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CIRCULAR April 23, 2009

#### **SELF-CERTIFICATION**

# IMPLEMENTATION OF AN IMPLIED PRICING ALGORITHM IN THE THREE-MONTH CANADIAN BANKERS' ACCEPTANCE FUTURES CONTRACTS (BAX)

#### AMENDMENTS TO ARTICLES 6303, 6369, 6381 AND 6383 TO 6385, ABROGATION OF ARTICLE 6382 AND ADDITION OF ARTICLE 6369A OF RULE SIX OF BOURSE DE MONTRÉAL INC.

#### AND AMENDMENTS TO THE PROCEDURES FOR THE CANCELLATION OF TRADES AS WELL AS THE DAILY SETTLEMENT PRICE PROCEDURES FOR FUTURES CONTRACTS AND OPTIONS ON FUTURES CONTRACTS

The Rules and Policies Committee of Bourse de Montréal Inc. (the Bourse) has approved amendments to the Rules of the Bourse and to related procedures in order to allow for the implementation of an implied pricing algorithm (IPA) in the Three-Month Canadian Bankers' Acceptance Futures contracts (BAX). The Bourse wishes to advise market participants that these amendments, abrogation and addition to the Rules of the Bourse and amendments to related procedures have been self-certified in accordance with the self-certification process as established in the *derivatives act* (2009, c. 24).

These amendments will become effective on April 24, 2009. You will find the amended articles and procedures attached herein or on the Web site of the Bourse.

#### Amendments to the Rules of the Bourse

Article 6303 and 6383 have been amended to update and harmonize the current terminology being used throughout the Rules of the Bourse.

Article 6369 has been amended by adding 6369A allowing for implied orders to be executed by the Bourse systems.

Article 6381 has been amended to change the means to communicate erroneous trades to a Market Supervisor by approved participants. The article is modified by replacing the requirement to use "a standard form" by a requirement to verbally communicate (by phone) the request for cancellation. The purpose of this modification is to reflect more accurately the current practice in such circumstances.

Circular no.: 062-2009

**Tour de la Bourse** P.O. Box 61, 800 Victoria Square, Montréal, Quebec H4Z 1A9 Telephone: (514) 871-2424 Toll-free within Canada and the U.S.A.: 1 800 361-5353 Website: www.m-x.ca Article 6382 pertaining to the "warning message" has been abrogated as it did not reflect accurately a common practice.

Articles 6384 and 6385 have been modified to clarify the language used in these articles as well as to further detail the circumstances when a trade will not be cancelled. The Bourse has also modified article 6385 by eliminating the reference to a standard form since, as explained previously, any request for cancellation shall be communicated verbally (by phone). Finally, the Bourse has also eliminated the provision of article 6385 to the effect that an erroneous trade will be maintained in the absence of notification of the decision by the Market Supervisor. In practice, a decision is always communicated to the concerned market participant either to confirm the cancellation or adjustment of the trade or, as the case may be, to notify that the trade is maintained.

#### Amendments to the Procedures of the Bourse

In addition to the amendments of the aforementioned articles of its Rules, the Bourse has also updated the Procedures for the Cancellation of Trades and the Daily Settlement Price Procedures for Futures Contracts and Options on Futures contracts

#### **Procedures for the Cancellation of Trades**

The Bourse has amended its Cancellation Procedures in order to harmonize them with the provisions of articles 6303, 6381, 6383, 6384 and 6385 of the Rules of the Bourse and that they take into account the new implied orders and pricing algorithm for the BAX future contract.

With the implementation of the new implied pricing market model, the increment level (in the procedure's schedule) has been harmonized and set at 5 basis points for all individual BAX maturities and regular BAX spread orders. The Bourse has also added a price increment (5 to 10 basis points) that will be applicable to erroneous trades resulting from implied spread orders.

The Bourse has also added a specification in Section 4.2 (Validation – No Cancel Range) stating that one of Market Operations Department roles is to ensure market integrity. Therefore, as stipulated, any trade outside of the No Cancel Range will be processed and adjusted by Market Supervisors within the prescribed range. An additional paragraph has also been added in section 4.8 (Decision) giving precision on the implications of re-instating an order after a transaction has been cancelled.

