

Technical Notice 18-013

MX Participation in the IIROC, FIA and SIFMA 2018 Disaster Recovery Tests

The Montréal Exchange (MX) will be participating in the aligned Investment Industry Regulatory Organization of Canada (IIROC), Futures Industry Association (FIA) and Securities Industry and Financial Markets Association (SIFMA) Disaster Recovery tests on Saturday, October 13, 2018, including the pre-connectivity test held on Saturday, September 8, 2018.

This document 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 8, 2018

IIROC - FIA - SIFMA	Pre-Connectivity Test
Date	September 8, 2018
MX Participants Start Time	10 h
MX Participants End Time	13 h

The purpose of this test is to establish and confirm connectivity. As stated in the TMX Information Technology (IT) policy, “PING” testing is not permitted, therefore all MX Participants will need to connect to MX systems in order to test and validate connectivity.

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 a.m and 1:00 p.m EDT, no testing appointments are required.

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

On Saturday October 13, 2018 Test Day Timelines Overview

Time	Access to Primary or Back-up System	Instrument State
7:00 a.m. – 8:30 a.m.	Primary	Pre-open
8:30 a.m. – 11:00 a.m.*	No access	8:30 a.m. – 9:00 a.m. disaster simulation
		9:00 a.m. – 11:00 a.m. recovery
Time of recovery until 1:30 p.m.	Back-up	15 minutes – Pre-Open
		Trading

* System will be up at the latest by 11:00 a.m.

Pre-Failover

Starting at 7:00 a.m. 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.
- 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 13 date (day orders only).

Disaster Simulation and Recovery

Between 8:30 a.m. to (latest) 11:00 a.m.

8:30 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 10:30 a.m. – 11:00 a.m. 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 p.m. 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 have been purged from the system.
- 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, 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.

Please note that **tests will only be considered conclusive if a participant has executed at least two trades during the post-failover.**

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

Participation to:	IIROC and/ or 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 p.m. EDT, the Production environment will be immediately brought down and scheduled for reactivation at its regular time on Sunday, October 14, at 10:00 a.m. EDT.

Please monitor your connections once your processes have reinitialized and report any issues or outages to the Technical Help Desk **by phone** at 514-871-7872.

Test Symbols

Transaction Type (Buy/Sell)	Security Identifier (Symbol/CUSIP/ISIN)	MX Price	
		Buy	Sell
B/S	BAX November 2018 BAXX18	97.50	98.50
B/S	SXF June 2019 SXFM19	900.00	1050.00
B/S	SXO Mar 19 950.00 Call (SXO 190315P950.00)	20.00	35.00
B/S	SU Jan 19 50.00 Put (SU 190118P50.00)	0.50	2.00

Participants can test connectivity with the following services:

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

Test Registration

As we have three 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/>

IIFROC website

[iMeet Central Portal](#)

MX Contact Information During the Pre-Test and Test Day

Technical Help Desk	Market Operations Department (Oct. 13 th Test day only)
Toll free : 1-877-588-8489	Toll free : 1-866-576-8836
Local : 514-871-7872	Local : 514-871-7877
DR-BCSupport@tmx.com	

For additional information on this notice, please contact Eyal Benezra, MX Market Operations at 514-787-6635 or by email at eyal.benezra@tmx.com.

We thank you for your cooperation.

Antonio Discenza
Director, Market Operations