

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-101743; File No. SR-BX-2024-048)

November 25, 2024

Self-Regulatory Organizations; Nasdaq BX, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Adopt an OTTO Protocol

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on November 15, 2024, Nasdaq BX, Inc. (“BX” or “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the 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 proposes to adopt a new protocol, “Ouch to Trade Options” or “OTTO” and establish pricing for this new protocol.<sup>3</sup>

The text of the proposed rule change is available on the Exchange’s Website at <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules>, at the principal office of the Exchange, 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 in

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

<sup>3</sup> On November 15, 2024, BX is withdrawing SR-BX-2024-019 and is filing this rule change.

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

BX proposes to offer a new order entry protocol called OTTO. Today, BX Participants may enter orders into the Exchange through the “Financial Information eXchange” or “FIX.”<sup>4</sup> The proposed new OTTO protocol is identical to the OTTO protocol offered today on 3 Nasdaq affiliated exchanges, Nasdaq ISE, LLC (“ISE”), Nasdaq GEMX, LLC (“GEMX”) and Nasdaq MRX, LLC (“MRX”).

The OTTO protocol is a proprietary protocol of Nasdaq, Inc. The Exchange continues to innovate and modernize technology so that it may continue to compete among options markets. The ability to continue to innovate with technology and offer new products to market participants allows BX to remain competitive in the options space which currently has eighteen options markets and potential new entrants.

**OTTO Protocol**

As proposed, OTTO would allow Participants and their Sponsored Customers<sup>5</sup> to connect, send, and receive messages related to orders, auction orders, and auction responses to the Exchange. OTTO features would include the following: (1) options symbol directory

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<sup>4</sup> FIX is an interface that allows Participants and their Sponsored Customers to connect, send, and receive messages related to orders and auction orders and responses to and from the Exchange. Features include the following: (1) execution messages; (2) order messages; and (3) risk protection triggers and cancel notifications. In addition, a BX Participant may elect to utilize FIX to send a message and PRISM Order, as defined within Options 3, Section 13, to all BX Participants that opt in to receive Requests for PRISM requesting that it submit the sender’s PRISM Order with responder’s Initiating Order, as defined within Options 3, Section 13, into the Price Improvement Auction (“PRISM”) mechanism, pursuant to Options 3, Section 13 (“Request for PRISM”). See Options 3, Section 7(e)(1)(A).

<sup>5</sup> General 2, Section 22 describes Sponsored Access arrangements.

messages (e.g., underlying and complex instruments); (2) System<sup>6</sup> 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. The Exchange notes that unlike FIX, which offers routing capability, OTTO does not permit routing. The Exchange proposes to include this description of OTTO in new Options 3, Section 7(e)(1)(B) and re-letter current “B” as “C”.

Only one order protocol is required for a BX Participant to submit orders into BX. Only BX Participants may utilize ports on BX. Any market participant that sends orders to a BX Participant would not need to utilize a port. The BX Participant may send all orders, proprietary and agency, through one port to BX. Participants may elect to obtain multiple ports to organize their business,<sup>7</sup> however only one port is necessary for a Participant to enter orders on BX.

Participants may elect to enter their orders through FIX, OTTO, or both protocols, although both protocols are not necessary. Participants may prefer one protocol as compared to another protocol, for example, the ability to route may cause a Participant to utilize FIX and a

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<sup>6</sup> The term “System” or “Trading System” means the automated system for order execution and trade reporting owned and operated by BX as the BX Options market. The BX Options market comprises: (A) an order execution service that enables Participants to automatically execute transactions in option series; and provides Participants with sufficient monitoring and updating capability to participate in an automated execution environment; (B) a trade reporting service that submits “locked-in” trades for clearing to a registered clearing agency for clearance and settlement; transmits last-sale reports of transactions automatically to the Options Price Reporting Authority for dissemination to the public and industry; and provides participants with monitoring and risk management capabilities to facilitate participation in a “locked-in” trading environment; and (C) the data feeds described in Options 3, Section 23. See BX Options 1, Section 1(a)(59).

