



REG SCI PLAYBOOK

As of October 21, 2020

FINAL

Deloitte & Touche LLP was engaged by SIFMA to assist with the development of the 2020 Reg SCI BC/DR industry test materials.

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Pre-Test Information and Timeline

Regulation SCI Rule requirements

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 2020 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.

2020 Test - Guiding Principles

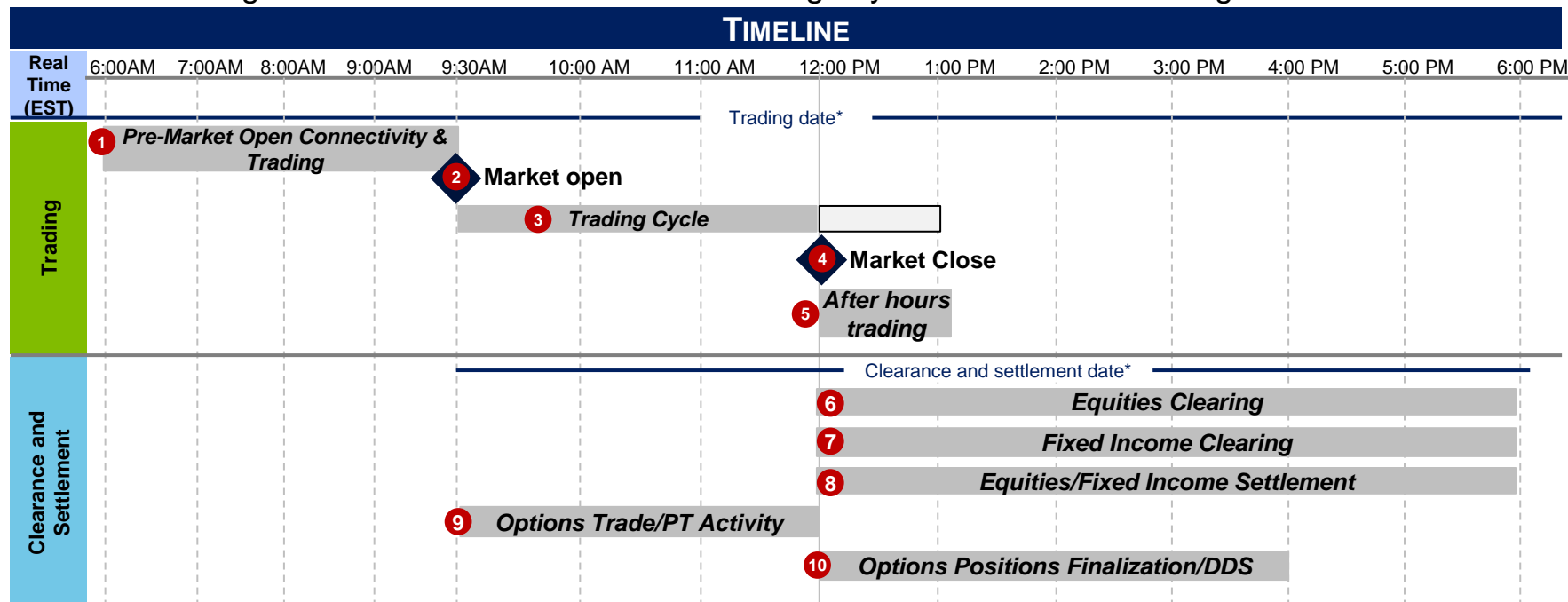
Topic	Approach
2020 test date	 <ul style="list-style-type: none"> The test will occur on Saturday October 24th 2020. The test date aligns with SIFMA Classic, and FIA. It is noted that the proposed date for 2021 is October 23rd
Environments connectivity	 <ul style="list-style-type: none"> Participating 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) ¹
Designated Reg SCI contacts	 <ul style="list-style-type: none"> Reg SCI Entities notification to designated Reg SCI firms will be included in the 2020 Reg SCI Playbook Participating members to develop & communicate Reg SCI distribution emails to all SCI Entities by SIFMA
Test scripts communication and distribution	 <ul style="list-style-type: none"> 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	 <ul style="list-style-type: none"> Connectivity testing is highly recommended to limit issues observed during prior years Reg SCI Entities are responsible for providing connectivity testing prior to the 2020 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 2020 Reg SCI BC/DR test date
Text Execution	 <ul style="list-style-type: none"> The 2020 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	 <ul style="list-style-type: none"> The 2020 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 2020 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 results². 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	 <ul style="list-style-type: none"> The 2020 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test

