



NOTICE TO MEMBERS

No. 2016 – 162

December 13, 2016

REQUEST FOR COMMENTS

AMENDMENTS TO THE RULES AND THE RISK MANUAL OF THE CANADIAN DERIVATIVES CLEARING CORPORATION TO REFLECT THE CHANGE OF ADMINISTRATOR, CALCULATION AGENT AND PUBLICATION AGENT OF CDOR AND CORRA RATES AND AMENDMENTS TO THE FINAL SETTLEMENT PRICE OF THE THREE-MONTH CANADIAN BANKERS' ACCEPTANCE, 30 DAY OVERNIGHT REPO RATE AND OVERNIGHT INDEX SWAP FUTURES CONTRACTS

Summary

On November 2nd, 2016, the Board of Directors of Canadian Derivatives Clearing Corporation (“CDCC”) approved amendments to CDCC’s Rules and Risk Manual. The purpose of the proposed amendments is to properly reflect the change of administrator, calculation agent and publication agent for the Canadian Dollar Offered Rate (CDOR) and for the Canadian Repo Rate Average (CORRA) in the Rules and Risk Manual.

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 the Rules and the Operations Manual of CDCC. Amendments are submitted to the AMF in accordance with the self-certification process and to the OSC in accordance with the process provided in its Recognition Order.

Canadian Derivatives Clearing Corporation

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Comments on the proposed amendments must be submitted before January 31st, 2017. Please submit your comments to:

*Mr. Martin Jannelle
Legal Counsel
Canadian Derivatives Clearing Corporation
Tour de la Bourse
P.O. Box 61, 800 Victoria Square
Montréal, Québec H4Z 1A9
E-mail: legal@tmx.com*

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

*Mrs. Anne-Marie Beaudoin
Corporate Secretary
Autorité des marchés financiers
Tour de la Bourse, P.O. Box 246
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Montréal, Québec H4Z 1G3
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For any question or clarification, Clearing Members may contact CDCC's Corporate Operations.

Glenn Goucher
President and Chief Clearing Officer



**AMENDMENTS TO THE RULES AND THE RISK MANUAL OF THE CANADIAN DERIVATIVES
CLEARING CORPORATION TO REFLECT THE CHANGE OF ADMINISTRATOR, CALCULATION
AGENT AND PUBLICATION AGENT OF CDOR AND CORRA RATES AND AMENDMENTS TO THE
FINAL SETTLEMENT PRICE OF THE THREE-MONTH CANADIAN BANKERS' ACCEPTANCE, 30 DAY
OVERNIGHT REPO RATE AND OVERNIGHT INDEX SWAP FUTURES CONTRACTS**

SUMMARY	P 2
ANALYSIS	
Background	P 2
Risk management	P 2
Description and Analysis of Impacts	P 4
Proposed Amendments	P 4
Benchmarking	P 4
PRIMARY MOTIVATION	P 4
IMPACTS ON TECHNOLOGICAL SYSTEMS	P 5
OBJECTIVES OF THE PROPOSED AMENDMENTS	P 5
PUBLIC INTEREST	P 5
MARKET IMPACTS	P 5
PROCESS	P 5
EFFECTIVE DATE	P 5
ATTACHED DOCUMENTS	
Appendix 1	P 6
Appendix 2	

I. SUMMARY

Bourse de Montréal Inc. (the “Bourse”) wants to clarify that the final settlement price of an expiring Canadian Bankers’ Acceptance futures contract shall be set with reference to the Thomson Reuters Canadian Dollar Offered Rate (CDOR) value (for one-month and three-month Thomson Reuters CDOR value), and that the final settlement price of an expiring Overnight Repo Rate and Overnight Index Swap futures contract shall be set with reference to the Thomson Reuters Canadian Overnight Repo Rate Average (CORRA) value(s).

