Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * 25	SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4	File No.* SR - 2021 - * 05 Amendment No. (req. for Amendments *)

Filing by   MIAX PEARL, LLC

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial * ☑	Amendment * ☐	Withdrawal ☐	Section 19(b)(2) * ☐	Section 19(b)(3)(A) * ☑	Section 19(b)(3)(B) * ☐

Rule

Pilot ☐	Extension of Time Period for Commission Action * ☐	Date Expires *	☐ 19b-4(f)(1) ☐ 19b-4(f)(4) ☐ 19b-4(f)(2) ☐ 19b-4(f)(5) ☐ 19b-4(f)(3) ☑ 19b-4(f)(6)

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010	Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 806(e)(1) * ☐ Section 806(e)(2) * ☐	Section 3C(b)(2) * ☐

Exhibit 2 Sent As Paper Document ▣   Exhibit 3 Sent As Paper Document ▣

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Amend Exchange Rule 519C to adopt a new risk protection feature

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name *	Gregory	Last Name *	Ziegler
Title *	Senior Counsel		
E-mail *	gziegler@miaxoptions.com		
Telephone *	(609) 897-1483	Fax	

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934,

has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

(Title *)

Date	02/25/2021
By	Gregory P. Ziegler
	(Name *)

Senior Counsel

gziegler@miami-holdings.com

NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

Required fields are shown with yellow backgrounds and asterisks.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

Add   Remove   View

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

Add   Remove   View

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications

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Exhibit Sent As Paper Document
☐

Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

Exhibit 3 - Form, Report, or Questionnaire

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Exhibit Sent As Paper Document
☐

Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

Add   Remove   View

The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.

Partial Amendment

Add   Remove   View

If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1.   Text of the Proposed Rule Change

(a) MIAX PEARL, LLC ("MIAX PEARL" or the "Exchange"), pursuant to the

provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act")[1] and Rule 19b-4

thereunder,[2] proposes to amend Exchange Rule 519C.

Notice of the proposed rule change for publication in the Federal Register is attached

hereto as Exhibit 1, and the text of the proposed rule change is attached hereto as Exhibit 5.

(b) Not applicable.

(c) Not applicable.

2.   Procedures of the Self-Regulatory Organization

The proposed rule change was approved by the Chief Executive Officer of the Exchange

or his designee pursuant to authority delegated by the MIAX PEARL Board of Directors on

January 28, 2021. Exchange staff will advise the Board of Directors of any action taken pursuant

to delegated authority.

Questions and comments on the proposed rule change may be directed to Gregory P.

Ziegler, Vice President and Senior Counsel, at (609) 897-1483.

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[1]   15 U.S.C. 78s(b)(1).

[2]   17 CFR 240.19b-4.

3.   Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

      a.   Purpose

The Exchange proposes to amend Rule 519C, Mass Cancellation of Trading Interest, to adopt new paragraph (d) titled, Detection of Unresponsive System Interface, which will state that a Member[3] may request that the Help Desk[4] enable the cancel on disconnect feature for a FIX session on their behalf. When the System[5] detects an unresponsive FIX Interface[6] due to a System issue, the System will cancel all open orders for that Interface session.

MIAX PEARL Members may connect to the System using the MEO Interface[7] and/or the FIX Interface. These two connection protocols are not mutually exclusive and Members, specifically Market Makers ("MMs")[8] on the Exchange, primarily use the MEO Interface for

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[3]   The term "Member" means an individual or organization that is registered with the Exchange pursuant to Chapter II of MIAX PEARL Rules for purposes of trading on the Exchange as an "Electronic Exchange Member" or "Market Maker." Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

[4]   The term "Help Desk" means the Exchange's control room consisting of Exchange staff authorized to make certain trading determinations on behalf of the Exchange. The Help Desk shall report to and be supervised by a senior executive officer of the Exchange. See Exchange Rule 100.

[5]   The term "System" means the automated trading system used by the Exchange for the trading of securities. See Exchange Rule 100.

[6]   The term "FIX Interface" means the Financial Information Exchange interface used for submitting certain order types (as set forth in MIAX PEARL Rule 516) to the MIAX PEARL System. See Exchange Rule 100.

[7]   The term "MEO Interface" means a binary order interface used for submitting certain order types (as set forth in MIAX PEARL Rule 516) to the MIAX PEARL System. See Exchange Rule 100.