¹ OCC does not support multiple environment testing

² OCC will publish results if asked by regulators

Test-Day - Timeline and Break Points

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



- 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

***Trade and Clearance and settlement dates**

- 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 date for Exchange Systems will be 10/23/2020
- Trade Date for the OCC Encore System will be 10/22/2020 (OCC to change date of 10/24/2020 to 10/22/2020)
- OCC's Business/Trade/Clearance date will be 10/22/2020
- OCC's settlement date will be 10/26/2020
- Input transaction settlement date for DTCC entities will vary by test

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

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

Test Summary

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

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

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)

Test Symbols

#	Exchange	Symbol
1	Cboe Exchanges (Options & Equites)	* See Below
2	NASDAQ	ZVZZT
3	NASDAQ	ZJZZT
4	NASDAQ	ZWZZT
5	NASDAQ	ZXZZT
6	NYSE Listed	NTEST
7	NYSE American Listed	ATEST
8	NYSE Arca Listed	PTEST
9	IEX	ZIEXT
10	IEX	ZEXIT
11	IEX	ZXIET
12	Global OTC test symbols	TESTF TESTJ TESTX
13	DealerWeb	See Appendix

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

Cboe Exchanges Options – Symbols: BTEST,CBO,CBX,IBO,IGZ,ZBZX,ZTEST,ZTST,ZVV,ZVZZT,ZWZZT,ZXZZT;
Strike Prices: 10.000,15.000,20.000,25.000,5.000; Expiration Date: 2099-01-01

Cboe Exchanges Equities - ATEST,CBO,CBX,CTEST,IBO,IGZ,MTEST,NTEST,PTEST,ZAZZT,ZBZX,ZBZZT,ZCZZT,ZEXIT, ZIEXT,ZTEST, ZTST, ZVV,ZVZZT,ZWZZT,ZXIET,ZXYZ,ZXZZT

- OCC will be using production symbols for testing
- OCC will not be supporting Cboe test symbols

Equities Symbols and CUSIPs - FINRA Securities List

#	FINRA Reporting Facility	CUSIP	Symbol	#	FINRA Reporting Facility	Symbol	CUSIP
1	ORF (non clearing test cases)		SWRAY	24	FINRA/NYSE TRF; FINRA/Nasdaq TRF-Carteret; FINRA/Nasdaq TRF-Chicago	ALLY	02005N100
2			RHHBY	25		CAT	149123101
3			POAHY	26		NKE	654106103
4			DASTY	27		AAPL	037833100
5			MIELY	28		EBAY	278642103
6			DANOY	29		NFLX	64110L106
7	TRACE: TS	912796SZ3	TSRYS4856639				
8		912796WF2	TSRYS4887865				
9		9127964V8	TSRYS5053887				
10		9128284L1	TSRYS4622555				
11		912803EQ2	TSRYS4493785				
12		9128284H0	TSRYS4620372				
13	TRACE: CA	88167AAE1	TEVA4384553				
14		31359MGK3	FNMA.RY				
15		36256M528	GS4775292				
16		439419BJ0	CHRC3995690				
17	TRACE: SP	14041NFN6	COF4550429				
18		12597DAS4	CS4915220				
19		00432CBQ3	AGIK3279059				
20		01449TAA1	ALEZ23279744				
21		12543PAB9	BAC3314428				
22		3140QCTB2	FNMA4932907				
23		21H030682	GNMB3525437				

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.

