REG SCI PLAYBOOK

Deloitte & Touche LLP was engaged by SIFMA to assist with the development of the 2019 Reg SCI BC/DR industry test materials.

Agenda

Overview

Guiding Principles

Test Timeline and Break Points

Test Scope Outline

Symbols and CUSIPs

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Overview

- Regulation SCI requires that each SCI entity designate members/participants (participating members) to take part in the annually scheduled Business Continuity and Disaster Recovery Plan test.

- SCI entities have established criteria for the designation of applicable members that are required to participate in the annual Business Continuity and Disaster Recovery Plan test.

- The objective of the 2019 test is that SCI entities conduct a functional and performance testing of ' business continuity and disaster recovery (BC/DR) plans with participating members to exercise and verify the ability to operate through a business continuity and/or disaster recovery event using backup sites, recovery facilities and backup communication capabilities.

2019 Test - Guiding Principles

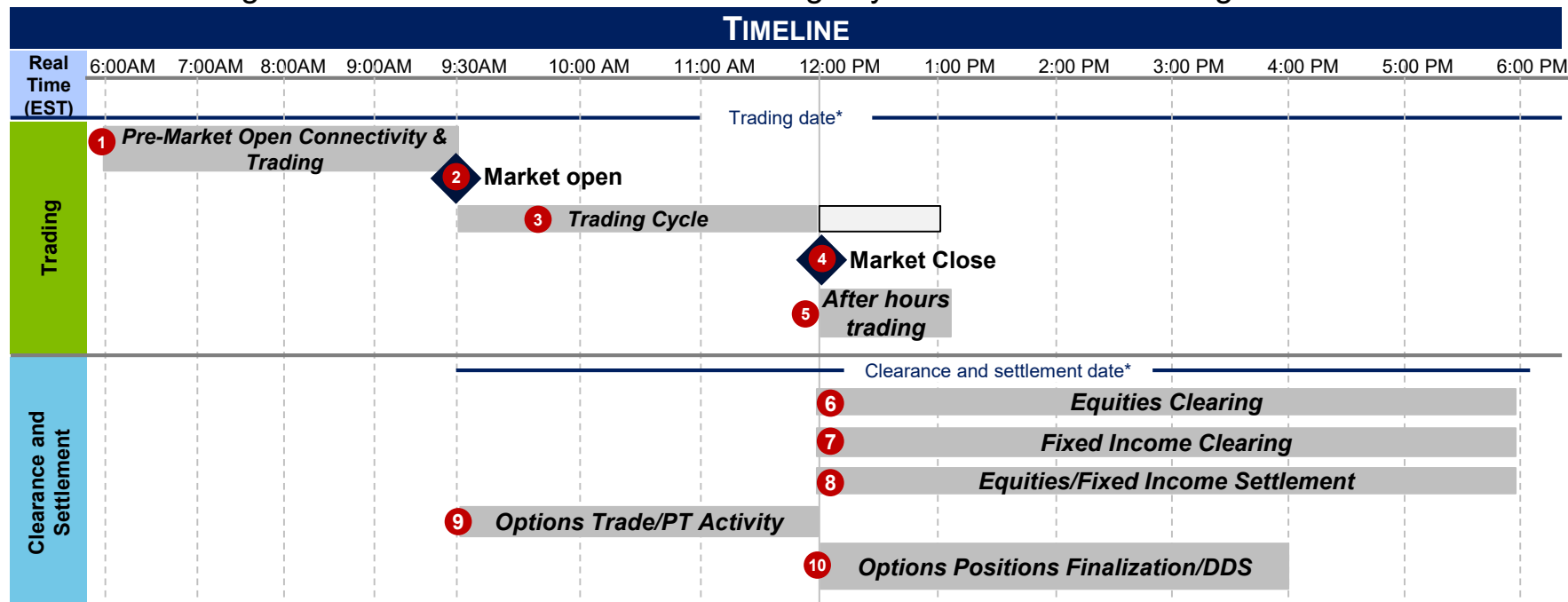| Topic		Approach
2019 test date		• The test will occur on Saturday **October 26**[h] **2019.** The test date aligns with SIFMA Classic, FIA and IIROC
Environments connectivity		• Participating members should be able to operate from their **production or DR environments** • Participating members who elect to operate from their production environments are ***strongly encouraged*** to conduct a separate connectivity test from their DR environment(s)
Designated Reg SCI contacts		• Reg SCI Entities notification to designated Reg SCI firms will be included in the 2019 Reg SCI Playbook • Participating members to develop & communicate Reg SCI distribution emails to all SCI Entities by SIFMA
Test scripts communication and distribution		• Reg SCI Entities are responsible for communicating test scripts and other test requirements to their respective participating members • Those Reg SCI Entities with public test scripts will provide participating members with the address of a dedicated location on their website which houses all REG SCI communications, including test scripts
Connectivity testing		• Connectivity testing is highly recommended to limit issues observed during prior years • Reg SCI Entities are responsible for providing connectivity testing prior to the 2019 Reg SCI BC/DR test; Connectivity test dates will be established and circulated to participating members • Entities will work directly with participating members to provide network connectivity information • Connectivity configuration used for pre-test must remain unchanged for 2019 Reg SCI BC/DR test date
Text Execution		• The 2019 annual Regulation SCI BC/DR test should not require manual intervention by participating member systems to execute the test (manual intervention refers to limited system or configuration changes)
Text Scope		• The 2019 test is designed to verify that Reg SCI entities are able to demonstrate that they can support the maintenance of fair & orderly markets in the event the Reg SCI entities' BC/DR plans are activated • The 2019 test is an industry coordinated test (as required by Reg SCI), but it is not an end-to-end industry integrated test; it is a test for each individual SCI Entity to test its own BC/DR environment(s) • The test is not systems capacity test; however the test should generate enough message traffic to support trading and dissemination of market data through the SIPs • The test is not a pass/fail exercise for the participating members. Some SCI members, based on their rulebook, will publish results[1]. Others will provide members with a scorecard outlining capabilities and issues • In the event of an unsuccessful test further analysis will be required to understand the root cause (i.e. is the issue on the participating member side, SCI entity, etc.)
Classic SIFMA Test		• The 2019 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test

