

March 9, 2018
MR-18-02

**CHICAGO STOCK EXCHANGE, INC.
MEMBER REGULATION DEPARTMENT
INFORMATION MEMORANDUM**

RE: Consolidated Audit Trail (“CAT”) Clock Synchronization Requirements to be Effective on or before March 15, 2018

On November 15, 2016, the Securities and Exchange Commission (“SEC”) approved the National Market Plan Governing the Consolidated Audit Trail (the “CAT NMS Plan” or the “Plan”). The SEC has approved a compliance rule series for each national securities exchange and the Financial Industry Regulatory Authority, Inc. (“FINRA”) (each, a “Participant” in the Plan) that requires the Participant’s members to comply with the CAT NMS Plan requirements and, ultimately, to report information to the CAT. This alert provides guidance regarding deadlines regarding clock synchronization requirements, including certifications, that apply to certain members of the Participants. Should you have any questions about this alert, please contact the CAT Help Desk by email at helpdesk@thesyscat.com or by telephone at (833)-CAT-SERV or 833-228-7378.

Business Clock Synchronization Requirement

Pursuant to the clock synchronization provisions in the CAT compliance rule series, each Participant’s member (“Industry Member”) shall synchronize its Business Clocks, other than such Business Clocks used solely for Manual Order Events or used solely for the time of allocation on Allocation Reports, at a minimum to within a fifty (50) millisecond tolerance of the time maintained by the atomic clock of the National Institute of Standards and Technology (“NIST”), and maintain such synchronization.¹ In addition, each Industry Member shall synchronize its (A) Business Clocks used solely for Manual Order Events and (B) its Business Clocks used solely for the time of allocation on Allocation Reports, at a minimum to within a one second tolerance of the time maintained by NIST, and maintain such synchronization. Under the Plan, as modified by an exemptive order issued by the SEC, each Industry Member must comply with these requirements with regard to Business Clocks that capture time in milliseconds on or before March 15, 2017, and each Industry Member must comply with these requirements with regard to Business Clocks that do not capture time in milliseconds on or before February 19, 2018. Further information about corresponding clock synchronization requirements (*i.e.*, documentation, certification, and violation reporting) is detailed below.

For purposes of the clock synchronization and certification deadlines, “Business Clocks” include those clocks that are used to record time related to “Reportable Events,” as defined under the Plan, including, without limitation, the original receipt or origination, modification, cancellation, routing, execution (in whole or in part) and allocation of an order, and receipt of a routed order, in Eligible Securities (*i.e.*, NMS Securities and OTC Equity Securities).

¹ Unless otherwise noted, capitalized terms are used as defined in the CAT compliance rule series or herein.

Synchronization Procedures

All Industry Members that have Business Clocks that are subject to the clock synchronization requirements must document and maintain their synchronization procedures and keep a log of the times when they synchronize their Business Clocks and the results of the synchronization process. The Participants expect that each Industry Member will synchronize its Business Clocks every business day before market open, and check synchronization at pre-determined intervals throughout the business day, to reasonably ensure that Business Clocks maintain synchronization. The Participants also expect that each Industry Member's synchronization log will document whenever a Business Clock fails to be within the applicable tolerance of the time maintained by NIST. At a later date, the Operating Committee of the CAT NMS Plan will provide further guidance regarding clock synchronization thresholds and Industry Members' clock synchronization logs. At that time, the Participants will publish this information.

Certification Regarding Business Clock Synchronization

The CAT compliance rule series requires each Industry Member to certify that its Business Clocks satisfy the synchronization requirements described above periodically in accordance with the certification schedule established by the Operating Committee of the CAT NMS Plan. The Operating Committee determined that such certifications should be made annually. Accordingly, Industry Members must complete a certification in the form attached hereto that covers all Business Clocks by March 15, 2018. Going forward, Industry Members must complete a new certification that covers all Business Clocks by March 15 of each year.

For future certifications, Industry Members should use a copy of the form certification attached hereto (**see Exhibit 1**), unless an updated form certification is available, in which case the Participants will distribute copies of such updated form certification prior to the applicable deadline.