FINRA will accept active Symbols and CUSIPs for OTC Equities testing, as well as for TRACE testing

Updated as of October 20 2020

SCI entities test scripts

BOX

- BOX communicated the test scope and framework to designated participating members

Cboe Exchanges (Cboe Options, BYX, BZX, EDGA, EDGX and C2)

- Link to [Cboe test plan](#)

CME

- Test scripts were distributed to designated participating members

DEALERWEB

- Test Script were distributed to designated participating members

DTCC

- Test scripts were shared and tailored to DTCC's designated participants via an online interface
- DTCC will be reviewing individualized test procedures with each designee

FINRA

- Test scripts were distributed to designated participating members for their respective facilities on June 18th and updated on October 19th
- FINRA's test scripts are confidential and were only be shared with FINRA's designated participants

FINRA CAT

- Test scripts were distributed to designated participating members for their respective facilities

IEX

- IEX distributed Test Scripts to participating members via Trader Alert Notification – [Link to IEX test playbook](#)

SCI entities test scripts

MEMX

- MEMX distributed test scripts to designated participants on 9/10/20.
- If non-mandatory participants would like a test script please request from membership@memx.com

MIAX Exchanges

- Link to [MIAX Exchanges Group test script, updated information](#) including info on PEARL Equities released

NASDAQ Exchanges

- Test notification information were distributed the week of 9/14/2020. The notification included test details and for required participants a check list of different items that they must complete as appropriate

NYSE Group/ ICE

- Link to [NYSE Group test scope](#):
- 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 developed for each registered participant and tailored to individual business models.
- OCC Testing requirements are [posted on Infomemo #46856](#) published on 4/20/2020

OTC Markets

- OTC Markets' test scripts have been distributed

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

Other Considerations (contd')

Orders

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

Registration

- The 2020 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test
- Registration to the 2020 Regulation SCI BC/DR test is done by notification from the SCI entities – see Appendix for 2020 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 in Appendix)
- OCC has documented Success Criteria in [Infomemo #46856](#) and it will be documented in each participants confirmed test strategy.

Pre Test and Post Test Requirements and Guidelines

	BOX	Cboe Exchanges	DTCC	DealerWeb	FINRA*	FINRA CAT	IEX
Availability for Pre Testing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Availability for Post Testing	No	No	N/A	Will accommodate upon request		Upon request	Yes – connectivity testing only
Pre- Testing Required	Yes	Strongly Recommended	highly recommended	No	Strongly recommended	Strongly recommended	Highly Recommended
Post - Testing Required	No	No	N/A	No		No	No
Connectivity Testing Required	Yes	No	No	No		Strongly Recommended	Highly recommended
Test Contact Information	BOX Maret Operations Center 866-768-8845 boxmoc@boxoptions.com	Cboe Trade Desk 913-815-7001 tradedesk@cboe.com Cboe NOC 913.815.7005 noc@cboe.com	Kevin Hanley , 212-855-8092 khanley@dtcc.com Eugene Lee elee1@dtcc.com	Market Support/Control - 201.536.5781 support@dealerweb.com William Vogt william.vogt@dealerweb.com Caroline Schultz caroline.schultz@dealerweb.com	Irene.bobbins@finra.org Orlando.cortes@finra.org FINRA Product Management-Backup: finraproductmanagement@finra.org	FINRA CAT Helpdesd Help@finracat.com 1-888-696 3348	Market Operations marketops@iextrading.com ; 646-343-2310 Tech. Ops sre@iextrading.com ; 646-343-2200
Reg SCI Pre Testing Dates	• 9/26/2020 • 10/3/2020	Any time – see below	• 9/12/2020	Will work with Participants	• 9/26/2020	• 9/26/2020 • 10/3/2020	• 9/26/2020 • 10/3/2020
Comments on Reg SCI Pre Testing	N/A	Voluntary connectivity pre-testing can occur any time. Cboe NOC & Trade Desk support available to address connectivity issues.	Pretest is highly recommended for designees				N/A
Post Reg SCI Test Confirmation	Not required	Not required	Email indicating receipt of test evidence and confirmation of success is provided during the test window	Please communicate with Market Support Group on test day when complete	Not required	Not required	Not required
Reg SCI Post Testing Dates	N/A	No	N/A	N/A		N/A	On request
Comments	Yes			Yes			N/A