Various modifications throughout the procedure have also been made with the purpose of clarifying and adding more precision without constituting material changes to the text's content. These additional clarifying modifications are for the benefit of the procedure's users and of the public in general.

#### **Daily Settlement Price Procedures for Futures Contracts and Options on Futures Contracts**

In addition, the Bourse amended its Daily Settlement Price Procedures in order for these procedures to be harmonized with article 6390 of the Rules of the Bourse and that they take into account the new proposed IPA algorithm for the BAX futures contract.

The daily settlement procedure for the BAX contract indicates that only regular orders posted in the order book will be taken into consideration. However all trades resulting from both regular and implied orders will be taken into account for the purpose of establishing the daily settlement price. Furthermore, the procedure has been adjusted providing details of the process by which the front quarterly contract month is established. Overall, the purpose of the Bourse's amendments to the above-mentioned Procedures and articles is to clarify, update and harmonize these procedures and rules with the current practices.

The regulatory modifications discussed in this circular were subjected to a request for comments published by the Bourse on February 5, 2009 (circular No. 021-2009). The Bourse received no comment letters following the publication of this request for comments.

For further information, please contact Richard Bourbonnière, Vice-President, Market Operations, Financials Market at 514-871-3548 or at <u>rbourbonniere@m-x.ca</u>.

Hanh Ly Legal Counsel General Secretariat and Legal Affairs

# 6303 Validation, alteration or cancellation of a trade

(10.10.91, 25.05.01, 24.04.09)

If certain urgent events require it or if certain extraordinary market conditions exist, and in order to maintain a fair and equitable market for all participants, a vice-president or senior vicepresident of the Bourse can validate, alter, disallow or cancel any trade and such trade will be validated, altered, disallowed or cancelled.

These decisions are final and cannot be appealed.

In the case of a cancellation, the trade will have no standing whatsoever and shall be expunged from the records.

#### 6369 Regular Orders

(25.09.00, 24.09.01, 29.10.01, 24.04.09)

The orders routed by Approved Participants (regular orders) which can be executed are defined hereinafter:

- a) Market order (best limit; bid/ask)
  - A Market order is executed at the best limit that is available on the other side of the market at the moment the order is introduced into the electronic trading system, at the quantity available at this limit. If the order is partially filled, the unfilled quantity is posted at the price which the first part of the order was executed.
  - A Market order can only be entered during the Market Session (Continuous Trading).
  - A Market order is only accepted by the system if a price limit exits on the other side.
- b) Limit order:

An order to buy or sell at a specified price, or better.

c) Stop limit order:

An order to buy or sell which becomes a limit order once the contract has traded at the stopprice or higher in the case of a buy order; at the stop-price or lower in the case of a sell order.

If more than one stop order has the same trigger price, then the first in, first out basis (FIFO) rule will apply. Once the stop order becomes a limit order, a new time priority is given to it.

- Stop limit orders can only be entered as day orders.
- d) Opening / Closing price order (Market on Open and Market on Close):

Order by which a trader is the buyer or the seller of contracts at the opening / closing price defined by the electronic trading system at the pre-opening / pre-closing session. Therefore, this order must be input during the pre-opening / pre-closing session. If an order is not filled in full, the order is assigned the opening price Calculated Theoretical-Opening (CTO) as defined in article 6375 of the Rules, as its new limit.

e) Hidden quantity order:

A trader may hide a certain quantity of the order to the market :

- Disclosed quantity: quantity of contracts initially parameterized by the user to be seen by the market.
- Hidden quantity: difference between the whole order quantity (total quantity) and the disclosed quantity. The hidden quantity is only seen by the Bourse.
- Displayed quantity: Quantity of contracts effectively seen by the market.
- When the order is executed for the disclosed quantity, it is renewed for the same disclosed quantity and the order is positioned at the end of the queue at the same limit. It loops until the whole order quantity (total quantity) has been filled.
- f) Fill and kill order

An order which is executed at the given price for the quantity which can be executed. Any portion of the order, which cannot be executed, will be cancelled.

g) All or none bids or offers and minimum amount orders are not allowed.

The Bourse may decide that certain types of orders are not available.