Following a tender process that was announced by the Canadian Bankers Association and the Investment Industry Association of Canada on June 2nd 2014, Thomson Reuters was appointed as the administrator, calculation agent and publication agent for the Canadian Dollar Offered Rate (CDOR) on December 31st 2014, and for the Canadian Overnight Repo Rate Average (CORRA) on March 31st 2015. Thomson Reuters Benchmark Services Limited is a subsidiary of Thomson Reuters Corporation.

Furthermore, the CORRA rate is also used by the Canadian Derivatives Clearing Corporation (“CDCC”) for other risk management purposes related to Repurchase Transactions such as the Mark-To-Market Repo rate valuation and the determination of the Floating Price Rate (Virtual Futures Contract (VFC)). Prior to the nomination of Thomson Reuters as benchmark administrator, the CDOR rate was set daily from a panel of eight participants and was publicly disseminated by Reuters while the CORRA rate was published daily by the Bank of Canada.

Therefore, in order to explicitly mention that the CDOR and CORRA rate are now administered, calculated and published by Thomson Reuters according to the IOSCO standards, CDCC needs to amend its rules.

II. ANALYSIS

a. Background

CDOR¹

The main benchmark for Canadian-dollar interest rates is the Canadian Dollar Offered Rate (commonly known as CDOR). It is used to determine interest payments on C\$130 billion in floating-rate notes and payments on about US\$9.3 trillion in Canadian-dollar interest rate swaps as well as over C\$750 billion in exchange-traded derivatives. Given CDOR’s importance, making sure it is robust is essential to the whole Canadian financial system.

CDOR is the rate at which banks are willing to offer credit to companies against bankers’ acceptances (BAs). CDOR is determined through a daily survey of seven market participants held at 10:15 a.m. In a simple process, the highest and lowest rates are dropped and the final five rates are averaged. The panel of banks represent the key players in the BA market, originating close to 99% of the approximately C\$67 billion in outstanding BAs in Canada.

Thus, although CDOR has some similarities to LIBOR, they are different. CDOR is a bank lending rate and LIBOR is a bank borrowing rate. Another difference is that while it is not an average of

¹ <http://www.bankofcanada.ca/2014/03/financial-benchmarks-question-trust/>

secondary market transaction data, it is derived from an underlying market that remains sizeable. This is in contrast to some unsecured interbank markets, the basis of LIBOR, which have generally shrunk substantially since before the crisis.

These features of CDOR do provide some reassurance - and indeed, no problems similar to those with other financial benchmarks have been reported. Nonetheless, given the vital role that CDOR plays in our financial system, Canadian authorities judged it essential to examine CDOR more closely in light of the new International Organization of Securities Commissions (IOSCO) principles and the experience with interest rate benchmarks elsewhere. Presently, to establish the Final settlement prices of an expiring Canadian Bankers' Acceptance futures contract, the Bourse uses the CDOR rate.

CORRA²

While CDOR is probably the most important financial market benchmark in Canada, it is important that other significant benchmarks are well designed and have appropriate governance, in line with IOSCO standards.

Although less widely used than CDOR, the Canadian Overnight Repo Rate Average (CORRA) is important for the Canadian financial system, since it is the reference rate for overnight index swaps, which is a sizable derivatives market. CORRA is calculated based on actual transactions in the overnight market. CORRA was previously calculated and published by the Bank of Canada, on the basis of data submitted by the brokers.

Following a tender process that was announced by the Canadian Bankers Association and the Investment Industry Association of Canada on June 2nd 2014, Thomson Reuters was appointed as the administrator, calculation agent and publication agent for the Canadian Dollar Offered Rate (CDOR) on December 31st 2014, and for the Canadian Overnight Repo Rate Average (CORRA) on March 31st 2015. The primary responsibility of Thomson Reuters is to implement and administer CDOR and/or CORRA in accordance with the responsibilities under the IOSCO Principles, while taking into consideration the specificities of the benchmark rate.