Pre Test and Post Test Requirements and Guidelines

	MEMX	MIAX Exchanges	NASDAQ Exchanges	NYSE Group	OCC	OTC Markets	UBS-ATS
Availability for Pre Testing	No	Yes	Yes	Yes	Yes	No	Yes
Availability for Post Testing	Upon Request	No	No	No	Yes – validation of prod to prod connectivity once testing is complete and OCC production environment is back up	No	No
Pre- Testing Required	No	Strongly recommended	Yes	Strongly recommended	Yes	No	Strongly recommended
Post - Testing Required	No	No	No	No	No (Optional)	No	No
Connectivity Testing Required		Yes	No	No	Yes	N/A	No
Test Contact Information	mops@memx.com 1-833-415-6677	Trading Operations TradingOperations@MIAXOptions.com Trading Services: 212 231-5180 Options Operations: 215 496-1571	Trading Services tradingservices@nasdaq.com Options Market Operations optionshelpdesk@nasdaq.com	Serge Sheynkman 212-894-5446 serge.sheynkman@theice.com Chris Loonam 770-857-2718 chris.loonam@theice.com	OCC Help Desk: 800-544-6091 or 800-621-6072 occDRtest@theocc.com	Bart Krezalek bart@otcmarkets.com 212-896-4475 Vlad Brodsky vlad@otcmarkets.com	Charles Seremetis Charles.seremetis@ubs.com 212-713-2080
Reg SCI Pre Testing Dates	• 9/26/2020	• 9/26/2020 • 10/3/2020	• 9/19/2020 • 9/26/2020 • 10/3/2020	• 9/26/2020 • 10/3/2020	• 8/8/2020 • 9/12/2020	Will work directly with participants	• 9/26/2020
Comments on Reg SCI Pre Testing	For any questions about mandatory testing or the script (prior to test day), membership@memx.com .	Will also be available Mon. 10/19 thru. Fri, 10/23, between 8:00AM - 5:30PM EST; MIAX entities will not just be telnet but also application layer support on both pretest weekends			Mandatory Pre-Testing for all OCC participants and will consist of validating connectivity		Offering connectivity testing to DR at any time (coordinate with charles.seremetis@ubs.com)
Post Reg SCI Test Confirmation	contact mops@memx.com when complete	Contact trading Operations when complete	Participants to fill out the checklist on the alert return via email to optionshelpdesk@nasdaq.com by following Monday	Completed Checklist by Email required per Test Script	Email indicating completion of input & output & test success	Contact trading Operations when Complete	
Reg SCI Post Testing Dates	N/A		made available upon request				
					Not participating in the		