[8]   The term "Market Maker" or "MM" means a Member registered with the Exchange for the purpose of making markets in options contracts traded on the Exchange and that is vested with the rights and responsibilities specified in Chapter VI of MIAX PEARL Rules. See Exchange Rule 100.

providing liquidity to the Exchange via their Market Making activities, while Electronic

Exchange Members ("EEMs") [9] primarily use the FIX Interface for submitting orders. [10]

These Interface ports provide the mechanism by which Members maintain a connection

to the Exchange and through which a Member communicates its quotes and/or orders to the

System. Market Makers may submit quotes [11] to the Exchange from one or more MEO ports.

Similarly, Members may submit orders to the Exchange from one or more FIX ports.

MEO Connections

Members connect to their assigned MEO port using the MIAX Session Management

Protocol ("SesM"). The SesM protocol uses Heartbeat [12] packets to detect link failures between

the Member and the Exchange. The SesM protocol requires that the Exchange must send a

Heartbeat packet anytime more than one (1) second has passed since the Exchange last sent any

data. Further, the SesM protocol requires that the Member must send a Heartbeat packet anytime

more than one (1) second has passed since the Member last sent any data. If a certain number of

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[9]   The term "Electronic Exchange Member" or "EEM" means the holder of a Trading
        Permit who is a Member representing as agent Public Customer Orders or Non-Customer
        Orders on the Exchange and those non-Market Maker Members conducting proprietary
        trading. Electronic Exchange Members are deemed "members" under the Exchange Act.
        See Exchange Rule 100.

[10]   The term "order" means a firm commitment to buy or sell option contracts. See Exchange
        Rule 100.

[11]   The term "quote" or "quotation" means a bid or offer entered by a Market Maker as a
        firm order that updates the Market Maker's previous bid or offer, if any. When the term
        order is used in these Rules and a bid or offer is entered by the Market Maker in the
        option series to which such Market Maker is registered, such order shall, as applicable,
        constitute a quote or quotation for purposes of these Rules. See Exchange Rule 100.

[12]   A Heartbeat message is a communication which acts as a virtual pulse between the
        Exchange System and the Member's system. The Heartbeat message sent by the Member
        and received by the Exchange allows the Exchange to continually monitor its connection
        with the Member.

consecutive Heartbeats are missed,[13] or if the Member fails to send data or Heartbeats within "xx" period of time ("Heartbeat Interval"), the System will automatically close the connection and listen for the Member to establish a new connection.[14] The default Heartbeat Interval setting is determined by the Exchange and configured directly into the System.[15] Any change to these settings is communicated to Members accordingly.

The Exchange offers Members three different types of MEO port connections. A Full Service Port Bulk ("FSP$_B$") which supports all message types and binary bulk order entry, a Full Service Port Single ("FSP$_S$") which supports all MEO input message types and binary order entry on a single order by order basis (no bulk orders), and a Limited Service Port ("LSP"), which supports all MEO input message types, but does not support bulk order entry and only supports IOC/ISO order types. All Ports can have "cancel on disconnect" enabled.

By default, cancel on disconnect functionality will be triggered upon establishing a loss of communication to the Member's last MEO Full Service Port connection to a matching engine. When cancel on disconnect is triggered, the System will close the session and remove the Member's quotes and orders from the Exchange, for the impacted matching engine only.[16] MEO cancel on disconnect functionality is not changing under this proposal.

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[13]   The Exchange notes that the current setting is three (3) Heartbeats.

[14]   See TCP Session Management (SesM), Protocol Specification, (8/13/2015), Version 1.1e, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_PEARL_TcpSessionMgmt_SesM_v1_1e_0.pdf.

[15]   The Exchange notes that the current setting is three (3) seconds.

[16]   See MIAX Express Orders Binary Orders for Trading Options, MEO Interface Specification, (8/12/2020), Version 2.0b, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_Express_Orders_MEO_v2.0b.pdf. See also Exchange Rule 519C(c)(1).

<u>FIX Connections</u>

Members connect to their assigned FIX port using the MIAX PEARL FIX Orders Interface ("FOI") which is a flexible interface that uses the FIX protocol for both application and session level messages. As per the FIX protocol, a connection is established by the Member submitting a logon message to the Exchange. This logon message establishes the Heartbeat interval that will be used by the session. This value must be greater than zero seconds and the same value must be used by both the Member and the Exchange.