# **6369A** Implied orders (24, 04, 09)

(24.04.09)

The orders generated by the trading engine which can also be executed are defined hereinafter:

#### **Implied orders:**

Orders generated by the implied pricing algorithm using regular orders and registered in the order book by the trading engine.

# 6381 Cancellation or Adjustment of Trades

(25.09.00, 24.09.01, 29.10.01, 24.04.09)

- a) A trade on the electronic trading system resulting from an input error can be cancelled by the parties agreeing to it within 15 minutes following its execution. The error and the request to cancel the resulting transaction must be verbally communicated (by telephone) by the approved participant to a Market Supervisor of the Bourse.
- b) The Bourse may at any time cancel or adjust a trade if it is judged to be detrimental to the normal operation or quality of the market or in any circumstance judged appropriate by a Market Supervisor.

The decisions are final and cannot be appealed.

#### 6382 Warning Message

(25.09.00, 24.09.01, 29.10.01, abr. 24.04.09)

#### 6383 Acceptable Market Price

(25.09.00, 24.09.01, 29.10.01, 24.04.09)

Before the cancellation of a trade, the Market Supervisor of the Bourse notes the spread between the price execution of the trade that is requested to be cancelled and the acceptable market price and determines the estimated price at which the trade should have been done in normal execution conditions.

The acceptable market price is determined by the Market Supervisor of the Bourse on the basis of available market information at the time the trade, requested to be cancelled was executed.

#### 6384 Decision by the Market Supervisor of the Bourse

(25.09.00, 24.09.01, 29.10.01, 24.04.09)

A trade will not be cancelled:

- if the error and the request to cancel the resulting trade have been communicated to the Bourse by the approved participant outside the prescribed delay;
- if the spread between the execution price of the trade to be cancelled and the acceptable market price is inferior to the spread determined by a Market Supervisor of the Bourse;
- if a Market Supervisor of the Bourse considers that he does not have sufficient information to determine the acceptable market price;
- if the information communicated to the Bourse by the approved participant is incomplete or insufficient.

The Market Supervisor's decision is final and cannot be appealed.

#### 6385 Delays of Decision and Notifications

(25.09.00, 24.09.01, 29.10.01, 24.04.09)

The Market Supervisor of the Bourse will decide to cancel or refuse to cancel a transaction and will inform each party to the trade of this decision. This will be done within thirty minutes following the communication of the error and of the cancellation request to the Bourse by the approved participant within the same delay.



# PROCEDURES FOR THE CANCELLATION OF TRADES

### 1. APPLICABLE RULES

The herein procedure is consistent and in reference with the following Rule Six articles of the Bourse:

- 6303 Validation, alteration or cancellation of a trade
- 6381 Cancellation of Trades
- 6383 Acceptable Market Price
- 6384 Decision by the Market Supervisor of the Bourse
- 6385 Delays of Decision and Notifications

#### 2. SUMMARY OF THE RELATED RULES

In order to maintain a fair and equitable market, trades may be cancelled by a vice-president or a senior vice-president of the Bourse if such transactions are detrimental to the normal operation or quality of the market or in any other circumstance deemed appropriate considering market conditions at the time of the trade or if the parties involved in the trade agree to the cancellation.

### 3. OBJECTIVE

The objective of the procedures described herein is:

• To ensure that all transactions are executed at a price coherent with prevailing market conditions (integrity) and to ensure that input errors can be corrected.

#### 4. DESCRIPTION

#### 4.1. DETECTION AND DELAYS

Market participants have the responsibility to identify without delay erroneous trades. As soon as an erroneous transaction resulting from an entry error is identified, the approved participant must advise a Market Supervisor of the Bourse by telephoning the Market Operations Department of the Bourse at 514 871-7871 or 1-888-693-6366. A Market Supervisor will then contact the counterparties to the trade to reach an agreement within 15 minutes as prescribed by article 6381 of the Rules of the Bourse.

# 4.2. IMPLIED SPREAD ORDERS

"Regular orders": Orders routed by approved participants to the Montréal Exchange trading system.

"**Implied orders**": Orders generated by the implied pricing algorithm (using regular orders) and registered in the order book by the trading engine.

A spread trade resulting from an implied spread order is in reality constituted from each of the individual legs regular outright orders. For the purpose of this procedure, an erroneous trade occurring on an implied spread order will be treated as if the spread trade was executed using regular posted orders of each individual leg separately.