[1] OCC will publish results if asked by regulators

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Test Timeline and Break Points

- Test Timeline and Breakpoints to follow the same test outline are prior years
- All exchanges and venues will follow a half trading day structure for the testing session

TIMELINE

Real Time (EST)	6:00AM	7:00AM	8:00AM	9:00AM	9:30AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM

Trading

Trading date*

1 *Pre-Market Open Connectivity & Trading*

2 **Market open**

3 *Trading Cycle*

4 **Market Close**

5 *After hours trading*

Clearance and Settlement

Clearance and settlement date*

6 *Equities Clearing*

7 *Fixed Income Clearing*

8 *Equities/Fixed Income Settlement*

9 *Options Trade/PT Activity*

10 *Options Positions Finalization/DDS*

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1 Exchanges to open their systems any time prior to market open

2 Coordinated Market Open across SCI entities - 9:30 AM ET

3 Short trading day cycle - 9:30 AM – 12:00 PM ET
[For OCC Exchange Mock Trading Cycle and Encore Daily Activity 9:30 AM-12:00 PM]

4 Coordinated Market Close (Equities and Options) – 12:00 PM ET

5 After hours trading - 12:00 PM – 1:00 PM ET

6 Equities Clearing – 12:00 PM – 6:00 PM
- Accept trades from the Exchanges – trades will reject with invalid trade Date

7 Fixed Income Clearing 12:00 PM – 6:00 PM
- Trades submitted and matched, settlement totals calculated

8 Equities/Fixed Income Settlement 12:00 PM – 6:00 PM
- Deliver Orders and Payment Orders submitted and settled
- CNS transactions and settlement totals processed
- Fixed income settlement totals processed

9 Options Trade / Post Trade Activity – 9:30 AM – 12:00 PM

10 Options Positions Finalization / End of Day – 12:00 PM – 4:00 PM

- Exchanges may test additional functionality including IPO's limit up/limit down and trading halts
- DTCC will be able to accept transactions during the Clearance and Settlement window beginning at noon
- DTCC anticipates all 4 entities (ITP (Omgeo), FICC, NSCC, DTC) will be simultaneously during the clearing and settlement window

*Trade and Clearance and settlement dates
- Trade date for Exchange Systems will be 10/25/2019
- Trade Date for the OCC Encore System will be 10/24/2019 (OCC to change date of 10/26/189 to 10/124/2019)
- OCC's Business/Trade/Clearance date will be 10/24/2019
- OCC's settlement date will be 10/28/2019
- Input transaction settlement date for DTCC entities will very by test