Within the logon message a Member can enable "Auto Cancel on Disconnect" for all orders sent through a session by setting a flag in the logon message. This would result in all eligible orders[17] submitted through the FIX connection to be canceled upon a loss of communication. Alternatively, a Member can identify individual orders on a per order basis that are to be considered for Auto Cancel on Disconnect treatment.

Upon missing a single Heartbeat, FOI will send a *Test Request* message[18] to the Member to check the status of the connection. Upon missing a certain number of Heartbeats,[19] FOI will send a logout message and terminate the connection. When FOI detects a disconnection for any reason it will trigger the Auto Cancel on Disconnect process, whereby, if enabled, FOI will cancel all eligible orders. If Auto Cancel on Disconnect is not enabled for the session or for any

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[17]   Good 'Til Cancelled ("GTC") orders are not eligible for Auto Cancel on Disconnect. A GTC Order is an order to buy or sell which remains in effect until it is either executed, cancelled or the underlying option expires. <u>See</u> Exchange Rule 516(i).

[18]   The test request message is a FIX Protocol message that forces a heartbeat from the opposing application. The test request message checks sequence numbers or verifies communication line status. The opposite application responds to the Test Request with a Heartbeat containing the Test Request ID. Financial Information Exchange Protocol (FIX), Version 4.2 with errata. May 1, 2001.

[19]   The Exchange notes that the current setting is two (2) Heartbeats.

orders, FOI will simply disconnect the FIX session and not cancel any orders. Once disconnected, a FIX user would have to commence a new session to add, modify, or cancel its orders. After a disconnect, FOI will not accept connections from the Member for a pre-configured period of time.[20] This allows the Exchange to cancel orders without the Member being able to reconnect and attempt to interact with an order in the process of being canceled. Any change to this setting will be communicated to Members accordingly.

The Auto Cancel on Disconnect functionality is designed to react to external connection loss scenarios only. Therefore, it does not cancel orders in the event of a FOI Interface becoming unresponsive as a result of a MIAX PEARL System issue. The execution reports resulting from cancels or trades during the period a Member is disconnected can be received upon a subsequent reconnection by the Member on the same trading day.[21]

The Exchange now proposes an additional risk protection feature designed to cancel orders in the event of a MIAX PEARL System issue that causes the FIX Order Interface to become unresponsive. The Exchange proposes to allow a Member to request that the Help Desk enable the cancel on disconnect feature for FIX sessions on their behalf. When the System detects an unresponsive FIX Order Interface due to a MIAX PEARL System issue, the System will cancel all open orders, including GTC orders, for that specific session. After initially requesting that the Help Desk enable the cancel on disconnect feature on behalf of the Member, the setting will remain enabled until such time as the Member requests that it be disabled.

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[20]   The Exchange notes that the current setting is five (5) seconds. See also Exchange Rule 519C(c)(2).

[21]   See Options Order Management using FIX Protocol, FIX Interface Specification, (6/10/2018), Version 1.1, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_PEARL_FIX_Order_Interface_FOI_v1.1a.pdf.

While GTC orders by definition are designed to remain on the Exchange's Book[22] until such time as they are executed or canceled, some Members have expressed a preference to have any order type, including Good 'til Cancelled, removed from the Exchange's Book if the Member is unable to interact with their order due to a technical issue. Removing a Member's order in the event of a technical issue reduces the chance of an undesirable execution occurring and gives the Member flexibility and control over their orders.

Additionally, the Exchange proposes to make a minor non-substantive edit to subparagraph (c)(2) to replace the term "Session" (with an uppercase "S") with the term "session" (with a lowercase "s"). The term "FIX Session" is not a defined term in the Exchange's rulebook and is therefore currently erroneously identified as one. This proposed change improves the clarity and precision of the Exchange's rulebook.

b.   Statutory Basis

The Exchange believes that its proposed rule change is consistent with Section 6(b) of the Act[23] in general, and furthers the objectives of Section 6(b)(5) of the Act[24] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanisms of a free and open market and a national market system and, in general, to protect investors and the public interest.

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[22]   The term "Book" means the electronic book of buy and sell orders and quotes maintained by the System. See Exchange Rule 100.