As a result, the prescribed increment utilized to establish the No Cancel Range to adjust an erroneous spread trade resulting from an implied spread order will be at least the increment on one of the individual legs (5 basis points) and at the most, the sum of each individual legs' increments (10 basis points).

#### 4.3. VALIDATION – NO CANCEL RANGE

In order to maintain market integrity, when a transaction outside the No Cancel Range is identified by Market Supervisors, the parties involved will be contacted within a reasonable delay by the Market Operations Department of the Bourse in order to adjust the trade price within the No Cancel Range.

When any potential erroneous trade is brought by a market participant to the attention of a Market Supervisor, he will determine whether the trade price is in the No Cancel Range for the particular derivative instrument.

The No Cancel Range is defined as the price interval within which a trade cannot be cancelled. To establish the No Cancel Range, Market Supervisors:

 determine, in accordance with article 6383 of the Rules, what the acceptable market price for that derivative instrument was before the trade occurred. In making that determination, the Market Supervisor will consider all relevant information, including the last trade price, a better bid or offer, a more recent price in a related derivative instrument (for example a different expiry month) and the prices of similar derivative instruments trading in other markets; • apply (add and deduct) the following increments to the acceptable market price:

DERIVATIVE INST	RUMENT	INCREMENT	
Three-Month Canadian Bank Futures – BAX (all quarterly months)	ker's Acceptance and serial	5 basis points	
Three-Month Canadian Bank	ker's Acceptance		
Futures – BAX SPREADS:			
- Regular spread orders		5 basis points	
- Implied spread orders		5 to 10 basis points; sum of the spread's individual legs' increments.	
Options on Three-Month Car	nadian Banker's	5 basis points	
Acceptance Futures – OBX			
Ten-Year Government of Ca	nada Bonds	20 basis points	
Futures – CGB			
Five-Year Government of Ca	inada Bonds	20 basis points	
Futures – CGF			
Options on Ten-Year Govern	nement of Canada	20 basis points	
Bonds Futures – OGB	OVE	1 index points	
S&P/TSX 60 Index Futures -		4 Index points	
S&P/ISX 60 Index Options -	- 570	0.5 index point	
S& D/TSX 60 Index Options	<u>svo</u>	1 index point	
Next two quarterly months	- 370		
PRICE RANGES	\$0.00 to \$5.00	\$0.10	
	\$5.01 to \$10.00	\$0.25	
	\$10.01 to \$20.00	\$0.50	
	\$20.00 up	\$0.75	
SPONSORED OPTIONS	· · · · · · ·		
PRICE RANGES \$0.001 to \$0.99		\$0.25	
	\$1.00 up	\$0.50	
SINGLE STOCK FUTURES	•	\$2.00	

# 4.4. TRADE PRICE INSIDE THE NO CANCEL RANGE

If the Market Supervisor determines that the price of the reported erroneous trade was inside the No Cancel Range, then the trade will be maintained and no further action will be taken unless the counterparty to the erroneous trade has agreed to cancel it.

Erroneous transactions, for which there has been consent between the parties to cancel, may be cancelled within the trading session (early, regular or extended) during which they have occurred.

# 4.5. TRADE PRICE OUTSIDE THE NO CANCEL RANGE

If the Market Supervisor determines that the price of the erroneous trade is outside the No Cancel Range, then all parties involved in the transaction will be contacted and advised of the situation.

The transaction will be cancelled if all parties involved are in agreement.

The transaction will not be cancelled if one of the parties involved refuses. The residual trades (the ones not cancelled) will be readjusted to the limit of the No Cancel Range. In this circumstance, if the transaction involved a linked implied order, the initiator of the original error trade will take responsibility for the outcome. The error initiator may therefore have to take ownership of market positions for the directly resulting trades in the other linked contracts.

The Market Operations Department of the Bourse will adjust erroneous transactions in the best possible way. The main objective when adjusting erroneous trades is to minimize the impact for all market participants involved in the erroneous transaction and more particularly those who had a regular order in the order book.

