

SECURITIES INDUSTRY BUSINESS CONTINUITY TEST

Saturday, October 13, 2018

Coordinated by

Securities Industry and Financial Markets Association

VERSION DATE: 7/24/2018



TEST OVERVIEW

- ❑ Test Date: Saturday, October 13, 2018
- ❑ Objective: Exercise and verify the ability of firms, markets and utilities to operate through a crisis using a combination of primary sites, backup sites, recovery facilities and backup communications capabilities across the industry based on the needs of the participants.
- ❑ This is a test of market connectivity that includes some processing interactions but is not a full test of internal systems of firms and exchanges.

TEST SCOPE

- ❑ Test components

Equities

FedWire

Treasury Auctions

Fixed Income

CHIPS

FX

Options

Market Data

SWIFT

- ❑ Firms will transmit dummy orders to markets and receive simulated execution reports and will conduct certain settlement and payment interactions.
- ❑ Firms will conduct test transactions with payment systems.
- ❑ Firms will receive and verify market data through connections at their backup sites.
- ❑ SIFMA will compile and publish aggregate test results based on input from providers (exchanges, utilities, service providers). Results for individual participants will remain strictly confidential.

TEST FORMAT

- ❑ The testing window will be open from 9:00 a.m. to 1:00 p.m. EST on 10/13 but providers may remain open for a reasonable period after 1:00 p.m. to resolve issues with individual participants if necessary. Providers may announce specific test windows within the 9:00 a.m. – 1:00 p.m. window based on their individual situations.
- ❑ Exchanges and markets may provide time for pre-test setup on test day prior to the test windows. Setup schedules will be announced in the documentation for each provider.
- ❑ Firms will follow the specific test scripts for each provider. Below is one example:
- ❑ Submit two orders for each of several designated symbols on each exchange/market using real symbols and real accounts. Firms will receive execution reports from the markets.

TEST FORMAT (continued)

- ❑ Providers may make their own specific modifications to the general test format per the scripts that they distribute ahead of the test.
- ❑ Firms will conduct specified interactions with payment entities.
- ❑ Firms will verify market data applications.
- ❑ Price data and symbols to be used for each market will be provided to participants as test scripts prior to the test.
- ❑ Exchanges and markets will purge all test data from systems prior to Monday market opening.

TEST SCRIPTS

WHAT ARE TEST SCRIPTS?

Test scripts provide an overview of test day procedures and how firms interact with test entities on the test day. Issues covered include structure of test message or test transaction and / or connectivity information.

HOW ARE TEST SCRIPTS DISTRIBUTED?

Test entities provide test scripts directly to firms who have registered to test against them.

This method of distribution allows for a confirmed handshake between both parties in a test connection, and allows participants to work out in advance that test participants and points of contact are known and understood by both firm and test entities, reducing missed contacts and errors on test day.

It also brings the test structure closer in line with the format of Reg SCI testing, with direct notification and sharing of test approaches between entities and their testers.

Reg. SCI - Overview

- ❑ Reg SCI testing will be held on October 13, in parallel with the SIFMA industry test, and will cover Equities, Options, and Clearance and Settlement
- ❑ The 2018 Regulation SCI BC/DR test is designed to verify that Regulation SCI entities are able to demonstrate that they can support the maintenance of fair and orderly markets in the event the Regulation SCI entities' business continuity and disaster recovery plans are activated
- ❑ The 2018 Reg SCI test is not an end-to-end industry integrated test; it is a test for each individual SCI Entity to test its own BC/DR environments
- ❑ Reg SCI entities will identify designated testers from among their participant firms who will be required to take part in Reg SCI testing with them
- ❑ The 2018 Regulation SCI test is distinct from the classic SIFMA Industry test as outlined in this presentation
- ❑ While Reg SCI test will cover a range of simulated market activities, the SIFMA industry test will retain the scope and format of prior years – i.e. primarily a bilateral connectivity test

Reg. SCI & SIFMA Industry Test

- ❑ SIFMA is working with Reg SCI test entities to develop a common framework for testing, including test timeline, test symbols and test structure
 - ❑ Reg SCI entities will use this framework to develop test outlines for their SCI testing
 - ❑ The test framework will be posted on SIFMA's website once done
 - ❑ This framework **only applies to Reg SCI testing**
 - ❑ Reg SCI entities who also participate in the Industry Test will provide test guidance through the Summary of Components document on the SIFMA website
- ❑ Firms who are not designated testers with Reg SCI entities will be able to continue to test through the SIFMA classic connectivity test with Reg SCI entities
- ❑ The SIFMA industry test will continue to provide connectivity testing with market infrastructure and service providers who are not in scope for Reg SCI