[23]   15 U.S.C. 78f(b).

[24]   15 U.S.C. 78f(b)(5).

The proposed rule will remove impediments to and perfect the mechanism of a free and open market and a national market system and protect investors and the public interest by providing Members with a mechanism by which to remove all open orders in the System in the event one of their FIX Order Interfaces becomes unresponsive due to a MIAX PEARL System issue.

Offering this type of order cancellation functionality to Members is consistent with the Act because it enables Members to avoid risks associated with inadvertent executions in the event the Member is unable to interact with its orders on the Exchange. The proposed rule change is not unfairly discriminatory among Members, as it is available equally to all Members of the Exchange that use the FIX Protocol to submit orders to the Exchange.

The Exchange's proposal is consistent with the Act because it adds another risk protection tool for Members to employ that may mitigate the risk of potential erroneous or unintended executions associated with an unresponsive FIX Order Interface which protects investors and the public interest.

The Exchange believes the proposed change to correct a typographical error, promotes just and equitable principles of trade, removes impediments to and perfects the mechanism of a free and open market and a national market system as it improves the accuracy and specificity of the Exchange's Rules. The Exchange believes that the proposed change will provide greater clarity to Members and the public regarding the Exchange's Rules, and it is in the public interest for rules to be accurate and concise so as to eliminate the potential for confusion.

4.   Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The

Exchange believes the proposed rule change will not impose any burden on intra-market

competition because every Member of the Exchange has the opportunity to benefit from the

optional functionality described in the proposed rule.

Offering optional functionality to cancel all open orders, including GTC orders, in the

System upon detection of an unresponsive FOI connection due to a MIAX PEARL System issue,

does not create an undue burden on intra-market competition as Members may wish to have all

open orders canceled to reduce the possibility of an undesired execution occurring.

The Exchange does not believe the proposed rule change will impose any burden on

inter-market competition that is not necessary or appropriate in furtherance of the purposes of the

Act. At least one other option exchange similarly offers a variation of cancel functionality to

their users to protect against unintended or unwanted executions.[25]

For the reasons stated, the Exchange does not believe that the proposed rule change will

impose any burden on competition not necessary or appropriate in furtherance of the purposes of

the Act.

5. **Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others**

The Exchange has neither solicited nor received comments on the proposed rule change.

6. **Extension of Time Period for Commission Action**

Not applicable.

7. **Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)**

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[25]   See Cboe Exchange Rule 5.34(c)(6) and (7).

Pursuant to Section 19(b)(3)(A) of the Act[26] and Rule 19b-4(f)(6)[27] thereunder, the Exchange has designated this proposal as one that effects a change that: (i) does not significantly affect the protection of investors or the public interest; (ii) does not impose any significant burden on competition; and (iii) by its terms, does not become operative for 30 days after the date of the filing, or such shorter time as the Commission may designate if consistent with the protection of investors and the public interest.

The proposed rule change does not raise any novel or unique substantive issues. The proposal is non-controversial because it provides an additional optional risk protection feature for Members in the event the Member's FIX Interface connection to the Exchange System becomes unresponsive due to a MIAX PEARL System issue. Accordingly, the Exchange believes that the proposed rule change is eligible for immediately effective treatment under the Commission's current procedures for processing rule filings.

The Exchange believes that the proposed change to make a non-substantive typographical correction to its rule text does not impose any significant burden on the Exchange's Members. The proposed change promotes the protection of investors and the public interest by improving the accuracy and precision of the Exchange's Rules.

Rule 19b-4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement. Furthermore, a proposed rule change filed pursuant to

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[26]   15 U.S.C. 78s(b)(3)(A).

[27]   17 CFR 240.19b-4(f)(6).

Rule 19b-4(f)(6) under the Act[28] normally does not become operative for 30 days after the date of its filing.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

8.   Proposed Rule Change Based on Rules of Another Self-Regulatory Organization or of the Commission

Not applicable.

9.   Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10.   Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11.   Exhibits

1. Notice of proposed rule for publication in the Federal Register.

5. Text of proposed rule change.

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[28]   17 CFR 240.19b-4(f)(6).