# 4.6. OTHER SITUATIONS JUSTIFYING THE CANCELLATION OF TRANSACTIONS

The Market Operations Department of the Bourse will review all circumstances surrounding a transaction to determine whether the trade occurred in accordance with the rules of the Bourse. The factors that will be considered include, among other things, the market conditions immediately before and after the trade was executed; the volatility of the market; the prices of related instruments in other markets and the fact that one or many parties to the transactions consider that it was executed at a valid price.

In the case of a system failure, it is possible that the Bourse's automated trading system will freeze with orders queued and waiting to be processed. Once the problem is resolved, the market will be put into a pre-opening phase by halting trading in each derivative instrument in order to modify the opening time parameters. This pre-opening phase will allow market participants to modify orders and will ensure that the system failure does not impact the integrity of the market. Nevertheless, when the system is not frozen, the pending orders could be unreasonably executed before the Bourse can halt the instruments. Accordingly, Market Supervisors could cancel trades resulting from executions in these circumstances.

# 4.7. MULTIPLE MARKET MAKER TRANSACTIONS ON EQUITY, INDEX AND BOND OPTIONS

A Market Supervisor may also cancel transactions under the following conditions:

- 1. Multiple consecutive transactions can be cancelled if they consist of four (4) or more transactions against one market maker provided that:
  - all transactions were executed within a one (1) second interval;
  - the opposite side of the transactions consists of one or several market makers.
- 2. The market maker involved in the four (or more) transactions contacted a Market Supervisor at 514 871-7877 or 1-866-576-8836 within one (1) minute of the execution time of the multiple consecutive transactions, to request their cancellation.

# 4.8. DECISION

A decision to cancel or to refuse to cancel will be rendered by a Market Supervisor within 30 minutes following the cancellation request.

If the decision is to cancel the trade, the Market Supervisor will remove the trade from the records. Furthermore, if stop orders were triggered and therefore executed as a result of the cancelled trades, then these "stop" trades will also be cancelled and the orders will have to be re-instated in the order book by the initiators of such orders. Trade cancellation messages will be disseminated.

When a transaction is cancelled, if it originated from a regular order posted in the order book, the original price/time priority (FIFO) will not be maintained if the initiator of the original order wishes to re-instate his order after the cancellation. This cancelled order must then be reentered in the trading system by the initiator of the original order. This subsequent order entry moment will be the official recorded time of the re-instated order.

If the Market Supervisor's decision is to not cancel the trade, the parties to the transaction can not themselves decide to cancel it by making a position transfer through the Canadian Derivatives Clearing Corporation.



### DAILY SETTLEMENT PRICE PROCEDURES FOR FUTURES CONTRACTS AND OPTIONS ON FUTURES CONTRACTS

# 1 RULE

Article 6390 of the Rules of Bourse de Montréal Inc. (the Bourse) stipulates that:

"The daily settlement price or the closing quotation are determined according to the procedures established by the Bourse for each derivative instrument."

#### 2 SUMMARY

# FUTURES CONTRACT AND OPTIONS ON FUTURES CONTRACT DAILY SETTLEMENT PRICES

- These markets use an average price during the last minutes of trading to establish a single settlement price. These calculations are executed manually by market officials or, as the case may be, by an automated algorithm using pre-established guidelines for each product.
- The prices at which block trades, Exchange for Physical (EFP), Exchange for Risk (EFR) or Substitution transactions are arranged shall not be used to establish the open, high, low or daily settlement price.

# 3 OBJECTIVES

The objectives of establishing daily settlement prices are:

- Ensure a fair and orderly market close and pricing for approved participants so that they can properly mark-to-market their positions for margin calculations and back office processing, including the clearing and settlement of their transactions ;
- Ensure that the Canadian Derivatives Clearing Corporation (CDCC) and all market participants are informed of the settlement prices.

#### 4 DESCRIPTION

# 4.1 THREE-MONTH CANADIAN BANKERS' ACCEPTANCE FUTURES CONTRACTS (BAX)

The daily settlement price procedure for the Three-Month Canadian Bankers' Acceptance Futures contract (BAX) is executed by a fully automated pricing algorithm which utilizes the parameters described in sections 4.1.1, 4.1.2 and 4.1.3 to ensure accuracy in the process.

# **DEFINITIONS:**

- "**Regular orders**": Orders routed by approved participants to the Montréal Exchange trading system.
- "**Implied orders**": Orders generated by the implied pricing algorithm (using regular orders) and registered in the order book by the trading engine.

