New text is underlined; deleted text is in brackets.

Nasdaq BX, Inc. Rules

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Options Rules

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Options 3 Options Trading Rules

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Section 7. Types of Orders and Quote Protocols

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(b) The term "Time in Force" or "TIF" shall mean the period of time that the System will hold an order for potential execution, and shall include:

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(2) "Immediate-or-Cancel" or "IOC" is a Market Order or Limit Order to be executed in whole or in part upon receipt. Any portion not so executed is cancelled.

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(B) IOC orders may be entered through FIX, <u>OTTO</u> or SQF, provided that an IOC Order entered by a Market Maker through SQF is not subject to the Order Price Protection, the Market Order Spread Protection, or Size Limitation in Options 3, Section 15(a)(1), (a)(2), and (b)(2), respectively;

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- (3) "DAY" is an order entered with a TIF of "Day" that expires at the end of the day on which it was entered, if not executed. All orders by their terms are Day Orders unless otherwise specified. Day orders may be entered through FIX or OTTO.
- (4) "Good Til Cancelled" or "GTC" is an order entered with a TIF of "GTC" that, if not fully executed, will remain available for potential display and/or execution unless cancelled by the entering party, or until the option expires, whichever comes first. GTC Orders shall be available for entry from the time prior to market open specified by the Exchange until market close. GTC orders may be entered through FIX.

- (e) Entry and Display of Orders and Quotes. Participants may enter orders and quotes into the System as specified below.
 - (1) The Exchange offers Participants the following protocols for entering orders and quotes respectively:

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- (B) "Ouch to Trade Options" or "OTTO" is an interface that allows Members and their Sponsored Customers to connect, send, and receive messages related to orders, auction orders, and auction responses to the Exchange. Features include the following: (1) options symbol directory messages (e.g., underlying and complex instruments); (2) System event messages (e.g., start of trading hours messages and start of opening); (3) trading action messages (e.g., halts and resumes); (4) execution messages; (5) order messages; (6) risk protection triggers and cancel notifications; (7) auction notifications; (8) auction responses; and (9) post trade allocation messages.
- ([B]C) "Specialized Quote Feed" or "SQF" is an interface that allows Market Makers to connect, send, and receive messages related to quotes, Immediate-or-Cancel Orders, and auction responses into and from the Exchange. Features include the following: (1) options symbol directory messages (e.g., underlying instruments); (2) system event messages (e.g., start of trading hours messages and start of opening); (3) trading action messages (e.g., halts and resumes); (4) execution messages; (5) quote messages; (6) Immediate-or-Cancel Order messages; (7) risk protection triggers and purge notifications; (8) opening imbalance messages; (9) auction notifications; and (10) auction responses. The SQF Purge Interface only receives and notifies of purge requests from the Market Maker. Market Makers may only enter interest into SQF in their assigned options series. Immediate-or-Cancel Orders entered into SQF are not subject to the Order Price Protection, Market Order Spread Protection, or Size Limitation Protection in Options 3, Section 15(a)(1), (a)(2), and (b)(2) respectively.

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Section 8. Options Opening Process

(l) **Opening Process Cancel Timer**. The Opening Process Cancel Timer represents a period of time since the underlying market has opened, and shall be established and disseminated by the Exchange on its website. If an option series has not opened before the conclusion of the Opening Process Cancel Timer, a Participant may elect to have orders returned by providing written notification to the Exchange. These orders include all non-Good Til Cancelled Orders received over the FIX or OTTO protocol.

Section 12. Crossing Orders

(a) **Customer Cross Orders**. Public Customer-to-Public Customer Cross Orders are automatically executed upon entry provided that the execution is at or between the best bid and offer on the Exchange and (i) is not at the same price as a Public Customer Order on the Exchange's limit order book and (ii) will not trade through the NBBO. [Public Customer-to-Public Customer Cross Orders must be entered through FIX.]