Information on Drop Copy Services

SCI Entity	Do you plan to send drop copies during test day?	Do you expect the participants to receive drop copies to have a full end to end test?	Additional Comments
BOX	Will be sending drop copies as normal	Do not mandate the use of drop copy	
Cboe Global Markets*	Exchanges systems are operational including drop copy. Clients can connect to their DR drop copy sessions and will receive messages if configured Drop copy connectivity will be available during the test. Any trades executed on test instruments will not get sent to clients.	Do not mandate the use of drop copy	Exchange systems may be up; However, the drop copy user may or may not receive data depending on the trading activity of their clients
DealerWeb		Do not mandate the use of drop copy	Trades executed on test instruments will not get sent to clients.
DTCC	N/A	N/A	
FINRA**	If testing participants currently have drop copy capabilities set up in their normal production configurations they will automatically get drop copies sent on the DR test as well.	It is not a requirement that the participant must submit using any ports that have drop copies configured to it.	
FINRA CAT	N/A	N/A	
IEX	Will bring up all systems in the DR environment, including Drop Copy sessions. IEX systems will send drop copy messages similar to ordinary production behavior.	Drop Copy testing is optional and not required for the Reg SCI BCP/DR Test.	A member BD that connects to the appropriate Drop Copy session in the DR environment will receive drop copy messages when they send orders and receive fills. This will exemplify a full end to end drop copy test.
MEMX	Drop copies will be sent if members are configured for drop copies from the DR site.	Do not mandate the use of drop copy	
MIAX Exchange Group	Drop Copies will be sent	Yes assuming Firms participate and execute trades	
NASDAQ Exchanges	All drop copy session will be available for clients to log into and trades for configured sessions will drop	There is no actual drop copy requirement; Firms who normally use drop copies should log into them and ensure that they receive trades	
NYSE Group /ICE	All NYSE Platforms will have Drop Copy sessions available and if there is a trade, customers will receive their drop copies.	If B/D order results in a trade, they will receive the drop copy report. However, Exchange will not be providing order flow and only customer submitted orders will be available on October 24th.	
OCC	N/A	N/A	Many of OCC's members reconcile what the exchange reports on the drop copy to the trade DDS provided by OCC
OTC Markets	--	--	
UBS ATS	Subscriber that has a drop copy process in production it will be available to them on the test date if the subscriber wants to test that functionality	Drop Copy processing in BC/DR is not a requirement for any subscriber of the UBS ATS to deem the test successful	

Appendix

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: <ul style="list-style-type: none"> • Web Interface • File Interface (FTP/NDM) • MQ Interface 	Designees to submit trade input using one of the following interfaces: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Web Interface • File Interface (FTP/NDM) • MQ Interface 	Each designee can confirm their capability in one of 2 ways: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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
NSSC	NSSC will submit transactions on behalf of Designees via a FIX simulation process. Exchanges to submit trades to NSSC (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	NSSC will enable the following capabilities for data inquiry: <ul style="list-style-type: none"> • Web Interface (Settlement) • File Interface (FTP/NDM) • MQ Interface • FIX 	Each designee can confirm their capability in one of 2 ways: <ol style="list-style-type: none"> 1. Receipt of automated machine readable output from NSSC, or; 2. Verification of NSSC 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: <ol style="list-style-type: none"> 1. Screen shot of the receipt date/time of the message or file sent by NSSC 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: <ul style="list-style-type: none"> • Web Interface • File Interface (FTP/NDM) • MQ Interface 	Designees to send inputs using one of the following interfaces: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 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: <ul style="list-style-type: none"> • Web Interface • File Interface (CCF/MTI) • MQ Interface • FIX 	Designees to send inputs using one of the following interfaces: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Web Interface • File Interface (CCF, MTI) • MQ Interface • PTS 	Each designee can confirm their capability in one of 2 ways: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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 NSSC is out of scope for 2019 since exchanges are not participating

Participating Member Notification Dates

SCI Entity	Latest Notification date	Comments
BOX	Notified post June 30 th 2020	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.
Cboe Global Markets*	May 4 th 2020	The Exchanges will measure volume executed on the respective Exchange during a single designated calendar quarter for a given year . The Exchanges will also individually notify all Designated Participants annually, and at least three (3) months prior to scheduled testing. For the October 24, 2020 mandatory test, the designated calendar quarter for measuring volume is Q1 2020 .
DTCC	Designation letters were sent between 10/28/19 and 10/31/19	Designation Date will be no later than October 31 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.
DealerWeb		will coordinate directly with its participants
FINRA**	April 21 st 2020	FINRA regulatory notice does not specify a date or measurement period, just how they determine which firms are designated Reg SCI testers. However, FINRA has been notifying firms of their designation in early Q2 each year.
FINRA CAT	August 31 st 2020	Will work directly with participants
IEX	April 24 th 2020	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 31 st 2020	Participants who meet the criteria requiring participation in the annual Business Continuity and Disaster Recovery Test will be notified by March 31, 2020.
NYSE Group	April 13 th 2020	NYSE will notify firms that meet these criteria in April 2020. 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.
MEMX	September 10, 2020	All designated participants were notified on 9/10/20.
MIAX Exchange Group	April 2 nd 2020	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. The measurement quarter defined as January 1st through March 31st each year.
OCC	November 2019	OCC published information memo #46856 on 4/20/2020 that contains all OCC testing details
OTC Markets		Will work directly with participants
UBS ATS	June 24 th 2020	Working directly with participants