#### 4.1.1 IDENTIFICATION OF THE FRONT QUARTERLY CONTRACT MONTH

The automated daily settlement pricing algorithm identifies the front quarterly contract month from the first two quarterly contract months. The front quarterly contract month is the one, among the first two quarterly contract months, that has the largest open interest and the required market information. In the absence of both these criteria together, then the front quarterly contract month shall be determined by market officials based on available market information.

### 4.1.2 ALGORITHM UTILIZED FOR THE DETERMINATION OF THE DAILY SETTLEMENT PRICE OF THE FRONT QUARTERLY CONTRACT MONTH

Once the front quarterly contract month has been identified, the automated daily settlement price algorithm will determine the settlement price of the front quarterly contract month according to the following priorities: first, it will use the last three minute weighted average price of cumulated trades amounting to at least 50 contracts on that contract month; if no such average price is available, it will then use the last 30 minute weighted average price of cumulated trades amounting to at least 50 contracts on that contracts on that contract month. Trades resulting from both regular and implied orders will be accounted for in the process. If no such average price is yet available, then the least variation between the bid or offer price that is not as a result of implied orders and the previous day settlement price will be used.

Once the daily settlement price for the front quarterly contract month has been established, it will be verified against the booked orders and if there is a better outright bid or offer that is not as a result of implied orders, the latter will take precedence over the daily settlement price calculated as described in the paragraph above.

### 4.1.3 PROCEDURE FOR THE DETERMINATION OF THE DAILY SETTLEMENT PRICE OF THE REMAINING BAX CONTRACT MONTHS

Upon completion of the aforementioned steps, the automated daily pricing algorithm will then establish the settlement prices for all other BAX contract months sequentially. The daily settlement prices of all other BAX contract months will be based first on the last three minute outright market (resulting from regular and implied orders) and strategy combination traded weighted average or, if no weighted average price can be determined in this manner, the least variation between the bid and offer for booked orders.

# 4.1.4 ANCILLARY PROCEDURE

In the absence of any required items to apply the aforementioned procedure, market officials will establish the settlement price based on available market information. They may also disregard any event (trade, bid or offer) which occurs near the end of the regular trading session and which is not compatible with a given settlement price.

In this situation, market officials will keep a record of the criteria used to establish the settlement price.

# 4.2 STOCK INDICES FUTURES CONTRACTS

The settlement price shall be the weighted average of all trades during the closing range. The closing range is defined as the last minute of the trading session for all contract months.

#### 4.2.1 MAIN PROCEDURE

#### Booked Orders

If there is an unfilled order with a higher bid or lower offer in an outright month, this bid or offer will override the settlement price obtained from the weighted average. The order must have been posted for 20 seconds or longer prior to the close and its size must be for a total of 10 contracts or more.

#### • Last Trade

If there are no trades in the last minute of trading, then the last trade will be taken into account while still respecting posted bids and offers in the market.

# 4.2.2 FIRST ANCILLARY PROCEDURE

When two contract months and the spread are trading (quarterly calendar roll), the ancillary procedure of this section will apply.

- The front month must be settled first (the establishment of the front month is based on the month with the greatest open interest).
- The spread between the two contract months must be settled next by taking into account the last minute average trading price and by examining the trades executed during the previous 10 minutes.
- The settlement price for the back month or far month is obtained by the difference between the front month settlement price and the value of the spread.

# 4.2.3 SECOND ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.2.1 and the ancillary procedure in 4.2.2, the following ancillary procedure will apply.

Market officials will post a settlement price that will reflect the same differential that was applied on the previous day settlement. The settlement price will be adjusted accordingly to respect that contract's previous settlement price.

# 4.2.4 THIRD ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.2.1 and the ancillary procedures in 4.2.2 and in 4.2.3, the following ancillary procedure will apply.

In this situation, market officials will establish the settlement price based on available market information. They may also disregard any event (trade, bid or offer) which occurs near the end of the regular trading session and which is not compatible with a given settlement price.

In this situation, market officials will keep a record of the criteria used to establish the settlement price.