Registration: Reg. SCI vs. SIFMA Test

- ❑ Reg SCI and the SIFMA Industry Test follow **separate registration models**
- ❑ **Reg SCI test entities** designate mandated testers bilaterally and communicate directly with them. All notifications should have been sent by mid-June
- ❑ **SIFMA Industry Test Participants** chose which test entities they would like to connect with, and register with them through the SIFMA site.
- ❑ Firms who have been designated SCI testers by a given SCI entity do not need to also register for the SIFMA industry test with that entity
- ❑ Firms do not use the SIFMA registration system to register for SCI testing

Registration Guide - Reg. SCI vs. SIFMA Test

Firm Situation	Registration Action
Designated by a Reg SCI Entity to test with them	Work directly with that entity, do NOT register to test against them in SIFMA connectivity database
Want to test with DTCC family (NSCC, FICC, Omgeo), firm is not a DTCC designated Reg. SCI Tester	DTCC family is not participating in 2018 industry test due to Reg SCI conflicts; contact your relationship manager for alternative testing arrangements
Want to test with OCC, firm is not an OCC designated Reg. SCI Tester	Firms who were not designated to participate as RegSCI testers are encouraged to participate in the SIFMA Test in the same manner as OCC's RegSCI designated participants. OCC encourages testing beyond the classic SIFMA Ping test and we would like to see firms send and receive actual data during the test. Connectivity testing is a required pre-requisite for participation in the Industry Test on Oct 13.
Want to test with any other Reg SCI entity, firm is not designated for Reg SCI Testing with them	Register to test with them in SIFMA industry test through SIFMA registration website
Want to test with a non Reg SCI entity (i.e. market data, FX, payments)	Register to test with them in SIFMA industry test through SIFMA registration website

PRE-TEST DATES

- ❑ Common pre-test dates will be established in August and September. **The pre-test dates will be posted on the industry test Web site.**
- ❑ Prior to the test, firms may test their connectivity with providers on these dates or on other dates as stipulated by each provider's schedule and documentation.
- ❑ Many of the participating exchanges, markets and utilities will offer pre-testing on the two common dates, but for technical reasons some may not be able to do pre-testing on those dates. In those case, other dates will be published.

Pre-test and Test Day Contacts

The screenshot shows a web application interface for adding test contacts. At the top, there is a 'Copy User' button and a note: 'To add an existing contact to another tab, select the contact name from drop down list and press the "Copy user" button.' Below this is a navigation bar with tabs: EQUITIES, FIXED INCOME, OPTIONS, CLR/SETTLE, PAYMENTS, MKT DATA, SRV BUREAUS, and TREASURY AUCTIONS. A list of exchanges is provided: NYSE ARCA, NASDAQ, Chicago Stock Exchange, NYSE AMEX, BATS BZX, BATS BYX, BATS EDGA, BATS EDGX, NYSE (CLASSIC), OTC Link ATS, UBS ATS, and National Stock Exchange - NSX. A 'Select Exchange:' dropdown menu is set to 'NYSE ARCA', with an 'Add Contact' button next to it. Below the exchange selection, there are input fields for 'Name:', 'Phone:', 'Cell:', and 'Email:'. Two radio button options are present: 'Serves as test day contact and will be available on test day:' (with 'Yes' selected) and 'Serves as the pre-test contact (who will receive scripts and other planning information):' (with 'No' selected). At the bottom, there is an 'Add' button and a note: 'You must click here to register this contact!'.

- Test registration now includes the ability to select test contacts as **pre-test contacts** as well as **test day contacts**

- Test entities should distribute scripts and other information in advance of the test to the pre-test contact
- An individual can serve as both pre-test and test day contact, one individual can serve as pre-test and/or test day contact for multiple entities

PROJECTED PARTICIPATING MARKET ENTITIES

Equities

BATS BZX
BATS BYX
BATS EDGA
BATS EDGX
Chicago Stock Exchange
NASDAQ
NYSE ARCA
NYSE MKT
NYSE
OTC Link ATS
BIDS Trading