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Test Scope Outline - Participating Members

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Participating Members Test Summary

- Conduct the test from their production or DR environments

- Submit a representative sample of daily trade transactions to exchanges

- Work with Reg SCI entities to determine communication protocols

- Cover all in-scope product types

- Clean all test data from systems prior to Monday market open

Test Scope Outline - Exchanges

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Exchanges Test Summary

- Conduct trade matching

- Transmit matched trades to clearing agencies to demonstrate connectivity to the clearing agency (NSCC will reject the trades at the CDTS gateway and a reject message will be transmitted back to the exchange over FIX connections)

- Receive and verify messages (pended/rejected trades and execution) if applicable

- Clean all test data from systems prior to Monday market open

Note: Exchanges to communicate additional functionality including IPO's limit up/limit down and trading halts

Test Scope Outline - Clearing Agencies

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Clearing Agencies Test Summary

NSCC
- NSCC simulate trade executions on behalf of the exchanges
- Participating members access NSCC to inquire on trade data submissions that NSCC would simulate on behalf of the exchanges via web screens or automated output; to validate data & receive output from DTCC

OCC
- Exchanges will:
    - Transmit matched trades to OCC for processing throughout the mock trading cycle to OCC in real time
    - Submit balance sets and balance trades with OCC at close of Mock Trading Lifecycle
    - Receive and verify outbound DDS through connections to OCC's DR environment
    - Purge all test data from systems prior to market open for Monday
- Firms will:
    - Submit post trade transactions to OCC utilizing the communication protocols normally used in production (External Encore, Real-time MQ, Batch SFTP or Batch NDM)
    - Receive and verify outbound DDS through connections to OCC's DR environments
    - Access on-demand and core reports through External Encore
    - Purge all test data from systems prior to market open for Monday

Fixed Income Clearing (FICC)
- Trades submitted and matched, settlement totals calculated

ITP (Omgeo)
- Trades submitted and matched/affirmed

DTC settlement test:
- Deliver Order and Payment Order submitted; processed; and submitted for settlement

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Test Scope Outline - SIPs

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

<u>Test Summary</u>

SIP - NASDAQ
- The NASDAQ SIP (UTP) will be available from both Carteret and Cermak
- The system of record is the binary version of the SIP feed which will be available during the Reg SCI and Industry BCP/DR test

SIP -SIAC
- The OPRA SIP and CTS/CQS SIP will be available in Cermak
- Firms can contact connectivity@nyse.com for any questions on connecting to DR in Cermak
- General questions on SIP support can be addressed to (cqs-cts-opra@siac.com)
- SIAC will be running out of the DR site on 9/28
- For 10/5, SIAC will be running normally *for OPRA only* to support the final CBOE test. CTS and CQS will run out of the DR.

Test Scope Outline - FINRA

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Test Summary

FINRA will create test scripts for each facility and send them to the firms who have been identified to test. Testing will include the following FINRA facilities:

- **TRACE** (Fixed Income – Corporate & Agency Debt, Securitized Products and treasuries)

- **ORF** (Over the Counter Equities)

- **NY and Nasdaq TRF** (for firms who report NMS trades to the TRFs)

- **OTCBB** (Over the counter Bulletin Board quoting)

- **OATS** (NMS stocks and OTC equity securities)

Note: Test scripts were distributed to each designated firm for their respective facilities

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Equities and Options Symbols and CUSIPs

- Production or Test Symbols will be used for trading
- Test Symbols will be used for clearing (minimum of one test symbol)
- Testing using production symbols is encourage using the below symbols to support triggering market infrastructures/SIPs. It is noted that testing is not limited to the production symbols below
- Production data will be used by FINRA for OTC equities testing (FINRA will accept any valid production symbol)

Production Symbols*

#	Symbol
1	CSCO
2	F
3	MSFT
4	GE
5	BAC
6	SPX (CBOE proprietary product)
7	SPXW (CBOE proprietary product)
8	VIX (CBOE proprietary product)

* Not Comprehensive - SCI entities may require specific Options to support their testing