<sup>7</sup> For example, a Participant may desire to utilize multiple FIX or OTTO Ports for accounting purposes, to measure performance, for regulatory reasons, segregating order flow among different trading desks, or other determinations that are specific to that Participant. A market participant may utilize multiple ports in some cases to send multiple orders through different ports to avoid any latency or queuing of orders. The Exchange notes that to the extent that different OTTO Ports are used to send multiple orders as compared to sending multiple orders through one OTTO Port the difference from a latency standpoint would be in nanoseconds.

Participant that desires to execute an order locally may prefer OTTO. Also, the OTTO Port offers lower latency as compared to the FIX Port, which may be attractive to Participants depending on their trading behavior. Nasdaq believes that the addition of OTTO will provide BX Participants with additional choice when submitting orders to BX.

While the Exchange has no way of predicting with certainty the amount or type of OTTO Ports market participants will in fact purchase, the Exchange anticipates that some Participants will subscribe to multiple OTTO Ports in combination with FIX Ports. The Exchange notes that Options Participants may use varying number of OTTO ports based on their business needs.

### **Other Amendments**

In connection with offering OTTO, the Exchange proposes to amend other rules within Options 3. Each amendment is described below.

#### *Options 3, Section 7*

BX proposes to amend Options 3, Section 7, Types of Orders and Quote Protocols. Specifically, BX proposes to amend Options 3, Section 7 (b)(2) that describes the “Immediate-or-Cancel” or “IOC” order. Today, Options 3, Section 7(b)(2)(B) notes that an IOC order may be entered through FIX 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. The Exchange proposes to add “OTTO” to the list of protocols to note that an IOC order may also be entered through OTTO.

BX also proposes to amend the “DAY” order in Options 3, Section 7(b)(3) that currently provides that a Day order may be entered through FIX. With the addition of OTTO, a Day order may also be entered through OTTO.

BX also proposes to amend the “Good Til Cancelled” or “GTC” order which currently does not specify that a GTC order may be entered through FIX. GTC orders would only be able to be entered through FIX and not OTTO. The Exchange proposes to amend Options 3, Section 7(b)(4) to add a sentence to note that GTC orders may be entered through FIX.

*Options 3, Section 8*

BX proposes to amend Options 3, Section 8, Options Opening Process. BX proposes to amend Options 3, Section 8(l) that describes the Opening Process Cancel Timer. The Opening Process Cancel Timer represents a period of time since the underlying market has opened. 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. Today, these orders include all non-Good Til Cancelled Orders received over the FIX protocol. The Exchange proposes to add the OTTO protocol as well to the rule text language in that paragraph.

*Options 3, Section 12*

The Exchange proposes to amend the Options 3, Section 12, Crossing Orders. Specifically, the Exchange proposes to amend Customer Crossing Orders in Options 3, Section 12(a) that currently provides 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. The Exchange proposes to remove the sentence that provides that Public Customer-to-Public Customer Cross Orders must be entered through FIX because they will be able to be entered through both FIX and OTTO.

### *Options 3, Section 17*

The Exchange proposes to amend the Kill Switch at Options 3, Section 17. The Kill Switch provides Participants with an optional risk management tool to promptly cancel and restrict orders. With the introduction of OTTO, the Exchange proposes to align its Kill Switch rule text with MRX's Kill Switch.<sup>8</sup> The Exchange proposes to note in Options 3, Section 17(a) that BX Participants may initiate a message(s) to the System to promptly cancel and restrict their order activity on the Exchange, as is the case today, as described in section (a)(1). This amendment simply rewords the rule text without a substantive amendment to the rule text.

The Exchange proposes to renumber Options 3, Section 17(a)(i) and (ii) as (a)(1) and (2). Current Options 3, Section 17(a)(i) states, "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)." The Exchange proposes to instead provide, "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." With the addition of OTTO, the Exchange notes that both FIX and OTTO orders may be cancelled. Further, today, BX Participants utilize an interface to send a message to the Exchange to initiate a Kill Switch.<sup>9</sup> The Exchange notes that in lieu of the interface, BX Participants will only be able to initiate a cancellation of their orders by sending a mass purge request through FIX or OTTO. This change will align the Kill Switch functionality to that of ISE, GEMX and MRX Options 3, Section 17 and will enable BX Participants to initiate

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<sup>8</sup> See MRX Options 3, Section 17.