Options

BOX Options Exchange
Cboe BZX Options
Cboe EDGX Options
CDCC
Chicago Board Options Exchange
MIAX
MIAX Pearl
Montreal Exchange
Nasdaq BX Options
Nasdaq Options Market
Nasdaq GEMX
Nasdaq ISE
Nasdaq MRX
Nasdaq PHLX
NYSE AMEX
NYSE ARCA
Options Clearing Corp

Fixed Income

Alternative Trading Systems

BondDesk
Tradeweb Markets LLC
MarketAxess
TMC Bonds LLC
Bloomberg TOMS

Inter-Dealer Brokers

ICAP
Tullett Prebon
Dealerweb
Nasdaq Fixed Income

Clearing Banks

BNY Mellon
JP Morgan Chase
CDCC

Market Data

Bloomberg
ICE Data Services - eSignal
FactSet
Fidessa
ICE Data Services - Interactive Data
OTC Markets Group
SIX Financial Information
Thomson Reuters

Payment Systems

Fedwire
CHIPS
SWIFT

Service Bureaus

Broadridge (BPO, BPS, ICI)
Fidessa
LavaFlow ECN
FIS Phase 3
FIS Valdi
Thomson Reuters BETA
ReadQ
Shadow Financial
Flex Trade Systems
Talisys
SS&C Tech (Lightning)

FX

Bloomberg Tradebook
Bloomberg FXGO
Hotspot
CLS
Thomson Reuters Fxall
Traiana

Clearing & Settlement

*DTCC family not participating in
2017 due to Reg SCI conflicts*

Treasuries

US Treasury Auctions

GENERAL TEST REQUIREMENTS

WHO MAY PARTICIPATE?

The test is open to all securities firms.

WHAT BACKUP SITES ARE TO BE USED?

The objective of the test is to have all participants operate from their backup locations to the greatest degree possible. It is intended that firms will activate backup **1) data center, 2) operations and 3) trading sites.**

USING YOUR PRIMARY SITE INSTEAD?

If a firm elects to test with providers from their primary site, the firm must ensure that they test from their backup site at some other point during the year. The goal of the test is to provide all firms the opportunity to test their back-up to back-up connectivity with multiple providers on a single day.

GENERAL TEST REQUIREMENTS

(Continued)

WHAT STAFF IS REQUIRED FOR THE TEST?

Each participating organization will determine the number of employees necessary to conduct the test. There is **no minimum or maximum staff size** but, in keeping with the intent of the test, it is suggested that each firm assign some staff to their backup 1) data center, 2) operations and 3) trading sites.

HOW DOES AN ORGANIZATION REGISTER FOR THE TEST?

An online registration system will be available on the SIFMA website in June. Registrations must be submitted through this system **by close of business Friday, October 6.**

CAN FIRMS PARTICIPATE IN THE TEST THROUGH SERVICE BUREAUS?

Yes. A number of service bureaus will participate. A list of participating services bureaus is shown in the overall list of participating market entities. Clients of these service bureaus may participate providing that they have tested connectivity to the service bureau backup sites prior to the test.

GENERAL TEST REQUIREMENTS

(Continued)

WILL REGULATORS AND THE PRESS BE INVOLVED IN THE TEST?

Regulators will not participate directly in the test but have a significant interest in the overall results. SIFMA will brief the regulators prior to, during and after the test as required regarding the test process and the aggregate results. The press is not permitted to observe the conduct of the test.

WILL PARTICIPANT BRIEFING CALLS BE HELD?

There will be at three briefing calls prior to the test where participants may ask questions. Representatives of the exchanges, markets and utilities will be available on these calls. The calls are scheduled for:

September 12, 2018, 4:00pm – 5:00pm EST

September 19, 2018, 4:00pm – 5:00pm EST

October 4, 2018, 4:00pm – 5:00pm EST

The briefing call schedule will be also be posted on the industry test Web site.

TEST DOCUMENTATION

Detailed documentation is posted on the SIFMA website at:

www.sifma.org/Services/BCP/Industry-Testing/

This site will be updated periodically as additional materials are available.

Participant instruction packages will include the following:

1. Test Overview (this presentation document)
2. Summary of Test Components

QUESTIONS

Questions regarding the overall test:

Charles De Simone (SIFMA), cdesimone@sifma.org, 212-313-1262

Questions regarding Service Bureaus and the Market Data component:

Bill Hebert (FIF), bill.hebert@fif.com

Questions regarding individual exchanges, markets and utilities should be directed to the contacts listed in the *Summary of Test Components* for each organization.