Presently, to establish the final settlement prices of an expiring Overnight Repo Rate (ONX) and Overnight Index Swap futures contract (OIS), the Bourse uses the CORRA rate. CDCC also currently uses the CORRA rate for Mark-To-Market Repo rate valuation for Repurchase Transactions.

b. Other risk management uses of the CORRA rate

Mark-To-Market Repo rate valuation for Repurchase Transactions

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.

² <http://www.bankofcanada.ca/2014/03/financial-benchmarks-question-trust/>

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 using the CORRA rate.

Floating Price Rate (Virtual Futures Contract (VFC))

In order to properly quantify the risk related to the Floating Price Rate, it is necessary to model the Floating Price Rate into a Virtual Futures Contract (VFC) with a price equal to: $VFC's\ price = 100 - Floating\ Price\ Rate$. The CDCC determines the appropriate interest rate using the overnight index swap (OIS) term structure (the CORRA rate is used for the 1 day overnight rate). The Margin Interval of the VFC is also calculated with the CORRA rate.

c. Description and Analysis of Impacts

The proposed modifications aims to align to align the rules of the CDCC with the new reality of having a benchmark administrators for Canadian interest rate benchmarks (CDOR and CORRA), which are respectively the underlying rates of the Bourse's Canadian Bankers' Acceptance futures contracts and the Overnight Repo Rate futures/Overnight Index Swap futures contracts. Specifically, the CDCC wants to properly reflect that the underlying rates of the above contracts are the ones administered and published by Thomson Reuters.

The proposed change will also allow the CDCC to maintain efficient margin requirement calculation (Repo Mark- to-Market with the CORRA rate, VFC) in line with IOSCO standards.

d. Proposed Amendments

The proposed amendments are presented in Appendix 1 and Appendix 2.

e. Benchmarking

None. Thomson Reuters now act as the administrator, calculation agent and publication agent of CDOR and CORRA rates, and the trading and clearing of derivatives products for which CDOR and CORRA are the underlying rates now requires a license from Thomson Reuters.

III. PRIMARY MOTIVATION

The proposed amendments to the rules of the CDCC are motivated by the fact that CDCC wants to explicitly mention that the CDOR and CORRA rate are now administered, calculated and published by Thomson Reuters according to the IOSCO standards. These rates (CDOR/CORRA) are primary used to determine, respectively, the final settlement price at the expiration of the Bourse's Futures contracts (Canadian Bankers' Acceptance futures contract and Overnight Repo Rate/Overnight Index Swap futures contract). CDCC also uses the CORRA rate for other risk management purposes related to Repurchase Transactions such as the Mark-To-Market Repo rate valuation and the determination of the Floating Price Rate (Virtual Futures Contract (VFC)).

IV. IMPACTS ON TECHNOLOGICAL SYSTEMS

The proposed changes will have no impact on the technological systems of the CDCC, its Clearing Members or any other market participant.

V. OBJECTIVES OF THE PROPOSED MODIFICATIONS

The objective of the proposed amendments is to reflect the new reality of having a benchmark administrator for the CDOR and the CORRA, which are the underlying rates of the Canadian Bankers' Acceptance futures contract and Overnight Repo Rate futures and Overnight Index Swap futures contract.

VI. PUBLIC INTEREST

The amendments and additions to the Rules of the CDCC are proposed in order to make the clearing members aware that the CDOR and CORRA rate are now administered by a Benchmark Administrator (Thomson Reuters). In CDCC's opinion, the proposed amendments are not contrary to the public interest.

VII. MARKET IMPACTS

The proposed change will have no observable market impact.

VIII. PROCESS

The proposed amendment is submitted for approval by the CDCC Board. After the approval has been obtained, the proposed amendment, 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 amendment and analysis will also be submitted for approval to the Bank of Canada in accordance with the Regulatory Oversight Agreement.