Test Symbols

#	Exchange	Symbol
1	Cboe	ZBZX
2	Cboe	ZTEST
4	NASDAQ	ZVZZT
5	NASDAQ	ZJZZT
6	NASDAQ	ZWZZT
7	NASDAQ	ZXZZT
8	NYSE Listed	NTEST
9	NYSE American Listed	ATEST
10	NYSE American Listed	PTEST
11	IEX	ZIEXT
12	IEX	ZEXIT
13	IEX	ZXIET
14	Global OTC test symbols	TESTF TESTJ TESTX

Equities Symbols and CUSIPs - FINRA Securities List

#	FINRA Reporting Facility	CUSIP	Symbol
1	ORF (non clearing test cases)		SWRAY
2			RHHBY
3			POAHY
4			DASTY
5			MIELY
6			DANOY
7	TRACE: TS	912796SZ3	TSRYS4856639
8		912796WF2	TSRYS4887865
9		912796SZ3	TSRYS4856639
10		9128284L1	TSRYS4622555
11		912833PB0	TSRYS4494557
12	TRACE: CA	88167AAE1	TEVA4384553
13		31359MGK3	FNMA.RY
14		97097125	BCS4586230
15		973205CG0	CHRC4412564
16	TRACE: SP	15200WAC9	CNP3661211
17		36197XAJ3	GS4007821
18		38381TDG7	GNMA4812033
19		31418CMF8	FNMA4492691
20		01F0326B5	UMBS4816528

#	FINRA Reporting Facility	Symbol	CUSIP
21	FINRA/NYSE TRF; FINRA/Nasdaq TRF-Carteret; FINRA/Nasdaq TRF-Chicago	ALLY	02005N100
22		CAT	149123101
23		NKE	654106103
24		AAPL	037833100
25		EBAY	278642103
26		NFLX	64110L106
27	OTCCBB	SGBG	
28		VTGGF	

> All FINRA's test scripts will be reviewed and updated to account for expired symbols/CUSIPS and price disparities, as needed. These changes will be made the week of the test- FINRA will provide an updated list of securities prior to the test.

Updated as of 10/22/2019

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SCI entities test scripts

BOX
- BOX communicated the test scope and framework to designated SCI participants (9/3/2019)

Cboe Exchanges (Cboe Options, BYX, BZX, EDGA, EDGX and C2)
- [Link to test plan](#)

DTCC
- Test scripts were shared and tailored to DTCC's designated participants
- DTCC distributed individualized test scripts to each designee

FINRA
- Test scripts were distributed to each designated firm for their respective facilities
- FINRA's test scripts are confidential and will only be shared with FINRA's designated participants

IEX
- Link to [IEX 2019 latest notice and playbook](#)

MIAX Exchanges
   Link to [MIAX Exchanges test script](#)

NASDAQ Exchanges
- Link to NASDAQ Exchanges [Equities test details (Equity Regulatory Alert #2019-10)](#) & Options test details [(Options Regulatory Alert #2019 – 19)](#)

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SCI entities test scripts

NYSE Group
- Link to <u>NYSE Group test scope;</u>
- NYSE will provide participating members with a Checklist in advance of the test. Checklist must be returned to regscitesting@nyse.com following test conclusion.
- Upon Checklist receipt, NYSE will provide firms with "a confirmation of test completion" email.

OCC
- Individualized test strategies will be developed for each registered participant tailored to individual business models.
- OCC Testing requirements are [posted on Infomemo](#) 45087 (infomemo memo to be updated)

OTC Markets
- OTC Markets' test scripts are confidential and were shared with designated participants only

SIFMA Classic Test
- SIFMA Classic Test scripts vary depending on the scope of testing offered by each test entity, an overview of test scope is available in the Summary of Components spreadsheet on the SIFMA test site

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Other Considerations (contd')

Orders
- Average number of shares is used with a minimum of 2 orders (no max)

Registration
- The 2019 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test
- Registration to the 2019 Regulation SCI BC/DR test is done by notification from the SCI entities – see Appendix for 2019 notification process

Success Criteria
- DTCC has outlined the capabilities, designee activity and evidence for inbound and outbound activity with FICC, NSCC, DTC and ITP (Omgeo) which will be used to determine whether testing has been successful (see chart on Page 23)
- OCC has documented Success Criteria in Infomemo 45087 and it will be documented in each participants confirmed test strategy.