<sup>9</sup> See Securities Exchange Act Release No. 76116 (October 8, 2015), 80 FR 62147 (October 15, 2015) (SR-BX-2015-050) (Order Approving Proposed Rule Change To Adopt a Kill Switch).

the Kill Switch more seamlessly without the need to utilize a separate interface. When initiating a cancellation of their orders by sending a mass purge request through FIX or OTTO, Participants will be able to submit a Kill Switch request on a user level only. This is a change from the ability to cancel orders on either a user or group level<sup>10</sup> with the interface. The Exchange proposes to amend Options 3, Section 17(a) to note this change by removing the words “or group” and the following sentence that applies to a group.<sup>11</sup>

Finally, the Exchange proposes to amend proposed Options 3, Section 17(a)(2) to align to MRX’s rule text by providing “Once a BX Participant initiates a Kill Switch pursuant to (a)(1) above...” in the first sentence. This amendment simply rewords the rule text without a substantive amendment to the rule text.

#### *Options 3, Section 18*

The Exchange proposes to amend Options 3, Section 18, Detection of Loss of Communication. The Exchange proposes to add OTTO to Options 3, Section 18 as OTTO would also be subject to this rule. Today, when the SQF Port or 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, the Exchange will automatically logoff the Participant’s affected Client Application and automatically cancel all of the Participant’s open quotes through SQF and open orders through FIX. Quotes and orders are cancelled across all Client Applications that are associated with the same BX Options Market Maker ID and underlying issues.

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<sup>10</sup> A permissible group could include all badges associated with a Market Maker. Today, a Participant is able to set up these groups in the interface to include all or some of the Identifiers associated with the Participant firm so that a GUI Kill Switch request could apply to this pre-defined group.

<sup>11</sup> The Exchange proposes to remove this sentence, “Permissible groups must reside within a single broker-dealer” as the group option would no longer exist.

At this time, the Exchange proposes to permit orders entered through OTTO to be cancelled similar to FIX orders when the Exchange's server does not receive a Heartbeat message for a certain time period. The Exchange is proposing to amend Options 3, Section 18 to also rearrange the rule text to add the word "Definitions" next to "a" and move the rule text in current "a" to "b" and re-letter the other paragraphs accordingly. Also, the Exchange proposes to define "Session of Connectivity" for purposes of this rule to mean each time the Participant connects to the Exchange's System. Further, each new connection, intra-day or otherwise, is a new Session of Connectivity. The Exchange proposes to use the new definition throughout Options 3, Section 18.

Similar to FIX, 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, the Exchange will automatically logoff the Participant's affected Client Application and automatically cancel all of the Participant's open orders through OTTO. Orders would be cancelled across all Client Applications that are associated with the same BX Options Market Maker ID and underlying issues. The Exchange proposes to update Options 3, Section 18 to provide in proposed Options 3, Section 18(a)(3) that the OTTO Port is the Exchange's proprietary System component through which Participants communicate their orders from the Client Application. Further, the Exchange would note in proposed Options 3, Section 18(c) that 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 proposed Section 18(f), automatically cancel all orders. Proposed Options 3, Section 18(f)



would provide that the default period of “nn” seconds for OTTO Ports would 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 proposed paragraph (c), 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.