IX. EFFECTIVE DATE

CDCC would like to implement the amendments as soon as possible in Q1, 2017.

X. ATTACHED DOCUMENTS

Appendix 1: Amended CDCC rules
Appendix 2: Amended Risks manual



CANADIAN DERIVATIVES CLEARING CORPORATION
RULES

RULE C-12 CANADIAN BANKER'S ACCEPTANCE FUTURES (SYMBOL BAR & BAX)

The Sections of this Rule C-12 are applicable only to Futures where the Underlying Interest is a Canadian Bankers' Acceptance.

SECTION C-1201 DEFINITIONS

Notwithstanding Section A-102 for the purposes of Canadian Bankers' Acceptance Futures, the following terms are as defined:

“Canadian Bankers' Acceptance” – means a bill of exchange that has been accepted by a Canadian chartered bank.

“Canadian Bankers' Acceptance Index” – an amount specified from time to time by an Exchange which is determined by subtracting from 100 the annualized yield on the Underlying Interest (based on a 365-day year).

“Canadian Bankers' Acceptance Reference Rate” – ~~means a rate expressed as an annual rate of interest determined daily by the Exchange on which the Future trades by taking the arithmetic mean (rounded to the nearest 1/1000th of a percentage point) of the bid rates for Canadian Bankers' Acceptances, which are the subject of the Future, as quoted by various major Canadian banks and investment dealers selected by the Exchange at random, provided that the two highest quoted bid rates and the two lowest quoted bid rates shall not be taken into account in calculating the arithmetic mean of the quoted rates and provided that the Exchange on which the Future trades, if it considers it appropriate to do so, may determine that such rate shall be calculated in some other fashion~~ Means the daily “Canadian Dollar Offered Rate (“CDOR”) as determined by the appointed CDOR benchmark administrator, currently Thomson Reuters, fixing on the last trading day of the contract month. The value of such CDOR shall be rounded to the nearest 1/1,000th of a percentage point. Any value ending in 0.0005, shall be rounded up.

“Exchange” – means the Bourse de Montréal Inc.

“Final Settlement Price” – means the Settlement Price quoted by the Exchange on which the Future trades at the close of trading on the last day on which such Future trades determined by subtracting from 100 the Canadian Bankers' Acceptance Reference Rate for such day, ~~rounded to the nearest 1/1000th of a percentage point.~~

“Future” – means an underlying to make settlement in cash on a future date of the difference between the Final Settlement Price and either the Trade Price or the Settlement Price on the previous day, multiplied by the appropriate Multiplier pursuant to the standardized terms and in accordance with the Rules, by-laws and policies of an Exchange.

“Multiplier” – means the multiplier of the Futures contract, as specified by the Exchange.

“Underlying Interest” means – BAR – a Canadian Bankers' Acceptance having a principal value at maturity of \$3,000,000 with a one-month maturity and quoted in term of a Canadian Bankers' Acceptance Index.



- BAX - a Canadian Bankers' Acceptance having a principal value at maturity of \$1,000,000 with a three-month maturity and quoted in term of a Canadian Bankers' Acceptance Index.

SECTION C-1202 SETTLEMENT IN CASH THROUGH THE CORPORATION

Unless otherwise specified by the Corporation, settlement of positions held following the close of trading on the last day of trading in Series of Futures shall be made on the first Business Day following the last day of trading. Settlement shall be made by an exchange of cash between the Corporation and each of the short and long Clearing Members. The amount to be paid or received in final settlement of

- a) each position opened prior to the last trading day is the difference between
 - i) the Final Settlement Price; and
 - ii) the Settlement Price of the contract on the previous trading day multiplied by the appropriate Multiplier; and
- b) each position opened on the last trading day is the difference between
 - i) the Final Settlement Price; and
 - ii) the Trade Price of the open contract multiplied by the appropriate Multiplier.

SECTION C-1203 TENDER NOTICES

Rule C-5 shall not apply to Canadian Bankers' Acceptance Futures as they are cash-settled.

