CONSOLIDATED AUDIT TRAIL ("CAT") CLOCK SYNCHRONIZATION CERTIFICATION

BY

Interactive Brokers LLC

Interactive Brokers LLC

[Industry Member]

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PARTICIPANTS OF THE CAT NMS PLAN

01 / 25 / 2024 [DD/MM/YY]

CLOCK SYNCHRONIZATION CERTIFICATION BY

hereby acknowledges that it is a member of the following national

[Industry Member]	1.02.00 j 4.01.11.020.000 01.41.0 10 10	# or
securities exchange(s) and/or nation	nal securities association(s) (please	select all that apply):
☑ BOX Exchange LLC	✓ Investors Exchange LLC	☑ NASDAQ MRX, LLC
✓ Cboe BYX Exchange, Inc.	✓ Long-Term Stock Exchange, Inc.	☑ NASDAQ PHLX LLC
✓ Cboe BZX Exchange, Inc.	✓ MEMX LLC	✓ The NASDAQ Stock Market LLC
☐ Cboe C2 Exchange, Inc.	Miami International Securities Exchange LLC	✓ New York Stock Exchange LLC
☐ Cboe Exchange, Inc.	☑ MIAX PEARL, LLC	✓ NYSE American LLC
☑ Cboe EDGA Exchange, Inc.	✓ MIAX Emerald, LLC	✓ NYSE Arca, Inc.
☑ Cboe EDGX Exchange, Inc.	✓ NASDAQ BX, Inc.	✓ NYSE Chicago, Inc.
Financial Industry Regulatory Authority, Inc.	☑ NASDAQ GEMX, LLC	✓ NYSE National, Inc.
	☑ NASDAQ ISE, LLC	
☐ Other:		

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 Interactive Brokers LLC, hereby certifies that Interactive Brokers LLC 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.

Interactive Brokers LLC
Industry Member]
By: Neil Maloney
Name: Neil Maloney
_{Γitle:} Global Director - Platform Engineering

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.