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Technical Notice 20-007

Average Pricing System (APS) Release

- **Post-Trade Web UI**
- **Clearing API**
- **Trade Management (TMS)**

Subject to regulatory approval, the Bourse de Montréal Inc. (the "Bourse") aims to introduce its Average Pricing System (APS) at the beginning of the third trimester of 2020. This notice provides an overview of the feature and describes the changes being made in preparation for its implementation.

APS Feature Overview

The introduction of this feature is the first step in replacing the Windows application of the Trade Management (TMS) with a web application. This initiative will:
- Facilitate the deployment of new features by avoiding on-site TMS deployment;
- Provide participants with a valuable new feature (APS);
- Improve the user experience for our clients;
- Lay the foundation for a streamlined post-trade (MX/CDCC) application landscape.

The Bourse APS will allow participants to add trades to a pricing group in order to obtain an average price calculated by the Bourse. Participants will then be able to perform allocations and/or give-ups at the calculated price using these trades.

The average price for a transaction is determined using a volume-weighted calculation and is rounded to seven digits. A negligible residual amount can result from this calculation/rounding. This non-material amount will always be given to the executing broker.

Transactions may be added to a pricing group if:
- They have the same trade date, firm, instrument and side (buy/sell);

- They are not part of another pricing group;
- They have not been given up.

The initial release will only allow participants to group trades on futures and strategy on futures instruments. Therefore, grouping trades on the following products will not be allowed:
- Equity options (this will be possible in a future release)
- BTC instruments
- Trades created using the Special Terms Transactions Reporting Form (STTRF)

Summary of changes

Post-Trade Web UI

- A new web application will be available through TMX Connect, the single sign-on (SSO) solution for TMX applications.
- Each individual user will need valid credentials to access the application. Prior to requesting access, please contact the MX Technical Support Desk to initiate the on-boarding process and obtain required signatures.
- The new web application will allow participants to group transactions to perform allocations and give-ups at an average price.

CLEARING API

The changes to the Clearing API protocol specifications are summarized as follows:

Message	Field	Tag	Req	Data Type	Change Description
TradeReport	AllocationPrice	503	R	Price	Increased to 7 decimals
TradeReport	OriginalAllocationPrice	510	R	Price	Allocation original price
TradeReport	AllocationPricingGroupName	820	C	String	New field
TradeReport	AllocationPricingGroupAlgo	6201	R	String	New field

Please refer to the protocol specifications for descriptions of the Req and Data Type fields.

Important: The updated protocol will be disabled by default. Participants who want to use average pricing and adopt the updated protocol must: (i) contact the MX's Technical Support Desk to schedule required compliance testing; (ii) ensure their internal systems can handle a trade price with 4 decimals and an allocation price with 7 decimals.

After successfully completing these steps, participants may request APS activation for their account.

TRADE MANAGEMENT SYSTEM (TMS)

- An updated version of the TMS will be available in the TMX Web Store. Participants must have the updated version in order to view the APS-related changes:

- ○ Trade price with four decimals;
- ○ Allocation price with seven decimals;
- ○ Allocation original price;
- ○ Allocation pricing group;
- ○ Allocation pricing group algo.
● Legacy versions will truncate the trade price and allocation price to three decimals, and will not display the allocation original price, pricing group and pricing algo fields.
● DTM2B report users will require an updated version of TMS.

OTHER POST-TRADING FACILITIES
● ATR: No impact due to trade prices with 4 decimals.

TIMELINE

Clearing API Protocol Specifications, v1.14	Tuesday, April 21, 2020, in www.tmxwebstore.com
Trade Management User Guide	Monday, June 1, 2020, in www.tmxwebstore.com
Post-Trade Web Application User Guide	Monday, June 1, 2020, in www.tmxwebstore.com
GTE	Monday, June 1, 2020
Production Release	Early Q3. Exact date to be confirmed.

Please direct any questions, comments or requests for additional information to the MX Technical Support Desk.

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