SECTION C-1204 ADJUSTMENTS

No adjustments will ordinarily be made in the terms of Canadian Bankers' Acceptance Futures in the event that the Canadian Bankers' Acceptance Index is changed. However, if the Corporation determines, in its sole discretion, that any such change causes significant discontinuity in the level of the Canadian Bankers' Acceptance Index, the Corporation may adjust the terms of the affected Canadian Bankers' Acceptance Futures by taking such action as the Corporation in its sole discretion deems fair to Clearing Members holding Long and Short Positions.

In the event that a governmental agency or body issues an order, ruling, directive or law pertaining to the trading of the Canadian Bankers' Acceptance and the Corporation determines that a significant discontinuity in the level of the Canadian Bankers' Acceptance Index is caused by such a Government order, ruling, directive or law, it shall take such action as it deems necessary and fair under the circumstances.

SECTION C-1205 UNAVAILABILITY OR INACCURACY OF CURRENT VALUE

- 1) If the Corporation determines that the Final Settlement Price for any series of Canadian Bankers' Acceptance Futures is unreported or otherwise unavailable for purposes of calculating the gains and losses, then, in addition to any other actions that the Corporation may be entitled to take under the Rules, the Corporation may do any or all of the following:

- a) Suspend the Settlement of Gains and Losses. At such times as the Corporation determines that the required Final Settlement Price is available, the Corporation shall fix a new date for Settlement of the Gains and Losses.
 - b) fix the Final Settlement Price in accordance with the best information available as to the Final Settlement Price.
- 2) The Final Settlement Price as reported by the Exchange shall be conclusively deemed to be accurate, except that where the Corporation determines, in its sole discretion, that there is a material inaccuracy in the reported Final Settlement Price, it may take such action as it determines in its discretion to be fair and appropriate in the circumstances. Without limiting the generality of the foregoing, the Corporation may require an amended Final Settlement Price to be used for settlement purposes.

SECTION C-1206 PAYMENT AND RECEIPT OF PAYMENT OF THE TRADE PRICE

The Trade price will be included with other settlements on the daily Detailed Futures Consolidated Activity Report and the Futures Sub-Accounts Consolidated Activity Report.

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RULE C-17 30-DAY OVERNIGHT REPO RATE FUTURES (SYMBOL - ONX)

The Sections of this Rule C-17 are applicable only to Futures settling on a future date where the Underlying Interest is the 30-day Overnight Repo Rate.

SECTION C-1701 DEFINITIONS

Notwithstanding Section A-102, for the purposes of the 30-day Overnight Repo Rate Futures contract, the following terms are as defined:

Compounded Overnight Repo Rate

- The Compounded Overnight Repo Rate is the rate of return of a daily compound interest investment at the Overnight Repo Rate. It is calculated in accordance with the following formula:

$$\left[\prod_{i=1}^{d_o} \left(1 + \frac{ORR_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{d} \times 100$$

where:

“ d_o ”, the number of Business Days in the calculation period;

“ i ” is a series of whole numbers from one to d_o , each representing the relevant Business Day in chronological order from, and including, the first Business Day in the relevant Calculation Period;

ORR_i = Overnight Repo Rate on the i^{th} day of the calculation period (if the i^{th} day is not a business day, the previous available Overnight Repo Rate is used);

“ n_i ” is the number of calendar days in the relevant Calculation Period on which the rate is ORR_i ;

“ d ” is the number of calendar days in the relevant Calculation Period.

“Final Settlement Price” – The Final Settlement Price shall be determined by the Exchange on which the Futures trade and will be equal to the Overnight Repo Rate Index calculated over the period of the contract month that begins on the first calendar day of the contract month and ends on the last calendar day of the contract month. ~~The Final Settlement Price is rounded to the nearest 1/10th of one basis point (0.001). In the case a decimal fraction ends with 0.0005 or higher, the Final Settlement Price shall be rounded up.~~ The Final Settlement Price is determined on the First Business Day following the last day of trading.