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-   ; File No. SR-PEARL-2021-05)

February__, 2021

Self-Regulatory Organizations: Notice of Filing and Immediate Effectiveness of a Proposed Rule Change by MIAX PEARL, LLC to Amend Exchange Rule 519C, Mass Cancellation of Trading Interest

Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934

("Act")[1] and Rule 19b-4 thereunder,[2] notice is hereby given that on February 25, 2021, MIAX

PEARL, LLC ("MIAX PEARL" or the "Exchange") filed with the Securities and Exchange

Commission ("Commission") a proposed rule change as described in Items I, II, and III below,

which Items have been prepared by the Exchange. The Commission is publishing this notice to

solicit comments on the proposed rule change from interested persons.

I.   Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed
        Rule Change

The Exchange is filing a proposed rule change to amend Exchange Rule 519C.

The text of the proposed rule change is available on the Exchange's website at

http://www.miaxoptions.com/rule-filings/pearl at MIAX PEARL's principal office, and at the

Commission's Public Reference Room.

II.   Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the
        Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the

purpose of and basis for the proposed rule change and discussed any comments it received on

the proposed rule change. The text of these statements may be examined at the places specified

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[1]   15 U.S.C. 78s(b)(1).

[2]   17 CFR 240.19b-4.

in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C

below, of the most significant aspects of such statements.

> A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

>> 1. Purpose

The Exchange proposes to amend Rule 519C, Mass Cancellation of Trading Interest, to

adopt new paragraph (d) titled, Detection of Unresponsive System Interface, which will state that

a Member[3] may request that the Help Desk[4] enable the cancel on disconnect feature for a FIX

session on their behalf. When the System[5] detects an unresponsive FIX Interface[6] due to a

System issue, the System will cancel all open orders for that Interface session.

MIAX PEARL Members may connect to the System using the MEO Interface[7] and/or the

FIX Interface. These two connection protocols are not mutually exclusive and Members,

specifically Market Makers ("MMs")[8] on the Exchange, primarily use the MEO Interface for

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[3]   The term "Member" means an individual or organization that is registered with the Exchange pursuant to Chapter II of MIAX PEARL Rules for purposes of trading on the Exchange as an "Electronic Exchange Member" or "Market Maker." Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

[4]   The term "Help Desk" means the Exchange's control room consisting of Exchange staff authorized to make certain trading determinations on behalf of the Exchange. The Help Desk shall report to and be supervised by a senior executive officer of the Exchange. See Exchange Rule 100.

[5]   The term "System" means the automated trading system used by the Exchange for the trading of securities. See Exchange Rule 100.

[6]   The term "FIX Interface" means the Financial Information Exchange interface used for submitting certain order types (as set forth in MIAX PEARL Rule 516) to the MIAX PEARL System. See Exchange Rule 100.

[7]   The term "MEO Interface" means a binary order interface used for submitting certain order types (as set forth in MIAX PEARL Rule 516) to the MIAX PEARL System. See Exchange Rule 100.

[8]   The term "Market Maker" or "MM" means a Member registered with the Exchange for the purpose of making markets in options contracts traded on the Exchange and that is

providing liquidity to the Exchange via their Market Making activities, while Electronic

Exchange Members ("EEMs") [9] primarily use the FIX Interface for submitting orders. [10]

These Interface ports provide the mechanism by which Members maintain a connection

to the Exchange and through which a Member communicates its quotes and/or orders to the

System. Market Makers may submit quotes [11] to the Exchange from one or more MEO ports.

Similarly, Members may submit orders to the Exchange from one or more FIX ports.

MEO Connections

Members connect to their assigned MEO port using the MIAX Session Management

Protocol ("SesM"). The SesM protocol uses Heartbeat [12] packets to detect link failures between

the Member and the Exchange. The SesM protocol requires that the Exchange must send a

Heartbeat packet anytime more than one (1) second has passed since the Exchange last sent any

data. Further, the SesM protocol requires that the Member must send a Heartbeat packet anytime

more than one (1) second has passed since the Member last sent any data. If a certain number of

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vested with the rights and responsibilities specified in Chapter VI of MIAX PEARL Rules. See Exchange Rule 100.

[9]   The term "Electronic Exchange Member" or "EEM" means the holder of a Trading Permit who is a Member representing as agent Public Customer Orders or Non-Customer Orders on the Exchange and those non-Market Maker Members conducting proprietary trading. Electronic Exchange Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

[10]   The term "order" means a firm commitment to buy or sell option contracts. See Exchange Rule 100.