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Pre Test and Post Test Requirements and Guidelines

	DTCC	OCC	IEX	NYSE Group	NASDAQ Exchanges	FINRA*	BOX
Availability for Pre Testing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Availability for Post Testing	N/A	Yes – validation of prod to prod connectivity once testing is complete and OCC production environment is back up	Yes – connectivity testing only	No	Will be made available upon request		No
Pre- Testing Required	Pretesting is highly recommended for DTC	Yes	Highly Recommended	Strongly recommended	Yes	Strongly recommended	Yes
Post - Testing Required	N/A	No (Optional)	No	No	No		No
Connectivity Testing Required	No	Yes	Highly recommended	No	No		Yes
Pre Test Contact Information	**Kevin Hanley,** 212-855-8092 khanley@dtcc.com	**Karen Glad** 312-322-2041 occDRtest@theocc.com	**Market Operations** marketops@iextrading.com; 646-343-2310 **Tech. Ops** sre@iextrading.com; 646-343-2200	**Serge Sheynkman** 212-894-5446 serge.sheynkman@theice.com **Chris Loonam** 770-857-2718 chris.loonam@theice.com	**Trading Services** tradingservices@nasdaq.com **Options Market Operations** optionshelpdesk@nasdaq.com	**Ron Miller-Prim:** ron.miller@finra.org ; 212 858-5178 **FINRA Product Management-Backup:** finraproductmanagement@finra.org	**BOX Maret Operations Center** 866-768-8845 boxmoc@boxoptions.com
Reg SCI Pre Testing Dates	• **9/14/2019**	• **7/13/2019** • **8/10/2019** • **9/28/2019**	• **9/28/2019** • 10/05/2019	• **9/28/2019** • 10/05/2019	• **9/28/2019** • 10/05/2019	• **9/28/2019**	• **9/28/2019**
Comments on Reg SCI Pre Testing	Pretest is highly recommended for designees	Mandatory Pre-Testing for all OCC participants and will consist of validating connectivity	N/A				N/A
Post Reg SCI Test Confirmation	Email indicating receipt of test evidence and confirmation of success is provided during the test window	Email indicating completion of input & output & test success	Not required	Completed Checklist by Email required per Test Script	Participants to fill out the checklist [link pending, to be on the alert] return via email to optionshelpdesk@nasdaq.com. Can be done following Monday.	Not required	Not required
Reg SCI Post Testing Dates	N/A		On request		made available upon request		N/A
Comments			N/A				Yes

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* Applies to all FINRA facilities and products including Fixed Income and TRACE for Treasuries

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Pre Test and Post Test Requirements and Guidelines

	NYSE Chicago	MIAX Exchanges	OTC Markets	Cboe Options	BYX/BZX/EDGA/EDGX/C2
Availability for Pre Testing	Yes 7:00am CT to 9:30am CT	Yes	No	Yes	Yes
Availability for Post Testing	As needed	No	No	No	No
Pre- Testing Required	Strongly recommended for CHX Required Participants	Strongly recommended	No	Strongly Recommended	Strongly Recommended
Post - Testing Required	N/A	No	No	No	No
Connectivity Testing Required	N/A	Yes	N/A	No	No
Pre Test Contact Information	**Kevin Tyson** ktyson@chx.com (312)663-2934	**Trading Operations** TradingOperations@MIAXOptions.com (609) 897-7302	**Bart Krezalek** bart@otcmarkets.com 212-896-4475 **Vlad Brodsky** vlad@otcmarkets.com	**Cboe Trade Desk** 913-815-7001 tradedesk@cboe.com **Cboe NOC** 913.815.7005 noc@cboe.com	**Cboe Trade Desk** 913-815-7001 tradedesk@cboe.com **Cboe NOC** 913.815.7005 noc@cboe.com
Reg SCI Pre Testing Dates	N/A – see comments	• **9/28/2019** • 10/05/2019 • ** 10/21/19-10/25/29	Do not participate	**9/28/2019;** Will not be available for 10/5/19	**9/28/2019;** Will not be available for 10/5/19
Comments on Reg SCI Pre Testing	n/a	Telnet testing to the DR environments for the MIAX Exchanges will be available: Saturday, 9/28/19, - 8:00AM - 12:00PM EST Saturday, 10/5/19 -8:00AM - 12:00PM EST ** Monday, 10/21/19 - Friday, 10/25/19 - 8:00AM - 5:30PM EST		Voluntary connectivity pre-testing can occur any time. Cboe NOC & Trade Desk support available to address connectivity issues.	Voluntary connectivity pre-testing can occur any time. Cboe NOC & Trade Desk support available to address connectivity issues.
Post Reg SCI Test Confirmation	Respond to CHX post test questionnaire	Contact trading Operations when complete	Contact trading Operations when Complete	Not required	Not required
Reg SCI Post Testing Dates	N/A			No	No
Comments	NYSE Chicago – maintains two hot-hot sites and is open to testing at any time during the week	Details can be found in the 4/25/19 Alert, "MIAX Exchange Group–Options Markets -Reg SCI/SIFMA BCP Test Plan-October 26, 2019": https://www.miaxoptions.com/alerts/2019/04/25/miax-exchange-group-options-markets-reg-sci-sifma-bcp-test-plan-october-26-2019-0		Refer to - http://cdn.cboe.com/resources/schedule_update/2019/2019-SIFMA-FIA-and-Reg-SCI-BCP-DR-Test-Plan.pdf for complete details.	Refer to - http://cdn.cboe.com/resources/schedule_update/2019/2019-SIFMA-FIA-and-Reg-SCI-BCP-DR-Test-Plan.pdf for complete details.