“Multiplier” – The Multiplier is the value of the tick used to calculate the size of the contract as specified by the Exchange on which the Futures trade.

“Overnight Repo Rate” – ~~The Overnight Repo Rate~~ means the Canadian Overnight Repo Rate (CORRA) as determined by the appointed CORRA benchmark administrator, currently Thomson Reuters, published by the Bank of Canada being the weighted average rate of overnight general (non-specific) collateral repo trades on a specified date as reported to the Bank of Canada.

“Overnight Repo Rate Index” – The Overnight Repo Rate Index is 100 minus Compounded Overnight Repo Rate. The value of the Overnight Repo Rate Index is rounded to the nearest 1/1000th of a percentage point. In the case a decimal fraction ends with 0.0005 or higher, the Overnight Repo Rate Index shall be rounded up.

“Underlying Interest” – The Underlying Interest is the Overnight Repo Rate calculated on a 30-day basis and quoted in terms of an Overnight Repo Rate Index.

SECTION C-1702 SETTLEMENT IN CASH THROUGH THE CORPORATION

Unless otherwise specified by the Corporation, settlement of positions held following the close of trading on the last day of trading in a Series of Futures shall be on the first Business Day following the last day of trading. Settlement shall be made by an exchange of cash between the Corporation and each of the short and long Clearing Members. The amount to be paid or received in final settlement of each position opened on or prior to the last day of trading shall be the difference between

- i) the Final Settlement Price; and
- ii) the Settlement Price of the contract on the last day of trading,

multiplied by the Multiplier of the contract.

SECTION C-1703 TENDER NOTICES

Rule C-5 shall not apply to 30-day Overnight Repo Rate Futures as they are cash-settled.

SECTION C-1704 ADJUSTMENTS

No adjustments will ordinarily be made in the terms of the 30-day Overnight Repo Rate Futures in the event that the Overnight Repo Rate Index is changed. However, if the Corporation shall determine in its sole discretion that any such change causes significant discontinuity in the level of the Overnight Repo Rate Index, the Corporation may adjust the terms of the affected Overnight Repo Rate Futures by taking such action as the Corporation in its sole discretion deems fair to Clearing Members holding Long and Short Positions.

In the event that a governmental agency or body issues an order, ruling, directive or law pertaining to repo transactions and the Corporation determines that a discontinuity in the level of the Overnight Repo Rate Index is caused by such a Government order, it shall take such action as it deems necessary and fair under the circumstances.

SECTION C-1705 UNAVAILABILITY OR INACCURACY OF CURRENT VALUE

- 1) If the Corporation shall determine that the Final Settlement Price for any series of 30-day Overnight Repo Rate Futures is unreported or otherwise unavailable for purposes of calculating the gains and losses, then, in addition to any other actions that the Corporation may be entitled to take under the Rules, the Corporation may do any or all of the following:
 - a) Suspend the Settlement of Gains and Losses. At such time as the Corporation determines that the required Final Settlement Price is available, the Corporation shall fix a new date for Settlement of the Gains and Losses.
 - b) Fix the Final Settlement Price in accordance with the best information available as to the correct Final Settlement Price.
- 2) The Final Settlement Price as reported by the Exchange on which the Futures trade shall be conclusively deemed to be accurate except that where the Corporation determines in its sole discretion that there is a material inaccuracy in the reported Final Settlement Price it may take such action as it determines in its discretion to be fair and appropriate in the circumstances. Without limiting the generality of the foregoing, the Corporation may require an amended Final Settlement Price to be used for settlement purposes.