Proposed Options 3, Section 18(f)(1) would provide that 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. Finally, as proposed in Options 3, Section 18(f)(2), if the time period is communicated to the Exchange by calling Exchange operations, the number of “nn” seconds selected by the Participant will 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. The trigger for OTTO Ports is event and Client Application specific. The automatic cancellation of the BX Options Market Maker’s open orders for OTTO Ports entered into the respective OTTO Ports via a particular Client Application will neither impact nor determine the treatment of orders of the same or other Participants entered into the OTTO Ports via a separate and distinct Client Application. The proposed amendments for

OTTO mirror the manner in which FIX Ports are treated when the Exchange's server does not receive a Heartbeat message for a certain time period for a FIX Port.<sup>12</sup>

### **Pricing**

BX proposes to amend its Pricing Schedule at Options 7, Section 3, BX Options Market – Ports and other Services, to adopt a port fee for the new OTTO protocol of \$650 per port, per month, per account number. OTTO would be an additional order entry protocol for BX Participants in addition to FIX, which is currently utilized by BX Participants to enter orders into BX. The Exchange currently assesses a FIX Port Fee of \$650 per port, per month, per account number.<sup>13</sup> The Exchange will provide each Participant the first FIX Port at no cost to submit orders into BX. BX Participants utilizing the first FIX Port offered at no cost do not need to purchase an OTTO Port, which is optional.

The Exchange also proposes to add OTTO to the list of ports that are capped at \$7,500 on BX. Today, the maximum monthly fees in the aggregate for FIX Port, CTI Port, FIX DROP Port, BX Depth Port and BX TOP Port Fees on BX is \$7,500.<sup>14</sup> These ports are available to all BX Participants. To the extent that a Participant expended more than \$7,500 for FIX or OTTO Ports in a month, BX would not charge a Participant for additional FIX or OTTO Ports, respectively, beyond the cap.

### **Implementation**

The Exchange will implement this rule change on or before December 20, 2025. The Exchange will announce the operative date to Participants in an Options Trader Alert.

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<sup>12</sup> The Exchange proposes to update internal cross-references to accommodate relocated text.

<sup>13</sup> The term “account number” means a number assigned to a Participant. Participants may have more than one account number. See Options 1, Section 1(a)(2). Account numbers are free on BX.

<sup>14</sup> See BX Options 7, Section 3(i).

## 2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,<sup>15</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act,<sup>16</sup> in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

### **OTTO Protocol**

The Exchange's proposal to adopt OTTO is consistent with the Act because OTTO would provide BX Participants with an alternative protocol to submit orders to the Exchange. As proposed, BX would offer the first FIX Port at no cost to submit orders into BX, which would remove impediments to and perfect the mechanism of a free and open market. While BX Participants may elect to obtain multiple ports to organize their business,<sup>17</sup> only one order port is necessary for a Participant to enter orders on BX. A BX Participant may send all orders, proprietary and agency, through one port to BX without incurring any cost with this proposal. In the alternative, BX Participants may elect to obtain multiple ports to organize their business.<sup>18</sup>

With the addition of OTTO, a BX Participant may elect to enter their orders through FIX, OTTO, or both protocols, although both protocols are not necessary. Each BX Participant would receive one FIX Port at no cost, thereby promoting just and equitable principles of trade. The Exchange notes that Participants may prefer one order protocol as compared to another order

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<sup>15</sup> 15 U.S.C. 78f(b).

<sup>16</sup> 15 U.S.C. 78f(b)(5).

<sup>17</sup> For example, a Participant may desire to utilize multiple FIX or OTTO Ports for accounting purposes, to measure performance, for regulatory reasons or other determinations that are specific to that Participant.

<sup>18</sup> For example, a Participant may desire to utilize multiple FIX or OTTO Ports for accounting purposes, to measure performance, for regulatory reasons or other determinations that are specific to that Participant.

protocol, for example, the ability to route an order may cause a Participant to utilize FIX and a Participant that desires to execute an order locally may utilize OTTO. Also, the OTTO Port offers lower latency as compared to the FIX Port, which may be attractive to Participants depending on their trading behavior. With this proposal, BX Participant may organize their business as they chose with the ability to send orders to BX at no cost. The proposed new OTTO protocol is identical to the OTTO protocol offered today on ISE, GEMX, and MRX.

### **Other Amendments**

In connection with offering OTTO, the Exchange proposes to amend other rules within Options 3 to make clear where the FIX and OTTO protocols may be utilized. IOC Orders may be entered through FIX, OTTO or SQF. A Day order may be entered through FIX or OTTO. A GTC order may only be entered through FIX. A Public Customer-to-Public Customer Cross Order may be entered through FIX or OTTO. Other processes such the Opening Cancel Timer would impact FIX and OTTO equally.