# 4.3 GOVERNMENT OF CANADA BOND FUTURES CONTRACTS

# 4.3.1 MAIN PROCEDURE

The settlement price shall be the weighted average of all trades during the closing range. The closing range is defined as the last minute of the trading session for all contract months.

# Booked Orders

If there is an unfilled order with a higher bid or lower offer in an outright month, this bid or offer will override the settlement price obtained from the weighted average. This order must have been posted for 20 seconds or longer prior to the close and its size must be for 10 contracts or more.

# • Last Trade

If there are no trades in the last minute of trading, then the last trade will be taken into account while still respecting posted bids and offers in the market.

# 4.3.2 FIRST ANCILLARY PROCEDURE

When two contract months and the spread are trading (quarterly calendar roll), the following ancillary procedure will apply.

- The front month must be settled first (the establishment of the front month is based on the month with the greatest open interest).
- The spread between the two contract months must be settled next by taking into account the last minute average trading price and by examining the trades executed during the previous 10 minutes.
- The settlement price for the back month or far month is obtained by the difference between the front month settlement price and the value of the spread.

# 4.3.3 SECOND ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.3.1 and the ancillary procedure in 4.3.2, the following ancillary procedure will apply.

Market officials will post a settlement price that will reflect the same differential that was applied on the previous business day. The settlement price will be adjusted accordingly to respect that contract's previous settlement price.

# 4.3.4 THIRD ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.3.1 and the ancillary procedures in 4.3.2 and 4.3.3, the following ancillary procedure will apply.

In this situation, market officials will establish the settlement price based on available market information. They may also disregard any event (trade, bid or offer) which occurs near the end of the regular trading session and which is not compatible with a given settlement price.

In this situation, market officials will keep a record of the criteria used to establish the settlement price.

# 4.4 OPTIONS ON THREE–MONTH CANADIAN BANKERS' ACCEPTANCE FUTURES CONTRACTS (OBX)

#### 4.4.1 MAIN PROCEDURE

#### 4.4.1.1 Weighted Average

The settlement price shall be the weighted average of the prices traded in the closing range (last minute of trading). If there is at the close, a higher bid or lower offer than the settlement price so obtained, that bid or offer shall be the settlement price.

#### 4.4.1.2 Last Trades

If no trade occurs during the closing range, the market officials will consider transactions executed during the last 30 minutes of trading. Also, to be considered, the bids and offers shall be for a minimum of 25 contracts and shall have been posted at least one minute before the close to be considered.

If no trade occurs in the closing range (or in the last 30 minutes of trading), the settlement price shall be the theoretical price calculated by the Bourse (as described in section 4.4.2). If there is at the close a higher bid or lower offer than the settlement price so obtained, that bid or offer shall be the settlement price.

#### 4.4.2 ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.4.1, the following ancillary procedure will apply.

The settlement price shall be determined by inserting the following parameters into a standard option pricing model (Black & Scholes):

#### Price of the underlying:

• The Bourse will capture the settlement price of the underlying BAX futures contract. This will be the price of the underlying.

#### Interest rate:

• The interest rate used will be the rate implied by the settlement price of the BAX futures contract nearest to expiration.

#### Volatility:

 The Bourse will use the implied volatility (per contract month, for puts and calls) obtained from the acting Market Maker. The same volatility will be applied for both calls and puts.

The strike price of the options' series and the time to expiration are the other parameters that will be inserted into the model.

In determining the closing price, the Bourse shall take into account the information provided by the spread market, for example; if the SEP 9200 straddle is 98 bid, the total of the closing prices of these two series should not be inferior to 98.

# 4.5 30-DAY OVERNIGHT REPO RATE FUTURES CONTRACTS (ONX)

# 4.5.1 MAIN PROCEDURE

The settlement price shall be the weighted average of all trades during the closing range. The closing range is defined as the last three minutes of the trading session for all contract months.

#### 4.5.1.1 Weighted Average of closing range trades

The weighted average will be derived from trades that occurred in the outright months during the closing range. The total volume traded in each outright month must be for 25 or more contracts.

#### 4.5.1.2 Booked Orders

If there is an unfilled order with a higher bid price or lower offer price in a month, this bid or offer will override the settlement price obtained from the weighted average. This order must have been posted for 15 seconds or longer prior to the close and its size must be for a total of 25 or more contracts in each of the months.