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Section 17. Kill Switch

- (a) BX Options Kill Switch is an optional tool that enables BX Participants to initiate a message(s) to the System to promptly cancel [orders]and restrict their order activity on the Exchange, as described in section (a)(1) below. Participants may submit a Kill Switch request to the System to cancel orders based on certain identifier(s) on [either]a user [or group]level ("Identifier"). [Permissible groups must reside within a single broker-dealer.] The System will send an automated message to the BX Participant when a Kill Switch request has been processed by the Exchange's System.
 - ([i]1) [If orders are cancelled by the BX Participant utilizing the Kill Switch, it will result in the cancellation of all orders requested for the Identifier(s). The BX Participant will be unable to enter additional orders for the affected Identifier(s) until re-entry has been enabled pursuant to section (a)(ii).] A BX Participant may submit a request to the System through FIX or OTTO to cancel all existing orders and restrict entry of additional orders for the requested Identifier(s) on a user level on the Exchange.
 - ([ii]2) [After orders are cancelled by the BX Participant utilizing the]Once a BX Participant initiates a Kill Switch pursuant to (a)(1) above, the BX Participant will be unable to enter additional orders for the affected Identifier(s) until the BX Participant has made a verbal request to the Exchange and Exchange staff has set a re-entry indicator to enable re-entry. Once enabled for re-entry, the System will send a Re-entry Notification Message to the BX Participant. The applicable Clearing Participant also will be notified of the re-entry into the System after orders are cancelled as a result of the Kill Switch, provided the Clearing Participant has requested to receive such notification.

Section 18. Detection of Loss of Communication

(a) <u>Definitions</u>[When the SQF Port detects the loss of communication with a Participant's Client Application because the Exchange's server does not receive a Heartbeat message for a certain time period ("nn" seconds), the Exchange will automatically logoff the Participant's affected Client Application and automatically cancel all of the Participant's open quotes. Quotes will be cancelled across all Client Applications that are associated with the same BX Options Market Maker ID and underlying issues.]

- (1) A "Heartbeat" message is a communication which acts as a virtual pulse between the SQF, <u>OTTO</u> or FIX Port and the Client Application. The Heartbeat message sent by the Participant and subsequently received by the Exchange allows the SQF, <u>OTTO</u> or FIX Port to continually monitor its connection with the Participant.
- (2) SQF Port is the Exchange's System component through which Participants communicate their quotes from the Client Application.
- (3) OTTO Port is the Exchange's proprietary System component through which Participants communicate their orders from the Client Application.
- ([3]4) FIX Port is the Exchange's System components through which Participants communicate their orders from the Client Application.
- ([4]5) Client Application is the System component of the Participant through which the Exchange Participant communicates its quotes and orders to the Exchange.
- (6) Session of Connectivity shall mean each time the Participant connects to the Exchange's System. Each new connection, intra-day or otherwise, is a new Session of Connectivity.
- (b) When the SQF Port detects the loss of communication with a Participant's Client Application because the Exchange's server does not receive a Heartbeat message for a certain time period ("nn" seconds), the Exchange will automatically logoff the Participant's affected Client Application and automatically cancel all of the Participant's open quotes. Quotes will be cancelled across all Client Applications that are associated with the same BX Options Market Maker ID and underlying issues.
- (c) When the OTTO Port detects the loss of communication with a Participant's Client

 Application because the Exchange's server does not receive a Heartbeat message for a certain time period ("nn" seconds), the Exchange will automatically logoff the Participant's affected Client Application and if the Participant has elected to have its orders cancelled pursuant to Section 18(f), automatically cancel all orders.
- ([b]d) When the FIX Port detects the loss of communication with a Participant's Client Application because the Exchange's server does not receive a Heartbeat message for a certain time period ("nn" seconds), the Exchange will automatically logoff the Participant's affected Client Application and if the Participant has elected to have its orders cancelled pursuant to subparagraph ([d]g), automatically cancel all open orders posted.
- ([c]e) The default time period ("nn" seconds) for SQF Ports shall be fifteen (15) seconds. A Participant may determine another time period of "nn" seconds of no technical connectivity, as required in paragraph ([a]b) above, to trigger the disconnect and must communicate that time to the Exchange. The period of "nn" seconds may be modified to a number between one hundred (100) milliseconds and 99,999 milliseconds for SQF Ports prior to each [session of

connectivity] <u>Session of Connectivity</u> to the Exchange. This feature is enabled for each Participant and may not be disabled.

