregate Base Initial Margin of all PAPs.
- Step 2.** In each PAP, the Corporation shall extinguish the losses with the allocated suspended Clearing Member's resources.
- Step 3.** For each asset class, if there remains a loss in a PAP after the allocation of the suspended Clearing Member's resources, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess resources of the suspended Clearing Member pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses.
- Step 4.** Across all asset classes, if there remains a loss in a PAP after the allocation of the suspended Clearing Member's resources, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by

allocating the aggregate excess resources of the suspended Clearing Member's pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated suspended Clearing Member's resources have proven insufficient to cover their respective losses.

- Suspended Clearing Member's resources should be fully exhausted across all PAPs and all asset classes before applying CDCC Default Risk Capital to cover losses as described below. If the suspended Clearing Member's resources have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

b) CDCC DRC

- Step 1.** CDCC shall allocate CDCC DRC to each PAP pro rata, based on the proportion of such PAP's Base Initial Margin to the aggregate Base Initial Margin of all PAPs.
 - Step 2.** In each PAP, the Corporation shall extinguish the loss with the allocated CDCC DRC.
 - Step 3.** For each asset class, if there remains a loss in a PAP after the allocation of CDCC DRC, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess resources of CDCC DRC pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated CDCC DRC has proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated CDCC DRC has proven insufficient to cover their respective losses.
 - Step 4.** Across all asset classes, if there remains a loss in a PAP after the allocation of CDCC DRC, while there is still an excess of resources in other PAPs, the Corporation will use such excess to extinguish the outstanding losses. This will be performed by allocating the aggregate excess CDCC DRC pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the CDCC DRC has proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated CDCC DRC has proven insufficient to cover their respective losses.
- CDCC DRC should be fully exhausted across all PAPs and all asset classes before allocating the surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the CDCC DRC has proven sufficient to

extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

c) Surviving Clearing Members' Clearing Fund Requirements

Step 1. Initial Allocation

Sub-Step.1 CDCC shall allocate the surviving Clearing Members' Clearing Fund Requirements to each PAP in the following manner:

- As a first step, the Corporation shall calculate the portion of each surviving Clearing Member's Clearing Fund Requirement attributed to each asset class pro rata, based on the proportion of each Clearing Member's Base Initial Margin for such asset class relative to the aggregate Base Initial Margin of such Clearing Member; and
- In a second step, for each asset class, the Corporation shall further sub-divide the amount of Clearing Fund Requirement obtained in the first step above, pro rata, based on the proportion of each PAP's Base Initial Margin on the aggregate Base Initial Margin of all PAPs of that asset class.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata, based on the proportion of (1) each Clearing Member's allocated Clearing Fund Requirement to such PAP, to (2) the aggregate Clearing Fund Requirements of all Clearing Members to such PAP, with the use of allocated surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- However, for PAPs related to Final Portfolios that were successfully auctioned, the loss allocation shall be subject to the subordination of each surviving Clearing Member's Clearing Fund Requirement based on such Clearing Member's bidding behavior in the PAPs where the loss is absorbed (please refer to Appendix 3- Bidding Incentives).

Step 2. Intra-Class Allocation

Sub-Step.1 For each asset class, if there remains a loss in a PAP after the allocation of the surviving Clearing Members' Clearing Fund Requirements, while there is still an excess of resources in other PAPs, such outstanding losses will be extinguished by these excess

surviving Clearing Members' Clearing Fund Requirements. This will be performed by allocating, for each Clearing Member its aggregated excess Clearing Fund Requirements pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Clearing Fund Requirement to such PAP, on (2) the aggregate allocated excess Clearing Fund Requirements of all Clearing Members to such PAP, with the allocated excess surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- However, for PAPs related to Final Portfolios that were successfully auctioned, the loss allocation shall be subject to the subordination of each surviving Clearing Member's Clearing Fund Requirement based on such Clearing Member's bidding behavior in the PAPs where the loss is absorbed (please refer to Appendix 3- Bidding Incentives).

Step 3. Inter-Class Allocation

Sub-Step.1 Across all asset classes, if there remains a loss in a PAP after the allocation of the surviving Clearing Members' Clearing Fund Requirements, while there is still an excess of resources in other PAPs, those outstanding losses will be extinguished by these excess surviving Clearing Members' Clearing Fund Requirements. This will be performed by allocating, for each Clearing Member, its aggregated excess Clearing Fund Requirements pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated surviving Clearing Members' Clearing Fund Requirements have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Clearing Fund Requirement to such PAP, on (2) the aggregate allocated excess Clearing Fund Requirements of all Clearing Members to such PAP with the allocated excess surviving Clearing Members' Clearing Fund Requirements calculated in Sub-Step 1.