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Appendix

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RegSCI DR Test – DTCC Client Success Criteria

SCI Entity	Inbound to DTCC*			outbound from DTCC			Criteria
	Capabilities	Designee Activity	Evidence	Capabilities	Designee Activity	Evidence	
FICC	FICC will enable the following capabilities for data submission: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Designees to submit trade input using one of the following interfaces: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each Designee will submit evidence (Screenshots) for inputs being sent to FICC	FICC will enable the following capabilities for data inquiry: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee can confirm their capability in one of 2 ways: 1. Receipt of automated machine readable output from FICC, or; 2. Verification of FICC data processing through the FICC Web Interface, File Interface, or MQ interface.	Each designee will need to submit evidence for at least one of the following: 1. Screen shot of the receipt date/time of the message or file sent by FICC to the designee; or; 2. Screen shot of result of data processing.	Firms are able to submit evidence for successful receipt of 1 Input and 1 output transaction
NSCC	NSCC will submit transactions on behalf of Designees via a FIX simulation process. Exchanges to submit trades to NSCC (UTC) which will reject with an invalid trade date via FIX	Exchanges to send inputs using FIX interface	Each Exchange will need to submit evidence (screenshots) of trade rejections	NSCC will enable the following capabilities for data inquiry: • Web Interface (Settlement) • File Interface (FTP/NDM) • MQ Interface • FIX	Each designee can confirm their capability in one of 2 ways: 1. Receipt of automated machine readable output from NSCC, or; 2. Verification of NSCC data processing through the Settlement Web Interface, File Interface, FIX or MQ interface.	Each designee will need to submit evidence for at least one of the following: 1. Screen shot of the receipt date/time of the message or file sent by NSCC to the designee; or; 2. Screen shot of pre and post data processing for the test transaction	Firms are able to submit evidence for successful receipt of 1 Input and 1 output transaction
DTC	DTC will enable the following capabilities for data submission: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Designees to send inputs using one of the following interfaces: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee will need to submit evidence (Screenshots) for inputs being sent to DTC	DTC will enable the following capabilities for data inquiry: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee can confirm their capability by validating the settlement figures through: the Settlement Web Interface, File Interface, or MQ interface.	Each designee will need to submit evidence for at least one of the following: 1. Screen shot of the receipt date/time of the message or file sent by DTC to the designee; or; 2. Screen shot of pre and post data processing for the test transaction	Firms are able to submit evidence for successful receipt of 1 Input and 1 output transaction
ITP (Omgeo)	ITP (Omgeo) will enable the following capabilities for data submission: • Web Interface • File Interface (CCF/MTI) • MQ Interface • FIX	Designees to send inputs using one of the following interfaces: • Web Interface • File Interface (CCF/MTI) • MQ Interface • FIX	Each designee will need to submit evidence (Screenshots) for inputs being sent to ITP (Omgeo)	ITP (Omgeo) will enable the following capabilities for data inquiry: • Web Interface • File Interface (CCF, MTI) • MQ Interface • PTS	Each designee can confirm their capability in one of 2 ways: 1. Receive automated machine readable output from ITP (Omgeo), or; 2. Validate the matched trade through: the Web Interface, File Interface, MQ interface or PTS.	Each designee will need to submit evidence for at least one of the following: 1. Screen shot of the receipt date/time of the message or file sent by ITP (Omgeo) to the designee; or; 2. Screen shot of pre and post data processing for the test transaction	Firms are able to submit evidence for successful receipt of 1 Input and 1 output transaction