* BYX/BZX/EDGA/ EDGX/C2/Cboe Options
 applies to all FINRA facilities and products including Fixed Income and TRACE for Treasuries

Additional Symbols / Cusips Information

Dealerweb

- Dealerweb will be using the following test symbols during the test:

Description	Cusip	Unique Instrument ID
Test NASDAQ 100 Dec20 / QQQ	FUTRNQZ0-TESTETFQQQ	FUTRNQZ20-TESTETFQQQQ_NASDAQ
TEST S&P 500 Dec20 / SPY	TESTSPZ0-TESTETFSPY	TESTSPZ20-TESTETFSPY_NYSE
TEST VIX Nov/Dec20/VXX	TESTUXX0-TESTUXZ0-TESTETFVXX	TESTUXX20-TESTUXZ19-TESTETFVXX_NYSE
TESTDIA	TESTDIA	TESTDIA_NAVX
TESTIWM	TESTIWM	TESTIWM_NAVX

DTCC (NSCC)

- DTCC (NSCC) will be using the following CUSIPS during the test:

747525103

191216100

594918104

713448108

459200101

2020 Coordinated Voluntary Pre-Test Dates

- The coordinated voluntary pre-Reg SCI BD/DR test dates are **9/26/2020 (Primary)** and **10/3/2020² (Secondary)**; Reg SCI Test Date is 10/24/2020.

SCI Entity	Primary		Secondary		Comments	
	8-Aug	12-Sep	19-Sept ¹	26-Sep		3-Oct ²
BOX				✓	✓	
Cboe Global Markets*				✓	✓	Offer connectivity testing to DR sessions at any time During 9/26 and 10/3 will be available for testing 9:00 am 0 1:00 pm
DealerWeb				✓		
DTCC		✓				During pre-test day DTCC executes with the same test timelines and test procedures that are used during the industry test
FINRA**				✓	--	
FINRA CAT				✓	✓	Offer connectivity testing to DR sessions at any time
IEX				✓	✓	
MEMX				--	--	Will not participate in pre-testing, Will test connectivity with relevant participants
MIAX Exchange Group				✓	✓	Will also be available Monday, October 19, 2020 through Friday, October 23, 2020, between 8:00AM - 5:30PM EST
NASDAQ Exchanges			✓	✓	✓	
NYSE Group /ICE				✓	✓	
OCC	✓	✓				<u>OCC is not participating in the coordinated voluntary pre-testing</u> Pretest is mandatory for all OCC Participants OCC published information memo #46856 on 4/20/2020 that contains all OCC testing details
OTC Markets						Will work directly with participants
UBS ATS				✓		Offering connectivity testing to DR at any time (coordinate with charles.seremetis@ubs.com)