The Exchange's proposal to amend the Kill Switch at Options 3, Section 17 to align its rule text in proposed Options 3, Section 17(a) and (a)(2) with MRX's Options 3, Section 17 is consistent with the Act because it does not substantively amend the functionality beyond removing the group level cancel capability. The Exchange's proposal to amend proposed Options 3, Section 17(a)(2) to specify that FIX and OTTO orders may be cancelled is consistent with the Act as it will make clear that all orders entered on BX may be purged through the Kill Switch. Finally, allowing BX Participants to send a mass purge request through FIX or OTTO, in lieu of an interface, is consistent with Act and the protection of investors and the general public because it will enable BX Participants to initiate the Kill Switch more seamlessly without the need to utilize a separate interface. Further, utilizing the order protocols directly, in lieu of

the interface, will align the Kill Switch functionality to that of ISE, GEMX and MRX. When initiating a cancellation of their orders by sending a mass purge request through FIX or OTTO, Participants will be able to submit a Kill Switch request on a user level only because the purge will be specific to a FIX or OTTO user for these ports.

Finally, the Detection of Loss of Communication would apply equally to FIX and OTTO. The Exchange believes that its proposal is consistent with the Act and protects investors as the Exchange is making clear what types of order types and other mechanisms may utilize OTTO. Today, BX Participants utilize FIX to enter their orders. Despite the fact that OTTO would not be available for the GTC Time-In-Force modifier, the Exchange notes that one FIX Port is being provided to Participants at no cost. Today, FIX is the only manner in which to enter orders into BX.

## **Pricing**

### Proposed Port Fees Are Reasonable, Equitable and Not Unfairly Discriminatory

The Exchange believes that its proposal furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,<sup>19</sup> in particular, in that it provides for the equitable allocation of reasonable dues, fees, and other charges among members and issuers and other persons using any facility, and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers. This belief is based on comparability: the proposed fees are comparable to, and in some cases less than, those of similarly situated exchanges.

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<sup>19</sup> See 15 U.S.C. 78f(b)(4) and (5).

The proposed fees for BX OTTO are nearly identical to fees on MRX<sup>20</sup> and GEMX<sup>21</sup> for OTTO, an identical protocol. Additionally, the proposed fees for BX OTTO are comparable to those of its closest competitors, Cboe C2 Exchange, Inc. (“C2”), MEMX LLC (“MEMX”),<sup>22</sup> MIAX Emerald, LLC (“Emerald”)<sup>23</sup> and Cboe EDGX Exchange, Inc.’s (“BatsEDGX”)<sup>24</sup> based on market share. Below is a chart comparing BX to affiliated Nasdaq exchanges that have an identical OTTO Port.

<b>Exchange</b>	<b>Market Share</b>	<b>OTTO</b>	<b>First Free FIX Port</b>	<b>Cap</b>
BX	2%	\$650 per port, per month, per account number	yes	OTTO Port subject to monthly cap of \$7,500
MRX	2.5%	\$650 per port, per month, per account number	yes	OTTO Port currently subject to monthly cap of \$7,500
GEMX	2.4%	\$650 per port, per month, per account number	no	OTTO Port currently subject to monthly cap of \$7,500

Below is a chart comparing BX to unaffiliated exchanges with comparable logical ports.

<b>Exchange</b>	<b>Market Share</b>	<b>Proprietary Port</b>	<b>First Free Port</b>	<b>Cap</b>
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<sup>20</sup> MRX offers one free FIX Port to its Members and assesses the same OTTO Port fee of \$650 per port, per month, per account number. MRX also offers a free FIX Disaster Recovery Port. Today, BX does not assess Disaster Recovery Port fees. Finally, today, MRX offers a \$7,500 monthly cap for OTTO Ports, CTI Ports, FIX Ports, FIX Drop Ports and all Disaster Recovery Ports. BX’s proposed monthly cap is \$7,500 and includes the same ports as MRX, except that BX also includes two data ports in addition to the other ports, BX Depth Ports and BX Top Ports. BX Depth Ports and BX Top Ports are assessed fees of \$650 per port, per month. Therefore, BX’s proposed cap can also be obtained utilizing BX Depth Port and BX Top Port in addition to the same ports that MRX aggregates for purposes of the monthly cap.