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RULE C-22 OVERNIGHT INDEX SWAP FUTURES (SYMBOL - OIS)

The Sections of this Rule C-22 are applicable only to Futures settling on a future date where the Underlying Interest is the Compounded Overnight Repo Rate over the period of the Contract Month

SECTION C-2201 DEFINITIONS

Notwithstanding Section A-102, for the purposes of the Overnight Index Swap Futures Contracts, the following terms are as defined:

“Final Settlement Price” – the Final Settlement Price shall be determined by the Exchange and will be equal to the Overnight Repo Rate Index calculated over the period of the Contract Month. ~~The Final Settlement Price is rounded to the nearest 1/10th of one basis point (0.001). In the case a decimal fraction ends with 0.0005 or higher, the Final Settlement Price shall be rounded up.~~ The Final Settlement Price is determined on the first business day following the last day of trading.

“Multiplier” – the value of the tick used to calculate the size of the contract as specified by the Exchange on which the Futures trade.

“Overnight Repo Rate Index” – 100 minus the Compounded Overnight Repo Rate. The value of the Overnight Repo Rate Index is rounded to the nearest 1/1000th of a percentage point. In the case a decimal fraction ends with 0.0005 or higher, the Overnight Repo Rate Index shall be rounded up.

“Compounded Overnight Repo Rate”

The Compounded Overnight Repo Rate is the rate of return of a daily compound interest investment at the Overnight Repo Rate. It is calculated in accordance with the following formula:

$$\left[\prod_{i=1}^{d_0} \left(1 + \frac{ORR_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{d} \times 100$$

where:

“ d_0 ”, the number of Business Days in the calculation period;

“ i ” is a series of whole numbers from one to d_0 , each representing the relevant Business Day in chronological order from, and including, the first Business Day in the relevant Calculation Period;

ORR_i = Overnight Repo Rate on the i^{th} day of the calculation period (if the i^{th} day is not a business day, the previous available Overnight Repo Rate is used);

“ n_i ” is the number of calendar days in the relevant Calculation Period on which the rate is ORR_i ;

“d” is the number of calendar days in the relevant Calculation Period.

“Overnight Repo Rate” – means the Canadian Overnight Repo Rate (CORRA) ~~as determined by the appointed CORRA benchmark administrator, currently Thomson Reuters, published by the Bank of Canada being the weighted average rate of overnight general (non-specific) collateral repo trades on a specified date as reported by the Bank of Canada.~~

“Underlying Interest” – the Compounded Overnight Repo Rate quoted in terms of an Overnight Repo Rate Index.

“Contract Month” – the period that begins the day following the last Bank of Canada Fixed Announcement Date to the day of the next Bank of Canada Fixed Announcement Date.

“Fixed Announcement Date” – the pre-specified date on which the Bank of Canada announces their decision on the target for the Overnight Repo Rate

SECTION C-2202 SETTLEMENT IN CASH THROUGH THE CORPORATION

Unless otherwise specified by the Corporation, settlement of positions held following the close of trading on the last day of trading in a Series of Futures shall be on the first Business Day following the last day of trading. Settlement shall be made by an exchange of cash between the Corporation and each of the short and long Clearing Members. The amount to be paid or received in final settlement of each position opened on or prior to the last day of trading shall be the difference between

- i) the Final Settlement Price; and
- ii) the Settlement Price of the contract on the last day of trading,

multiplied by the Multiplier of the contract.

SECTION C-2203 TENDER NOTICES

Rule C-5 shall not apply to Overnight Index Swap Futures as they are cash-settled.

SECTION C-2204 ADJUSTMENTS

No adjustments will ordinarily be made in the terms of the Overnight Index Swap Futures in the event that the Overnight Repo Rate Index is changed. However, if the Corporation shall determine in its sole discretion that any such change causes significant discontinuity in the level of the Overnight Repo Rate Index, the Corporation may adjust the terms of the affected Overnight Index Swap Futures by taking such action as the Corporation in its sole discretion deems fair to Clearing Members holding Long and Short Positions.