- Surviving Clearing Members' Clearing Fund Requirements should be fully exhausted across all PAPs and all asset classes before allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the suspended Clearing Member's resources have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.
- The surviving Clearing Members' Clearing Fund Requirements of all Clearing Members should be fully exhausted across all PAPs and all asset classes before allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to cover losses as described below. If the surviving Clearing Members' Clearing Fund Requirements have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

d) 2nd surviving Clearing Members' Clearing Fund Requirements

- The methodology for allocating the 2nd surviving Clearing Members' Clearing Fund Requirements to each PAP shall follow the same allocation methodology used for the allocation of the surviving Clearing Members' Clearing Fund Requirements and described in the previous section 1(c).

2. Recovery Power Resources

In the event that a Recovery Process has been declared by CDCC and that Recovery Powers are used to extinguish uncovered losses, the loss allocation methodology provides for the usage of financial resources levied by the RAD and the Recovery Loss Cash Payment after the application of the Default Waterfall.

a) Retained Amounts

Step 1. Initial Allocation

Sub-Step.1 CDCC shall allocate the sum of Retained Amounts to each PAP, in the following manner:

- As a first step, the Corporation shall calculate the portion of each surviving Clearing Member's Retained

Amounts attributed to each asset class, based on the proportion of each Clearing Member's Base Initial Margin for such asset class to the aggregate Base Initial Margin of such Clearing Member; and

- In a second step, for each asset class, the Corporation shall further sub-divide each Clearing Member Retained Amounts obtained in the first step above pro rata, based on the proportion of each PAP's Base Initial Margin to the aggregate Base Initial Margin of all PAPs of that asset class. Provided however that, in the case of the suspension of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata, based on the proportion of (1) each Clearing Member's allocated Retained Amounts to such PAP, to (2) the aggregate Retained Amounts of all Clearing Members to such PAP, with the use of the allocated Retained Amounts calculated in Sub-Step 1.

Step 2. Intra-Class Allocation

Sub-Step.1 For each asset class, if there remains a loss in a PAP after the allocation of the Retained Amounts, while there is still an excess of resources in other PAPs, such outstanding losses will be extinguished by these excess Retained Amounts. This will be performed by allocating, for each Clearing Member, its aggregated excess Retained Amounts pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated Retained Amounts have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs of that asset class where the allocated Retained Amounts have proven insufficient to cover their respective losses.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses pro rata of (1) each Clearing Member allocated excess Retained Amounts to such PAP, on (2) the aggregate excess Retained Amounts of all Clearing Members to such PAP, with the use of the allocated excess Retained Amounts calculated in Sub-Step 1. Provided however that, in the case of the suspension

of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

Step 3. Inter-Class Allocation

Sub-Step.1 Across all asset classes, if there remains a loss in a PAP after the allocation of the Retained Amounts, while there is still an excess of resources in other PAPs, those outstanding losses will be extinguished by these excess Retained Amounts. This will be performed by allocating, for each Clearing Member, its aggregated excess Retained Amounts pro rata, based on the proportion of (1) the Base Initial Margin of each PAP where the allocated Retained Amounts have proven insufficient to cover their respective losses, to (2) the aggregate Base Initial Margin of all PAPs, across all asset classes, where the allocated Retained Amounts have proven insufficient to cover their respective losses. Provided however that, in the case of the suspension of more than one Clearing Member, an LCM Retained Amounts withheld in connection with the suspension of one Clearing Member shall only be allocated to PAPs in relation to the same suspended Clearing Member.

For further clarity, the Inter-Class Allocation methodology permits the use of any Retained Amounts levied from any Clearing Member, without regard to the asset class that such Clearing Member's membership covers, to be used to absorb losses stemming from any PAP in any asset class. This implies that Retained Amounts levied from an LCM or another Fixed Income Clearing Member may be allocated to PAPs of Futures or Options asset classes.

Sub-Step.2 In each PAP, CDCC will extinguish the outstanding losses on pro rata of (1) each Clearing Member allocated excess Retained Amounts to such PAP, on (2) the aggregate excess Retained Amounts of all Clearing Members to such PAP, with the use of the allocated excess Retained Amounts calculated in Sub-Step 1.

- Subject to the requirement that LCM Retained Amounts in connection with the suspension of one Clearing Member be used only to absorb losses incurred by the Corporation in relation to the same suspended Clearing Member, in the case of the suspension of more than one Clearing Member, Retained Amounts

should be fully exhausted across all PAPs and all asset classes before allocating the Recovery Loss Cash Payment to cover losses as described below. If the Retained Amounts have proven sufficient to extinguish all the outstanding losses, the loss allocation mechanism is deemed completed.

b) Recovery Loss Cash Payment

After the complete exhaustion of Retained Amounts, the outstanding losses across all PAPs are extinguished with the Recovery Loss Cash Payment pro rata, based on the proportion of each surviving Clearing Member's Clearing Fund Requirement to the aggregate Clearing Fund Requirements of all Clearing Members.