* - Inbound processing for NSCC is out of scope for 2019 since exchanges are not participating

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Participating Member Notification Dates

DRAFT

SCI Entity	Latest Notification date	Comments
BOX	Promptly after July 31st	The measurement period for determining BOX BCP/DR Participants is January 1st – July 31st. BOX will individually notify Designated BCP/DR Participants of their designation as such (including the Exchange volume percentage(s) such designation is based upon) promptly following completion of the applicable measurement period. **Note: will explore the possibility of updating role book to align dates**
Cboe Options/BYX/BZX/EDGA/EDGX/C2	See Regulatory Circular	Cboe Options: RG19-021 BYX Equities: RC19-015 BZX Equities & Options: RC19-015 C2 Options: C2 RG19-019 EDGA Equities: RC19-015 EDGX Equities & Options: RC19-015
DTCC	Within 30 calendar days after July 30 2018	Designation Date will be no later than July 30 of each calendar year. Designated firms will be notified that they have been designated to participate in the next annual test of the DTCC DR plan within 30 calendar days after the Designation Date.
FINRA*	April 30th 2019**	FINRA regulatory notice does not specify a date or measurement period, just how they determine which firms are designated Reg SCI testers. However, FIRNA has been notifying firms of their designation in early Q2 each year.
IEX	April 30th 2019	notify members of their requirement to participate in annual testing in April of each year (generally first or second week), based on Q1 data.
NASDAQ Exchanges	March 31st 2019	Participants who meet the criteria requiring participation in the annual Business Continuity and Disaster Recovery Test will be notified by March 31, 2019.
NYSE Group*	April 15th 2019	NYSE will notify firms that meet these criteria in April 2019. The NYSE may revise the list of required participants based on updated aggregated daily volume data for subsequent calendar quarters and will notify any impacted firms individually at least three months in advance of the scheduled test.
MIAX Exchanges	*MIAX Options & MIAX Pearl* Within 15 calendar days following March 31, 2019 *MIAX Emerald* Within 15 calendar days following June 30, 2019	Within fifteen (15) calendar days following the end of the measurement quarter MIAX exchanges will provide notice to qualifying Members that will have a mandatory BC/DR testing participation requirement. *MIAX Options and Pearl.* - The measurement quarter defined as January 1st through March 31st each year. *MIAX Emerald* - The measured quarter defined as April 1, 2019 through June 30, 2019. **Note: for 2020 MIAX is expecting to align Emerald's measurement quarter to with Options/Pearl.**
OCC	May 2019	Notified in November 2018 – lasted updated published May 2019 see Infomemo 45087
OTC Markets	N/A	Test plans will be distributed individually to all entities who have been identified as required to test

* Applies to all FINRA facilities and products including Fixed Income and TRACE for Treasuries
** The date is not firm and could slip

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Regulation SCI Rule requirements

- An SCI entity's BC/DR plan, including its backup systems, each SCI entity shall: (a) establish standards for the designation of those members or participants that the SCI entity reasonably determines are, taken as a whole, the minimum necessary for the maintenance of fair and orderly markets in the event of the activation of such plans; (b) **designate members or participants** pursuant to the standards established and **require participation** by such designated members or participants in **scheduled functional and performance testing** of the operation of such plans, in the **manner and frequency specified by the SCI entity**, provided that such frequency shall not be less than once every 12 months; and (c) **coordinate** the **testing** of such plans **on an industry- or sector-wide basis** with **other SCI entities** [Regulation SCI Rule 1004 and FAQs]

- Conduct the **initial functional** and **performance testing** of **BC/DR plans** with designated members or participants no later than November 2, 2016 [Regulation SCI FAQs]

- SCI entities are **not required to conduct all functional** and **performance testing** at once and in coordination with other SCI entities all at the same time…. if, to meet the requirements of the rule, a single annual test cannot be properly conducted, **SCI entities have flexibility to design their testing to include**, for example, **weekend testing** and **testing** in **segments** over the course of a year [SCI Adopting Release and FAQ's]

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