<sup>21</sup> GEMX does not offer the first FIX Port for free and assesses the same OTTO Port fee of \$650 per port, per month, per account number. Also, GEMX caps OTTO Ports, CTI Ports, FIX Ports, FIX Drop Ports and all Disaster Recovery Ports at \$7,500 a month the same as the proposed fee for BX.

<sup>22</sup> MEMX assesses \$450 per port for an order entry port.

<sup>23</sup> Emerald assesses \$550 for the first FIX Port, \$350 for 2 through 5 FIX Ports and \$150 for over 5 FIX Ports.

<sup>24</sup> BatsEDGX assesses \$750 per port, per month for a Logical Port.

BX	2%	\$650 per port, per month, per account number	yes	OTTO Port subject to monthly cap of \$7,500
C2	2.8%	BOE Port fee of \$650 per port	no	no
MEMX	2.3%	MEMO SBE Port fee of \$450 per port	no	no
Emerald	3.6%	Emerald does not offer a proprietary port similar to OTTO	no	no
BatsEDGX	3.6%	BOE Port fee of \$750 per port, per month	no	no

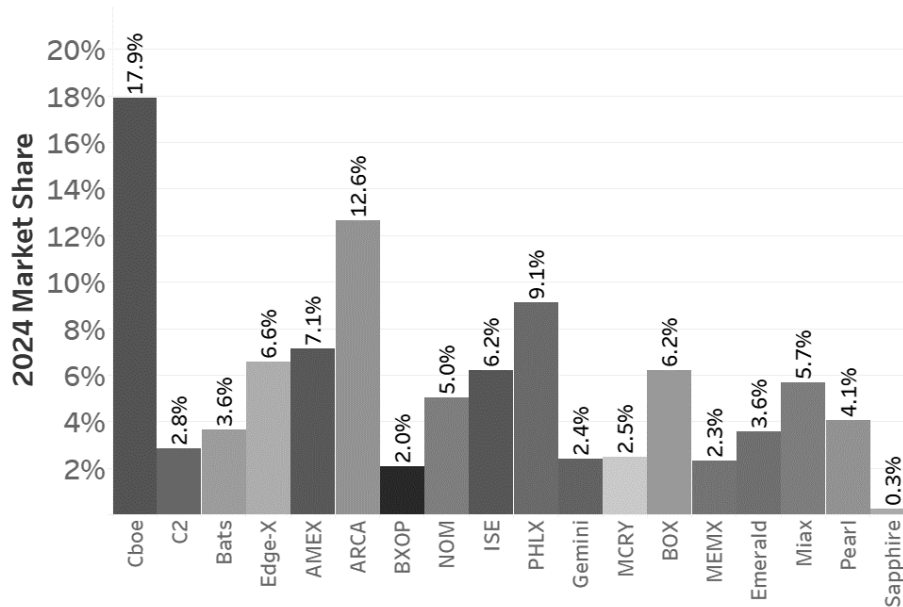
The Exchange's analysis utilizes the below graph representing the market share<sup>25</sup> for each of the eighteen options markets based on total options contracts traded in 2024 through October 28, 2024.

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<sup>25</sup> Market share is the percentage of volume on a particular exchange relative to the total volume across all exchanges, and indicates the amount of order flow directed to that exchange. High levels of market share enhance the value of trading and ports. Total contracts include both multi-list options and proprietary options products. Proprietary options products are products with intellectual property rights that are not multi-listed. BX does not list proprietary products.

## US Options Market Share

Data using total options contracts traded from start of 2024 - October 28, 2024



Source: OCC, Nasdaq Economic Research

### MRX

MRX has market share of 2.5% which is comparable to BX's market share of 2.0%.