Appendix 3: Bidding Incentives and the Loss Allocation Methodology

For each PAP where the portfolio has been successfully auctioned, and where losses remain after the allocation of the suspended Clearing Member financial resources and CDCC DRC, the loss allocation to the surviving Clearing Members' Clearing Fund Requirements will be based on the bidding behavior of the Eligible Clearing Members. This appendix describes:

1. How CDCC will categorize each Eligible Clearing Member based on their bidding behavior.
2. How CDCC will allocate losses, related to each PAP, to each Eligible Clearing Member and then extinguish such losses with their allocated surviving Clearing Members' Clearing Fund Requirements.
3. How CDCC will allocate losses to non-Eligible Clearing Members.

I. Bidding Behavior Assessment

For each successfully auctioned portfolio, the Corporation will categorize each Eligible Clearing Member (other than a Limited Clearing Member) based on its bidding behavior in the Default Auction in order to subordinate their Clearing Fund Requirements in the following order:

1. **Non-bidders:** Eligible Clearing Members that did not submit any bid⁸;
2. **Low-bidders:** Eligible Clearing Members that submitted a higher bid relative to the prevailing bid; and
3. **High-bidders:** The prevailing bidder plus any Eligible Clearing Member that submitted an equal bid relative to the prevailing bid.

II. Loss Allocation Methodology:

After the categorization of the Eligible Clearing Members based on their bidding behavior, losses are first allocated and then extinguished with the surviving Clearing Members' Clearing Fund Requirements within each category of bidders in the following order:

1. Non-bidders:

For each PAP, after the exhaustion of CDCC DRC, the total amount of outstanding losses, shall be extinguished pro rata, based on the proportion of (1) its Clearing Fund Requirements in respect of such PAP, to (2) the aggregate amount of Non-bidders'

⁸ For further clarity, an Eligible Clearing Member which indicated that it will not be participating in the auction will be considered a Non-bidder.

Clearing Fund Requirements in respect of such PAP, with the use of each Non-bidder's resources as calculated in Appendix 2:

$$Allocation_Prorata_Non_Bidder_CMi = \frac{CF_{NB_CMi}}{\sum CF_{NB_CMi}}$$

Where:

CF_{NB_CMi} is the Clearing Fund Requirements of the Non-bidder Clearing Member i that is allocated to a PAP.

Within each PAP, all Non-bidders' Clearing Fund Requirements should be fully exhausted before applying Low-bidders' Clearing Fund Requirements to cover losses as described below.

2. Low-bidders:

For each PAP with outstanding losses, the total amount of associated losses shall be extinguished based on its bid variance in respect of the winning bid, with the use of each Low-bidder's resources. In other terms, losses are allocated to each Low-bidder pro rata, based on the proportion of (1) the difference between its provided bid and the prevailing bid in respect of such PAP ("Bid Variance"), to (2) the sum of all Low-bidders' Bid Variances in respect of such PAP:

$$Allocation_Prorata_Low_Bidder_CMi = \frac{BID_{LB_CMi} - BID_{winner}}{\sum (BID_{LB_CMi} - BID_{winner})}$$

Where:

BID_{LB_CMi} is the provided bid of the Low-bidder Clearing Member i; and

BID_{winner} is the prevailing bid for the auction.

Within each PAP, all Low-bidders' Clearing Fund Requirements should be fully exhausted before applying High-bidders' Clearing Fund Requirements to cover losses as described below.

Therefore, if there remains a loss after the first loss allocation to the Low-bidders' Clearing Fund Requirements, while there are still some Clearing Members in the Low-Bidders category with excess resources, such outstanding losses will be extinguished with the use of those excess Clearing Fund Requirements according to the same allocation methodology described in this Low-bidders Section. Such procedure shall be repeated until all the Low-bidders' Clearing Fund Requirements are exhausted.

3. High-bidders:

For each PAP with outstanding losses, the total amount of associated losses shall be extinguished pro rata, based on the proportion of (1) its Clearing Fund Requirement

in respect of such PAP, to (2) the aggregate amount of High-bidders' Clearing Fund Requirements in respect of such PAP with the use of each High-bidder's resources:

$$Allocation_Prorata_High_Bidder_CMi = \frac{CF_{HB_CMi}}{\sum CF_{HB_CMi}}$$

Where:

CF_{HB_CMi} is the Clearing Fund Requirements of the High-bidder Clearing Member i that is allocated to a PAP.

III. Loss Allocation to Non-Eligible Clearing Member:

Within a PAP in a specific asset class, Clearing Members (excluding Limited Clearing Members) who are not eligible to participate in the auction will be exposed to losses once all the surviving Clearing Members' Clearing Fund Requirements of Eligible Clearing Members allocated to such asset class have been exhausted. In other terms, non-Eligible Clearing Members will be exposed to losses in the Inter-Class Allocation step, i.e. when losses are extinguished across all asset classes, as described in appendix 2, section IV) 1. c) Step 3 Inter-Class Allocation.