Industry Members are not required to submit such certifications to the exchanges or FINRA. Instead, originals of such certifications must be maintained by Industry Members as part of their books and records and be available to regulators upon request. Industry Members who are members of multiple Participants need only make a single clock synchronization certification.

Violation Reporting

Each Participant's compliance rule series provides that each Industry Member with Business Clocks must report to the Plan Processor and the Participant when the Industry Member violates the clock synchronization requirements pursuant to the thresholds set by the Operating Committee of the CAT NMS Plan (the "Compliance Thresholds"). At this time, the Operating Committee has not adopted Compliance Thresholds, so Industry Members are not yet required to report violations of the clock synchronization requirements to the Plan Processor or the Participants. At a later date, the Participants will publish the Compliance Thresholds, subject to approval by the Operating Committee of the CAT NMS Plan. At that time, Industry Members will be required to report violations of the Compliance Thresholds to the Plan Processor and the Participants.

CHX Article 23, Rule 2 and Rule 7 regarding clock synchronization were adopted and effective on March 15, 2017. For those Participants designated to the CHX, compliance with the CAT Clock Synchronization Requirements will be reviewed as part of CHX's examination program.

**CONSOLIDATED AUDIT TRAIL (“CAT”)
CLOCK SYNCHRONIZATION CERTIFICATION
BY
[INDUSTRY MEMBER / FIRM NAME]
TO
PARTICIPANTS OF THE CAT NMS PLAN
_____, 2018**

[Industry Member / Firm Name] hereby acknowledges that it is a member of the following national securities exchange(s) and/or national securities association(s) (please select all that apply):

- | | | |
|---|--|--|
| <input type="checkbox"/> BOX Options Exchange LLC | <input type="checkbox"/> Financial Industry Regulatory Authority, Inc. | <input type="checkbox"/> NASDAQ PHLX LLC |
| <input type="checkbox"/> Cboe BYX Exchange, Inc. | <input type="checkbox"/> Investors Exchange LLC | <input type="checkbox"/> The NASDAQ Stock Market LLC |
| <input type="checkbox"/> Cboe BZX Exchange, Inc. | <input type="checkbox"/> Miami International Securities Exchange LLC | <input type="checkbox"/> New York Stock Exchange LLC |
| <input type="checkbox"/> Cboe C2 Exchange, Inc. | <input type="checkbox"/> MIAX PEARL, LLC | <input type="checkbox"/> NYSE American LLC |
| <input type="checkbox"/> Cboe EDGA Exchange, Inc. | <input type="checkbox"/> NASDAQ BX, Inc. | <input type="checkbox"/> NYSE Arca, Inc. |
| <input type="checkbox"/> Cboe EDGX Exchange, Inc. | <input type="checkbox"/> NASDAQ GEMX, LLC | <input type="checkbox"/> NYSE National, Inc. |
| <input type="checkbox"/> Cboe Exchange, Inc. | <input type="checkbox"/> NASDAQ ISE, LLC | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Chicago Stock Exchange, Inc. | <input type="checkbox"/> NASDAQ MRX, LLC | |

To achieve compliance with the clock synchronization requirements of the CAT compliance rule, including any interpretive or exemptive guidance applicable to such rule, of each national securities exchange and/or national securities association identified above (the “Clock Synchronization Requirement”), the undersigned, who is duly authorized to execute this certification on behalf of [Industry Member / Firm Name], hereby certifies that [Industry Member / Firm Name] has:

(1) synchronized its Business Clocks, other than such Business Clocks used solely for Manual Order Events or used solely for the time of allocation on Allocation Reports, at a minimum to within a fifty (50) millisecond tolerance of the time maintained by the National Institute of Standards and Technology, and maintains such synchronization; and

(2) synchronized (A) its Business Clocks used solely for Manual Order Events and (B) its Business Clocks used solely for the time of allocation on Allocation Reports at a minimum to within a one second tolerance of the time maintained by the National Institute of Standards and Technology, and maintains such synchronization.

Capitalized terms are defined as set forth in the CAT compliance rule series of each national securities exchange and national securities association.

EXECUTED as of the date first written above.

[INDUSTRY MEMBER / FIRM NAME]

By: _____

Name: _____

Title: _____