

2013 SECURITIES INDUSTRY BUSINESS CONTINUITY TEST

October 5, 2013

SUMMARY OF RESULTS

Test Lead By

Securities Industry and Financial Markets Association



2013 SECURITIES INDUSTRY BCP TEST

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Summary of Results

Executive Summary

The 2013 test is part of an ongoing industry-driven backup site testing initiative that began in 2003 and is led by Securities Industry and Financial Markets Association (SIFMA)¹.

The 2013 test followed the format of prior industry-wide tests where firms submit test orders and transactions from their backup sites to the markets and industry utilities. The test involved components for Equities, Options, Fixed Income, Clearing and Settlement Utilities, Market Data, Payment Systems, Treasuries, Commercial Paper and FX. The exercise was supported by all major exchanges, markets and industry utilities. Participation in the test was voluntary and results for specific firms, exchanges, markets and utilities are retained in strict confidence by SIFMA.

Participants in the SIFMA test included **128 securities firms** and **62 market organizations**. During the test approximately **985 communications connections** were established between securities firms and banks and the exchanges, markets and utilities. **Test transactions on these connections were successful 97% of the time**. These results were generally comparable to prior tests and underscore the ability of the securities industry to operate through adverse conditions

In parallel with the SIFMA test on October 5, the Futures Industry Association led a backup site test of the futures exchanges and clients. The Futures test included 23 futures exchanges and clearing organizations. **In the futures test, 64 clearing/non-clearing firms and trading firms participated. Between 73% - 100% of firms tested successfully, depending on the exchange.**

Results for that test can be found at:

<http://www.futuresindustry.org/business-continuitydisaster-recovery.asp>.

¹ The Securities Industry and Financial Markets Association (“SIFMA”) brings together the shared interests of hundreds of securities firms, banks and asset managers. SIFMA’s mission is to support a strong financial industry, investor opportunity, capital formation, job creation and economic growth, while building trust and confidence in the financial markets. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (“GFMA”). For more information, visit www.sifma.org.

Test Objectives

1. To assess the ability of securities market participants to operate through a significant emergency from their backup data centers and work area recovery sites and to examine the level of resiliency of the markets and the industry overall.
2. To provide firms and exchanges with an opportunity to test and evaluate their backup sites and backup communications with the markets on a single day.

Markets and Utilities Tested and Expanded Test Components

The 2013 test included components for Equities, Options, Fixed Income, Clearing and Settlement Utilities, Market Data, Payment Systems, Treasuries, Commercial Paper and FX.

Market participants included all major exchanges, markets and industry utilities plus major service bureaus and market data vendors. See **Appendix A** for list of participating market entities.

The Financial Information Forum assisted in coordinating with the services bureaus and market data vendors during the test.

Test Format

Participating firms, exchanges, industry utilities, service bureaus and payment banks, operating from backup sites (data center and work area recovery), simultaneously submitted scripted test transactions to markets and settlement entities and receive simulated confirmations. The test was not intended to be a simulation of any specific real event.

Firms and markets were requested to test from backup locations but, in some instances, this was not technically feasible. For a connection between a firm and a market to be considered a valid test interaction, at least one of the entities had to test from a backup site. A number of exchanges and markets and some firms run multiple “hot” sites as a normal data center configuration. In a multiple hot site configuration, order traffic is routed automatically to one or more of the sites and if a site fails, traffic is automatically shifted to the operational sites. This test did not require shutdown of one of the hot sites.

Test Participants Summary

Exchanges, Markets and Industry Utilities (Equities, Options, FI, Clearing, Treasuries, FX)	39
Securities Firms (Including those testing directly with markets and through service bureaus)	128
Service Bureaus	12
Market Data Vendors	8
Payment Organizations	3
Future Exchanges and Clearing Organizations	19

See Appendix A for a complete list of market entities participating. The names of the participating firms will not be released.

Overall Test Results

There were 985 test interactions in the SIFMA test components of which 97% were successful.

The success rate for 2013 is in line with results for the past few years.

Notes: A test interaction is a connection between a firm and an exchange, market, service bureau or utility. Test interactions are considered successful if a two-way communication is recorded during the test window. Interactions that experienced issues that were corrected during the test window were counted as successful tests.