[11]   The term "quote" or "quotation" means a bid or offer entered by a Market Maker as a firm order that updates the Market Maker's previous bid or offer, if any. When the term order is used in these Rules and a bid or offer is entered by the Market Maker in the option series to which such Market Maker is registered, such order shall, as applicable, constitute a quote or quotation for purposes of these Rules. See Exchange Rule 100.

[12]   A Heartbeat message is a communication which acts as a virtual pulse between the Exchange System and the Member's system. The Heartbeat message sent by the Member and received by the Exchange allows the Exchange to continually monitor its connection with the Member.

consecutive Heartbeats are missed,[13] or if the Member fails to send data or Heartbeats within "xx" period of time ("Heartbeat Interval"), the System will automatically close the connection and listen for the Member to establish a new connection.[14] The default Heartbeat Interval setting is determined by the Exchange and configured directly into the System.[15] Any change to these settings is communicated to Members accordingly.

The Exchange offers Members three different types of MEO port connections. A Full Service Port Bulk ("FSP_B") which supports all message types and binary bulk order entry, a Full Service Port Single ("FSP_S") which supports all MEO input message types and binary order entry on a single order by order basis (no bulk orders), and a Limited Service Port ("LSP"), which supports all MEO input message types, but does not support bulk order entry and only supports IOC/ISO order types. All Ports can have "cancel on disconnect" enabled.

By default, cancel on disconnect functionality will be triggered upon establishing a loss of communication to the Member's last MEO Full Service Port connection to a matching engine. When cancel on disconnect is triggered, the System will close the session and remove the Member's quotes and orders from the Exchange, for the impacted matching engine only.[16] MEO cancel on disconnect functionality is not changing under this proposal.

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[13]   The Exchange notes that the current setting is three (3) Heartbeats.

[14]   See TCP Session Management (SesM), Protocol Specification, (8/13/2015), Version 1.1e, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_PEARL_TcpSessionMgmt_SesM_v1_1e_0.pdf.

[15]   The Exchange notes that the current setting is three (3) seconds.

[16]   See MIAX Express Orders Binary Orders for Trading Options, MEO Interface Specification, (8/12/2020), Version 2.0b, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_Express_Orders_MEO_v2.0b.pdf. See also Exchange Rule 519C(c)(1).

FIX Connections

Members connect to their assigned FIX port using the MIAX PEARL FIX Orders

Interface ("FOI") which is a flexible interface that uses the FIX protocol for both application and

session level messages. As per the FIX protocol, a connection is established by the Member

submitting a logon message to the Exchange. This logon message establishes the Heartbeat

interval that will be used by the session. This value must be greater than zero seconds and the

same value must be used by both the Member and the Exchange.

Within the logon message a Member can enable "Auto Cancel on Disconnect" for all

orders sent through a session by setting a flag in the logon message. This would result in all

eligible orders[17] submitted through the FIX connection to be canceled upon a loss of

communication. Alternatively, a Member can identify individual orders on a per order basis that

are to be considered for Auto Cancel on Disconnect treatment.

Upon missing a single Heartbeat, FOI will send a *Test Request* message[18] to the Member

to check the status of the connection. Upon missing a certain number of Heartbeats,[19] FOI will

send a logout message and terminate the connection. When FOI detects a disconnection for any

reason it will trigger the Auto Cancel on Disconnect process, whereby, if enabled, FOI will

cancel all eligible orders. If Auto Cancel on Disconnect is not enabled for the session or for any

orders, FOI will simply disconnect the FIX session and not cancel any orders. Once

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[17]   Good 'Til Cancelled ("GTC") orders are not eligible for Auto Cancel on Disconnect. A
        GTC Order is an order to buy or sell which remains in effect until it is either executed,
        cancelled or the underlying option expires. See Exchange Rule 516(i).

[18]   The test request message is a FIX Protocol message that forces a heartbeat from the
        opposing application. The test request message checks sequence numbers or verifies
        communication line status. The opposite application responds to the Test Request with a
        Heartbeat containing the Test Request ID. Financial Information Exchange Protocol
        (FIX), Version 4.2 with errata. May 1, 2001.