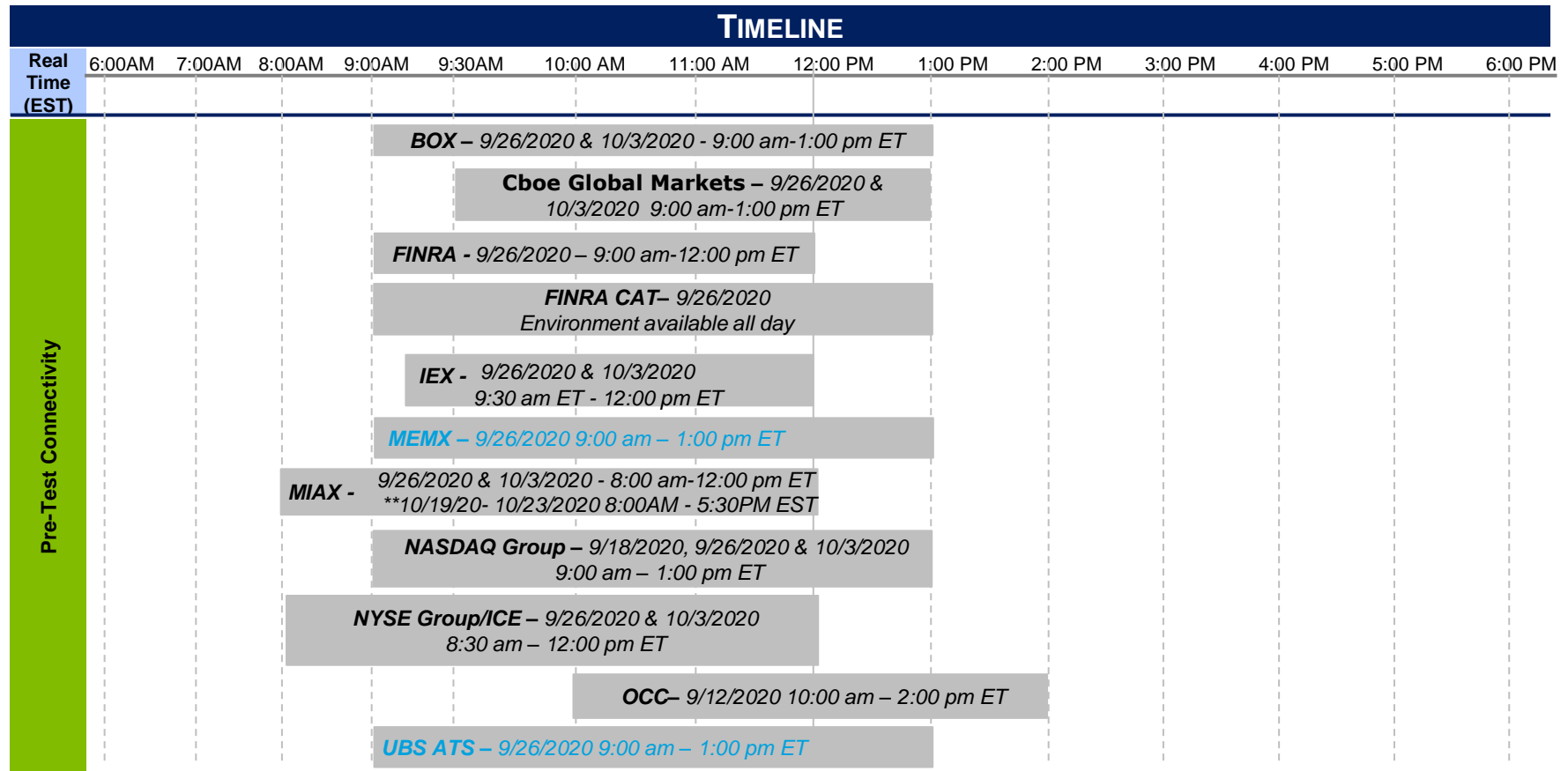
1. Jewish New Year
2. Jewish Holiday

* BYX/BZX/EDGA/ EDGX/C2/Cboe Options

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

Pre-Test Day - Outline Timeline

- The coordinated voluntary pre-Reg SCI BD/DR test dates are **9/26/2020 (Primary)** and **10/03/2020 (Secondary)**
- Pre-Test will focus on connectivity testing
- SCI entities will open their systems per the below schedule
- SCI entities who are interested in extending the test further than connectivity testing will notify their participating members accordingly



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]

End of PlayBook