

Technical Notice 20-013

MX Participation in the FIA and SIFMA 2020 Disaster Recovery Tests

The Montréal Exchange (MX) will be participating in the aligned Futures Industry Association (FIA) and Securities Industry and Financial Markets Association (SIFMA) Disaster Recovery tests on Saturday, October 24th 2020, including the pre-connectivity test held on Saturday, September 12th 2020.

This notice details the sequence of events during the Disaster simulation. It also provides information on registration, pre-connectivity date and contact information.

Pre-Connectivity information - September 12th , 2020

FIA - SIFMA	Pre-Connectivity Test
Date	September 12, 2020
MX Participants Start Time	10 h
MX Participants End Time	13 h

The purpose of this test is to establish and confirm connectivity. For this activity, “PING” testing is not permitted, therefore all MX Participants will need to connect to MX systems in order to test and validate connectivity, via telnet.

MX Participants can test pre-connectivity with the following services:

SAIL	FIX	ATR
Drop Copy	TMS	Clearing API
MX FTP/SFTP Server (EOD and PAR Reports)	LOPR	HSVF (unicast & multicast)
OBF (Order Book Feed)		

As long as testing is conducted between 10:00 am and 1:00 pm EDT, no testing appointments are required but please provide your email to TMX Market Operations if you are participating in the DR testing.

The Technical Support Desk (TSD) and TMX IT Group support staff will be available to assist. Participants are required to advise TSD by phone or email once they have successfully connected (see coordinates on last page).

On Saturday October 24, 2020 Test Day Timelines Overview

Time	Access to Primary or back-up system	Instrument state
7:00 am - 8:20 am	Primary	Pre-open
8:20 am - 8:45		Markets Open
8:45 am - 11 :00 am*	No access	8:45 am - 9:00 am disaster simulation
		9:00 - 11:00 recovery
Time of recovery until 1:30 pm	Back-up/DR	15 minutes - Pre-Open
		Markets Open

*System will be up at the latest by 11

Pre-Failover

Starting at 7:00 am EDT, the Primary site (MCC) will be up and running and participants will be able to engage connectivity.

- Selected instruments will be in a pre-open phase. No trading will occur before 8:20. Between 8:20 and 8:45 the instruments will be in continuous trading mode (matching prices will produce trades)
- MX will not be using its production database for these tests. The order book will be empty when tests begin. Orders must be entered with October 24 date (day orders only)

Disaster Simulation and Recovery

Between 8:45 am to (latest) 11:00 am

- **8:45 am: MX will abruptly interrupt SOLA trading. In the approximate 15 minutes that follows, POP access will also be interrupted. In consequence, the primary site will be isolated by a network failover.**

Post-Failover

Between 9:00 am - 11:00 am EDT, MX will have switched over to the back-up location in Toronto (DR site known as TCF).

- Immediately following the conclusion of our recovery process, we will offer a 15-minute pre-open period, followed by an instrument state change to allow for continuous trading. Products will remain in a tradable state until 1:30 pm EDT.
- There is no continuity between the pre-open session and this one. Our back-up system will start as if it were a new day. If you were previously connected to our system, please make sure to reset your system to avoid de-synchronization of messaging.
- All orders entered during the pre-failover period will be in the system except while connected (as everyone will get disconnected) and BulkQuotes messages.
- Order book reconciliation will be possible through:
 - SAIL users: AF message (Order Request)
 - FIX users: AF message (Order Mass Status Request) - **Please refer to the Disaster Recovery Client Impact Guide available on our webstore(www.tmxwebstore.com)**
- During the test, MX Participants and ISVs will be able to connect to the MX Production network (IP & ports) from their Disaster Recovery (DR) environment. MX will redirect participants to the MX DR environment in a seamless fashion.
- MX Participants must be in a position to maintain their connectivity to the MX from TCF. MX will ensure connectivity.
- MX POPs are located in Markham and Toronto.
- Participants will not be required to make network, DNS, or IP changes in order to connect to the MX DR site during the tests.
- MX will provide bids and offers for instruments. Participants will be able to lift or hit MX market. Firm IDs (mnemonic) representing the MX will be 901 and 902. ➤ During the exercise MX will be sending periodic status emails.

Scheduled testing appointments are not needed. If required, the Technical Help Desk (THD) and TMX Group IT support staff will be on-site and available to assist, but please provide your email to TMX Market Operations if you are participating in the DR testing.

Please note: Tests will only be considered conclusive if a participant has executed at least 2 trades during the post-failover.

Once your tests have completed, please send an email to DR-BCSupport@tmx.com with the following:

Participation to:	FIA and/or SIFMA
Firm name and ID:	ABC / BDM004
Application tested:	ATR, TMS, HSVF, etc.
Successful trade on:	BAX, SXF, SXO, SU or MFC

Comments: Describe any issues you may have encountered during the test, including how they were resolved or if further investigation is required.

Upon conclusion of our testing window at 1:30 pm EDT, the Production environment will be immediately brought down and scheduled for reactivation at its regular time on Sunday, October 25, at 10:00 am EDT. Please monitor your connections once your processes have reinitialized and report any issues or outages to the Technical Service Desk by phone at 514-871-7872.

Test Symbols

Transaction Type (buy/Sell)	Security Identifier (Symbol/CUSIP/ISIN)	MX Prices	
		Buy	Sell
B/S	BAX November 2020 BAXX20	97.50	99.50
B/S	SXF June 2021 (SXF21)	700.00	1100.00
B/S	SXO Dec 20 1000.00 Call (SXO 201218C1000.00)	2.00	10.00
B/S	SU Jan 22 60.00 Call (SU 220121C60.00)	0.10	2.00
B/S	MFC Jan 23 14.00 Put (MFC 230120P14.00)	0.05	3.00

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SAIL	FIX	ATR
Drop Copy	TMS	Clearing API
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OBF (Order-Book Feed)		

Test Registration

As we have two organizations sponsoring this annual test, we expect a large number of firms participating. To facilitate the coordination and appropriate level of communication on test day, please ensure to officially register working staff via the respective websites of the association or organization towards which your firm plans to participate. Please find links below:

FIA website

<https://secure.fia.org/bcp/test-registration.asp>

SIFMA website

<http://www.sifma.org/services/bcp/industry-testing/>

Please provide your contact information at TMX Market Operations via email to marketops@tmx.com

Contact Information During the Pre-Test and Test Day

Technical Help Desk	Market Operations Department (Oct. 24 th Test day only)
Toll free : 1-877-588-8489	Toll free : 1-866-576-8836
Local : 514-871-7872	Local : 514-871-7871
DR-BCSupport@tmx.com	

For additional information on this notice, please contact Santo Ferraiuolo, MX Market Operations at 514-871-7871 or by email at santo.ferraiuolo@tmx.com

We thank you for your cooperation.

Antonio Discenza
Director, Market Operations

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