[19]   The Exchange notes that the current setting is two (2) Heartbeats.

disconnected, a FIX user would have to commence a new session to add, modify, or cancel its orders. After a disconnect, FOI will not accept connections from the Member for a pre-configured period of time.[20] This allows the Exchange to cancel orders without the Member being able to reconnect and attempt to interact with an order in the process of being canceled. Any change to this setting will be communicated to Members accordingly.

The Auto Cancel on Disconnect functionality is designed to react to external connection loss scenarios only. Therefore, it does not cancel orders in the event of a FOI Interface becoming unresponsive as a result of a MIAX PEARL System issue. The execution reports resulting from cancels or trades during the period a Member is disconnected can be received upon a subsequent reconnection by the Member on the same trading day.[21]

The Exchange now proposes an additional risk protection feature designed to cancel orders in the event of a MIAX PEARL System issue that causes the FIX Order Interface to become unresponsive. The Exchange proposes to allow a Member to request that the Help Desk enable the cancel on disconnect feature for FIX sessions on their behalf. When the System detects an unresponsive FIX Order Interface due to a MIAX PEARL System issue, the System will cancel all open orders, including GTC orders, for that specific session. After initially requesting that the Help Desk enable the cancel on disconnect feature on behalf of the Member, the setting will remain enabled until such time as the Member requests that it be disabled.

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20   The Exchange notes that the current setting is five (5) seconds. See also Exchange Rule
        519C(c)(2).

21   See Options Order Management using FIX Protocol, FIX Interface Specification,
        (6/10/2018), Version 1.1, available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_PEARL_FIX_Order_Interface_FOI_v1.1a.pdf.

While GTC orders by definition are designed to remain on the Exchange's Book[22] until such time as they are executed or canceled, some Members have expressed a preference to have any order type, including Good 'til Cancelled, removed from the Exchange's Book if the Member is unable to interact with their order due to a technical issue. Removing a Member's order in the event of a technical issue reduces the chance of an undesirable execution occurring and gives the Member flexibility and control over their orders.

Additionally, the Exchange proposes to make a minor non-substantive edit to subparagraph (c)(2) to replace the term "Session" (with an uppercase "S") with the term "session" (with a lowercase "s"). The term "FIX Session" is not a defined term in the Exchange's rulebook and is therefore currently erroneously identified as one. This proposed change improves the clarity and precision of the Exchange's rulebook.

2.   Statutory Basis

The Exchange believes that its proposed rule change is consistent with Section 6(b) of the Act[23] in general, and furthers the objectives of Section 6(b)(5) of the Act[24] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanisms of a free and open market and a national market system and, in general, to protect investors and the public interest.

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[22]   The term "Book" means the electronic book of buy and sell orders and quotes maintained by the System. See Exchange Rule 100.

[23]   15 U.S.C. 78f(b).

[24]   15 U.S.C. 78f(b)(5).

The proposed rule will remove impediments to and perfect the mechanism of a free and open market and a national market system and protect investors and the public interest by providing Members with a mechanism by which to remove all open orders in the System in the event one of their FIX Order Interfaces becomes unresponsive due to a MIAX PEARL System issue.

Offering this type of order cancellation functionality to Members is consistent with the Act because it enables Members to avoid risks associated with inadvertent executions in the event the Member is unable to interact with its orders on the Exchange. The proposed rule change is not unfairly discriminatory among Members, as it is available equally to all Members of the Exchange that use the FIX Protocol to submit orders to the Exchange.

The Exchange's proposal is consistent with the Act because it adds another risk protection tool for Members to employ that may mitigate the risk of potential erroneous or unintended executions associated with an unresponsive FIX Order Interface which protects investors and the public interest.

The Exchange believes the proposed change to correct a typographical error, promotes just and equitable principles of trade, removes impediments to and perfects the mechanism of a free and open market and a national market system as it improves the accuracy and specificity of the Exchange's Rules. The Exchange believes that the proposed change will provide greater clarity to Members and the public regarding the Exchange's Rules, and it is in the public interest for rules to be accurate and concise so as to eliminate the potential for confusion.

B.   Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange believes the proposed rule change will not impose any burden on intra-market

competition because every Member of the Exchange has the opportunity to benefit from the

optional functionality described in the proposed rule.