In the event that a governmental agency or body issues an order, ruling, directive or law pertaining to repo transactions and the Corporation determines that a discontinuity in the level of the Overnight Repo Rate Index is caused by such a Government order, it shall take such action as it deems necessary and fair under the circumstances.

SECTION C-2205 UNAVAILABILITY OR INACCURACY OF CURRENT VALUE

- 1) If the Corporation shall determine that the Final Settlement Price for any series of Overnight Index Swap Futures is unreported or otherwise unavailable for purposes of calculating the gains and losses, then, in addition to any other actions that the Corporation may be entitled to take under the Rules, the Corporation may do any or all of the following:
 - a) Suspend the Settlement of Gains and Losses. At such time as the Corporation determines that the required Final Settlement Price is available, the Corporation shall fix a new date for Settlement of the Gains and Losses.
 - b) Fix the Final Settlement Price in accordance with the best information available as to the correct Final Settlement Price.
- 2) The Final Settlement Price as reported by the Exchange on which the Futures trade shall be conclusively deemed to be accurate except that where the Corporation determines in its sole discretion that there is a material inaccuracy in the reported Final Settlement Price it may take such action as it determines in its discretion to be fair and appropriate in the circumstances. Without limiting the generality of the foregoing, the Corporation may require an amended Final Settlement Price to be used for settlement purposes.

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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 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” – 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(9)(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” – 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(11)(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(11)(b).

“Cash Buy or Sell Trade” – 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. The weighted average of rates on overnight general collateral repo transactions conducted through designated interdealer bond brokers between 06:00 and 16:00, as determined by the Bank of Canada.

“Coupon Income” – the interest amount payable to the holder of a Security by its issuer on a Coupon Payment Date.

“Coupon Payment Date” – a date on which the issuer of a Security pays Coupon Income to the holder of the Security.

“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(11)(c).

“Economic Terms” – means the transactional details of a Fixed Income Transaction as set out in Subsection D-603(1).

“Equivalent Security” – an Acceptable Security that is equivalent to the Purchased Security in that it is of the same issuer, part of the same issue, of an identical type, nominal value, description and (except where otherwise specified by the Corporation) amount as the Purchased Security.

“Expected Novation Date” – 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” – the provision of clearing services by the Corporation of Fixed Income Transactions.

“Fixed Income Clearing Member” – an applicant which meets the criteria set out in Section A – 1A01 and Subsection A-301(3) and is approved by the Corporation for Fixed Income Clearing.

“Fixed Income Transaction(s)” – 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 ~~as published by Bloomberg~~ 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 ~~published by Bloomberg~~ 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” – 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 must have available funds in its cash account at the Central Securities Depository 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(11)(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(11)(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(11)(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” – 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” – 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 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(1).

“Net Funds Reversal Requirement” – 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, the amount which is the aggregate net sum of all OCF MTM 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(7).

“Net Payment Obligation” – 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 Seller” – 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).

“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” – 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” – the dedicated trade input screens for clearing and settlement of OTCI operated and/or used by the Corporation.

“Pending Delivery Requirements – 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” – any Net Payment Against Delivery Requirement 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 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” – collectively any Pending Delivery Requirements and/or any Pending Payment Against Delivery Requirements at the Afternoon Netting Cycle Timeframe.

“Price Differential” – 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” – 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” – 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” – 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” – 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” – 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” – with respect to any Repurchase Transaction, the per annum fixed pricing rate agreed by the Repo Party and the Reverse Repo Party.

“Repo Style” – in respect of Coupon Income payments of any Repurchase Transaction, either the US convention that applies as set forth in Paragraph D-606(9)(a), or the Canadian convention that applies as set forth in Paragraph D-606(9)(b).

“Repurchase Date” – 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” – with respect to any Repurchase Transaction, the sum of the Purchase Price and the Price Differential.

“Repurchase Transaction” – 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” – 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.

“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.

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.



Risk Manual

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.

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.