- (1) If the Participant systemically changes the default number of "nn" seconds, that new setting shall be in effect throughout the current [session of connectivity] Session of Connectivity and will then default back to fifteen seconds. The Participant may change the default setting systemically prior to each [session of connectivity] Session of Connectivity.
- (2) If a time period is communicated to the Exchange by calling Exchange operations, the number of "nn" seconds selected by the Participant shall persist for each subsequent [session of connectivity] Session of Connectivity until the Participant either contacts Exchange operations and changes the setting or the Participant systemically selects another time period prior to the next [session of connectivity] Session of Connectivity.
- (f) The default period of "nn" seconds for OTTO Ports shall be fifteen (15) seconds for the disconnect and, if elected, the removal of orders. A Participant may determine another time period of "nn" seconds of no technical connectivity, as required in paragraph (c) above, to trigger the disconnect and, if so elected, the removal of orders and communicate that time to the Exchange. The period of "nn" seconds may be modified to a number between one hundred (100) milliseconds and 99,999 milliseconds for OTTO Ports prior to each Session of Connectivity to the Exchange. This feature may be disabled for the removal of orders, however the Participant will be disconnected.
 - (1) If the Participant changes the default number of "nn" seconds, that new setting shall be in effect throughout the current Session of Connectivity and will then default back to fifteen seconds. The Participant may change the default setting prior to each Session of Connectivity.
 - (2) If the time period is communicated to the Exchange by calling Exchange operations, the number of "nn" seconds selected by the Participant shall persist for each subsequent Session of Connectivity until the Participant either contacts Exchange operations by phone and changes the setting or the Participant selects another time period through the Client Application prior to the next Session of Connectivity.
- ([d]g) The default period of "nn" seconds for FIX Ports shall be thirty (30) seconds for the disconnect and, if elected, the removal of orders. If the Participant elects to have its orders removed, in addition to the disconnect, the Participant may determine another time period of "nn" seconds of no technical connectivity, as required in paragraph ([b]d) above, to trigger the disconnect and removal of orders and communicate that time to the Exchange. The period of "nn" seconds may be modified to a number between one (1) second and thirty (30) seconds for FIX Ports prior to each [session of connectivity] Session of Connectivity to the Exchange. This feature may be disabled for the removal of orders, however the Participant will be disconnected.
 - (1) If the Participant systemically changes the default number of "nn" seconds, that new setting shall be in effect throughout the current [session of connectivity] Session of

<u>Connectivity</u> and will then default back to thirty seconds. The Participant may change the default setting systemically prior to each [session of connectivity] <u>Session of Connectivity</u>.

(2) If the time period is communicated to the Exchange by calling Exchange operations, the number of "nn" seconds selected by the Participant shall persist for each subsequent [session of connectivity] Session of Connectivity until the Participant either contacts Exchange operations and changes the setting or the Participant systemically selects another time period prior to the next [session of connectivity] Session of Connectivity.

([e]h) The trigger for the SQF, OTTO and FIX Ports is event and Client Application specific. The automatic cancellation of the BX Options Market Maker's quotes for SQF Ports and open orders for OTTO and FIX Ports entered into the respective SQF, OTTO or FIX Ports via a particular Client Application will neither impact nor determine the treatment of the quotes of other BX Options Market Makers entered into SQF Ports or orders of the same or other Participants entered into the OTTO or FIX Ports via a separate and distinct Client Application.

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Options 7 Pricing Schedule

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Section 3 BX Options Market - Ports and other Services

The below charges are assessed by BX for connectivity to the BX Options Market.

A port is a logical connection or session that enables a market participant to send inbound messages and/or receive outbound messages from the Exchange using various communication protocols. Fees are prorated for the first month of service under this section. Upon cancellation, participants are required to pay for service for the remainder of the month, regardless of whether it is the first month of service.

An account number shall mean a number assigned to a Participant. Participants may have more than one account number.

(i) The following order and quote protocols are available on BX:

(1) FIX Port Fee¹ \$650 per port, per month, per account number (2) OTTO Port Fee² \$650 per port, per month, per account number

([2]3) SQF Port Fee \$500 per port, per month ([3]4) SQF Purge Port Fee \$500 per port, per month

BX does not assess a fee for account numbers.

¹The maximum monthly fees in the aggregate for FIX Port, CTI Port, FIX DROP Port, BX Depth Port and BX TOP Port Fees will be \$7,500.

² BX will waive one OTTO Port fee per BX Participant per month.