Offering optional functionality to cancel all open orders, including GTC orders, in the

System upon detection of an unresponsive FOI connection due to a MIAX PEARL System issue,

does not create an undue burden on intra-market competition as Members may wish to have all

open orders canceled to reduce the possibility of an undesired execution occurring.

The Exchange does not believe the proposed rule change will impose any burden on

inter-market competition that is not necessary or appropriate in furtherance of the purposes of the

Act. At least one other option exchange similarly offers a variation of cancel functionality to

their users to protect against unintended or unwanted executions.[25]

For the reasons stated, the Exchange does not believe that the proposed rule change will

impose any burden on competition not necessary or appropriate in furtherance of the purposes of

the Act.

C.   Self-Regulatory Organization's Statement on Comments on the Proposed Rule
         Change Received from Members, Participants, or Others

Written comments were neither solicited nor received.

III.   Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the

protection of investors or the public interest; (ii) impose any significant burden on competition;

and (iii) become operative for 30 days after the date of the filing, or such shorter time as the

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[25]   See Cboe Exchange Rule 5.34(c)(6) and (7).

Commission may designate, it has become effective pursuant to 19(b)(3)(A) of the Act[26] and Rule 19b-4(f)(6)[27] thereunder.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV.   Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

☐ Use the Commission's Internet comment form (http://www.sec.gov/rules/sro.shtml); or

☐ Send an e-mail to rule-comments@sec.gov. Please include File Number SR-PEARL-2021-05 on the subject line.

Paper comments:

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[26]   15 U.S.C. 78s(b)(3)(A).

[27]   17 CFR 240.19b-4(f)(6). In addition, Rule 19b-4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

☐   Send paper comments in triplicate to Vanessa Countryman, Secretary, Securities

and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-PEARL-2021-05. This file number

should be included on the subject line if e-mail is used. To help the Commission process and

review your comments more efficiently, please use only one method. The Commission will post

all comments on the Commission's Internet Web site (http://www.sec.gov/rules/sro.shtml).

Copies of the submission, all subsequent amendments, all written statements with respect

to the proposed rule change that are filed with the Commission, and all written communications

relating to the proposed rule change between the Commission and any person, other than those

that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be

available for website viewing and printing in the Commission's Public Reference Room, 100 F

Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m.

and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the

principal office of the Exchange. All comments received will be posted without change; the

Commission does not edit personal identifying information from submissions. You should

submit only information that you wish to make available publicly.

All submissions should refer to File Number SR-PEARL-2021-05 and should be

submitted on or before [insert date 21 days from publication in the Federal Register]. For the

Commission, by the Division of Trading and Markets, pursuant to delegated authority.[28]

Vanessa Countryman
Secretary

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[28]   17 CFR 200.30-3(a)(12).

New text is underlined;
Deleted text is in [brackets]

MIAX PEARL, LLC Rules

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Rule 519C. Mass Cancellation of Trading Interest

(a) - (b) No change.

(c) **Detection of Loss of Communication**

     (1) **MIAX Express Order Interface ("MEO")**. When a Loss of Communication is detected on a MEO port during a certain time period ("xx" seconds), the System will close the session and automatically cancel quotes and orders, as configured by the Member, provided that when a Loss of Communication is detected on the last connected MEO port during a certain time period ("xx" seconds), the System will close the session and automatically cancel quotes and orders. The Exchange shall determine the appropriate period of ("xx" seconds) and shall notify Members of the value of "xx" seconds via Regulatory Circular. In no event shall "xx" be less than one (1) second or greater than ten (10) seconds.

     (2) **Financial Information eXchange ("FIX") Protocol**. When a Loss of Communication is detected on a FIX port the System will logoff the Member's session and (i) cancel all eligible orders for the FIX [S]session if instructed by the Member upon login, or (ii) cancel all eligible orders identified by the Member. Following a disconnection, a reconnection will not be permitted for a certain period of time ("yy" seconds). The Exchange shall determine the appropriate period of ("yy" seconds) and shall notify Members of the value of "yy" seconds via Regulatory Circular. In no event shall "yy" be less than one (1) second or greater than ten (10) seconds.

(d) **Detection of Unresponsive System Interface.** A Member may request that the Help Desk enable the cancel on disconnect feature for a FIX session on their behalf. When the System detects an unresponsive FIX Interface due to a System issue, the System will cancel all open orders for that Interface session.

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