Successful Test Interactions by Market

Equities	97%
Options	98%
Fixed Income	95%
Clearing & Settlement	94%
Commercial Paper	100%
Treasury	100%
FX	100%
Payments	100%
Market Data	100%
Service Bureaus	95%
Total	97%

Types of Issues Resulting in Unsuccessful Test Interactions

The type of issues noted during this year's test are consistent with issues encountered in prior test except that the organizations experiencing the problems seem to vary from year to year. Types of problems include:

- ✓ General connectivity issues at firms
- ✓ System specific connectivity issues at firms

Observations and Conclusions

- This test and prior annual industry tests have consistently achieved extremely positive results that underscore the ability of the industry as a whole to operate through adverse conditions.
- One of the primary values of the annual test is the opportunity it provides for firms and markets to test their backup strategies collectively as an industry.
- The types of problems that caused the failures during this test were not so significant that, during a real event, they could not be addressed fairly quickly with full resources.
- Participants agree that it is valuable to continue to modify and expand the scope of the test each year.
- The backup strategies installed by securities firms and market entities performed extremely well.
- The need for firms to regularly and frequently test their backup connections to market entities is critical.
- Firms should ensure that appropriate controls are in place to manage changes to applications and hardware that may impact backup site connectivity to markets. Some of the problems seen during the test resulted from applications changes and hardware configuration changes that were installed since the last test.

Private Voice Line Test

- In conjunction with this year's SIFMA Industry Test we hosted an additional test around Private Line connectivity. Private Voice Lines are an integral component of a firm's trading strategy. They ensure a direct path to a firm's counterparties, as well as provide a means of identification when calls are received. Like other key technologies, Private Lines must be recoverable within predefined timeframes.
- 5 firms took part in the test which exercised 11 scenarios.
- 2 firms failed over their lines, the other 3 were remote ends.
- No issues reported
- In the debrief, the team decided that given the limited scope/pool of firms that utilize this technology, we shouldn't continue with this testing stream however, SIFMA should publish a best practice recommendation that firms should do this on their own.

Inquires About the SIFMA Test

Inquires about the test may be directed to:

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Futures Industry Test

For information about the Futures test led by Futures Industry Association, see <http://www.futuresindustry.org/business-continuitydisaster-recovery.asp>

Appendix A

PARTICIPATING MARKET ORGANIZATIONS

Equities

BATS BZX

BATS BYZ

Chicago Stock Exchange

Direct Edge EDGA

Direct Edge EDGX

NASDAQ

National Stock Exchange

NYSE/Euronext

NYSE/AMEX

Options

BATS Options

Boston Options Exchange

Canadian Derivatives Clearing Corporation

Chicago Board Options Exchange

ISE

Montreal Exchange

MIAX

NASDAQ OMX PHLX

NYSE/ARCA

The Options Clearing Corporation

Fixed Income

BondDesk - ATS

MarketAxess - ATS

The Municenter - ATS

TradeWeb - ATS

Dealerweb - IDB

eSpeed - IDB

ICAP - IDB

Tullett Prebon – IDB

Bank of New York - Clrg Bank

JP Morgan Chase - Clrg Bank

Clearing/Settlement

DTCC

Omgeo

Payments

Fedwire

CHIPS

SWIFT

Market Data

Bloomberg

eSignal

Factset

Fidessa

Interactive Data

OTC Markets Group

SIX Financial Information

Thomson Reuters

Service Bureaus

Broadridge ICI

Broadridge BPS

Broadridge BPO

Fidessa

Lava ECN

OTC Markets Group

ReadQ

SunGard Phase 3

SunGard Valdi

Thomson Reuters BETA Systems

Flex Trade

Shadow Financial

Treasuries

US Treasury Auctions

FX

Bloomberg Tradebook

Bloomberg FXGO

CLS

FXAll

Hotspot

Futures

Canadian Derivatives Clearing Corporation

CBOE Futures Exchange

CME Group

ELX Futures

Eris Exchange

ICE Clear Canada

ICE Clear Credit

ICE Clear EU

ICE Clear US

ICE Exchanges

LCH Clearnet

Mercado Español de Futuros Financieros

Minneapolis Grain Exchange

Montreal Exchange

New York Portfolio Clearing

NYSE Liffe US

OneChicago

Options Clearing Corporation

TrueEx