# 4.5.1.3 Remaining Balances of Booked Orders Partially Executed at the close

In the case of a booked order as stipulated in paragraph 4.5.1.2 above, which would be only partially executed, the trades during the closing period as well as the remaining balance of booked orders will be considered to establish the settlement price.

Example 1: If there is a booked order for 25 ONX contracts at 97.92 and 15 of those contracts are executed, the 10 remaining contracts, if they are still present on the market at the same price, will be considered to establish the required minimum of 25 contracts.

Example 2: If there is a trade of 15 ONX contracts during the closing period at 97.92 and there is a booked order bid for 10 ONX contracts at 97.91 (respecting the required time limit), the bid will be considered in addition to the trades in the closing period to establish a settlement price.

# 4.5.1.4 Strips and Spreads

All trades and unfilled booked orders for strips and spreads related to any expiry months will be ignored.

# 4.5.2 FIRST ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.5.1, the following ancillary procedure will apply.

#### 4.5.2.1 Weighted Average of trades on strategies

The settlement price shall be the weighted average of the trades on the strategies traded during the last five minutes provided the volume for the strategy taken into account was of 25 or more contracts.

#### 4.5.2.2 Booked Orders

If there is an unfilled order with a higher bid or lower offer, this bid or offer will override the settlement obtained from the weighted average described in 4.5.2.1. It has to have been posted for three minutes or longer prior to the close and the size must be for 25 or more contracts.

#### 4.5.3 SECOND ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.5.1 and the ancillary procedure in 4.5.2, the following ancillary procedure will apply.

#### 4.5.3.1 Differential with the previous contract month's settlement price

The settlement price will be defined by a price that reflects an appropriate differential with the settlement price of the previous contract month always starting with the contract month closest to expiry.

#### 4.5.3.2 Conflicts between spreads

If two spreads are in conflict, the calendar spread closest to expiry will have priority.

# 4.5.4 THIRD ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.5.1 and the ancillary procedures in 4.5.2 and 4.5.3, the following ancillary procedure will apply.

In this situation, market officials will establish the settlement price based on the available market information. They may also disregard any event (trade, bid or offer) which occurs near the end of the regular trading session and which is not compatible with a given settlement price.

In this situation, market officials will keep a record of the criteria used to establish the settlement price.

# 4.6 FUTURES CONTRACT ON CARBON DIOXIDE EQUIVALENT (CO<sub>2</sub>e) UNITS

### 4.6.1 MAIN PROCEDURE

The settlement price shall be the weighted average of all traded prices during the closing range. The closing range is defined as the last fifteen minutes of the trading session for all contract expiries.

# Booked Orders

If there is an unfilled order with a higher bid or lower offer in a particular contract expiry, this bid or offer will override the settlement price obtained from the weighted average. This order must have been posted for 20 seconds or longer prior to the close and its size must be for 10 contracts or more.

# • Last Trade

If there are no trades in the last fifteen minutes of trading, then the last trade will be taken into account while still respecting posted bids and offers in the market.

# 4.6.2 FIRST ANCILLARY PROCEDURE

When two contracts expiries and the spread are trading (calendar roll), the following ancillary procedure will apply.

- The contract having the earliest expiry must be settled first.
- The spread between the two contracts must be settled next by taking into account the last fifteen minutes average trading price and by examining the trades executed during the previous 30 minutes.
- The settlement price for the far-dated contracts corresponds to the difference between the settlement price of the contract having the earliest expiry and the value of the spread.

# 4.6.3 SECOND ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.6.1 and the ancillary procedure in 4.6.2, the following ancillary procedure will apply.

Market officials will post a settlement price that will reflect the same differential that was applied on the previous trading day. The settlement price will be adjusted accordingly to respect that contract's previous settlement price.

# 4.6.4 THIRD ANCILLARY PROCEDURE

In the absence of the items required to apply the main procedure in 4.6.1 and the ancillary procedures in 4.6.2 and 4.6.3, the following ancillary procedure will apply.

In this situation, market officials will establish the settlement price based on available market information. They may also disregard any event (a trade, a bid or an offer) which occurs near the end of the regular trading session and which is not compatible with a given settlement price.

Market officials will register in the "daily settlement price record" the criteria considered for determining the settlement price.