MRX offers one free FIX Port to its Members and assesses the same OTTO Port fee of \$650 per port, per month, per account number. MRX also offers a free FIX Disaster Recovery Port.

Today, BX does not assess Disaster Recovery Port fees. Finally, today, MRX offers a \$7,500 monthly cap for OTTO Ports, CTI Ports, FIX Ports, FIX Drop Ports and all Disaster Recovery Ports. BX's proposed monthly cap is \$7,500 and includes the same ports as MRX, except that BX also includes two data ports in addition to the other ports, BX Depth Ports and BX Top Ports. BX Depth Ports and BX Top Ports are assessed fees of \$650 per port, per month. Therefore, BX's proposed cap can also be obtained utilizing BX Depth Port and BX Top Port in addition to the same ports that MRX aggregates for purposes of the monthly cap. The proposed fees are nearly identical to MRX's OTTO fees.

### GEMX



GEMX has market share of 2.4% which is comparable to BX's market share of 2.0%. GEMX does not offer the first FIX Port for free and assesses the same OTTO Port fee of \$650 per port, per month, per account number. Also, GEMX caps OTTO Ports, CTI Ports, FIX Ports, FIX Drop Ports and all Disaster Recovery Ports at \$7,500 a month the same as the proposed fee for BX. The proposed fees are nearly identical to GEMX's fees.

## C2

C2 has market share of 2.8% which is comparable to BX's market share of 2.0%. C2 assesses \$650 per port for its Binary Order Entry ("BOE") Logical Port, a Cboe proprietary order entry protocol.<sup>26</sup> BOE provide users the ability to enter order/quotes. Unlike BOE, OTTO is only for order submission and is similarly a proprietary protocol. While OTTO is subject to a cap, BOE's logical port fee is applicable when used to enter up to 20,000 orders per trading day per logical port as measured on average in a single month. Each incremental usage of up to 20,000 per day per logical port will incur an additional logical port fee of \$650 per month. Incremental usage will be determined on a monthly basis based on the average orders per day entered in a single month across all of a market participant's subscribed BOE Logical Ports. OTTO does not have a similar limitation on its port for number of orders which would require additional ports if the orders per day were exceeded. With its proposal, BX is offering the first FIX at no cost, while C2 does not offer any ports at no cost. The proposed fees are similar to C2's fees.

## MEMX

MEMX has market share of 2.3% which is comparable to BX's market share of 2.0%. MEMX assesses \$450 per port for an order entry port. MEMO SBE, a binary, proprietary

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<sup>26</sup> [https://cdn.cboe.com/resources/membership/US\\_Options\\_BOE\\_Specification.pdf](https://cdn.cboe.com/resources/membership/US_Options_BOE_Specification.pdf).

protocol used for order submission on MEMX Options,<sup>27</sup> would be similar to OTTO. MEMX does not cap its fees and also does not offer any ports at no cost. The proposed fees are higher than MEMX's fees. MEMX is a new options market that only recently began trading as compared to BX which began trading in 2012. Typically, new options entrants have no port fees<sup>28</sup> or lower port fees.

#### Emerald

Emerald has market share of 3.6% which is comparable to BX's market share of 2.0%. Emerald assesses \$550 for the first FIX Port, \$350 for 2 through 5 FIX Ports and \$150 for over 5 FIX Ports. FIX is a universal protocol while BX OTTO is a proprietary protocol. Emerald offers a FIX Port but not a similar proprietary logical port.<sup>29</sup> Emerald does not cap its fees and does not offer a FIX Port at no cost. The proposed fees are similar to Emerald's FIX fees for the first port and higher for subsequent Emerald FIX ports, however Emerald does not offer any FIX ports at no cost.

#### BatsEDGX

BatsEDGX has market share of 3.6% which is comparable to BX's market share of 2.0%. BatsEDGX assesses \$750 per port, per month for its Binary Order Entry ("BOE") Logical Port, a Cboe proprietary order entry protocol.<sup>30</sup> BOE provide users the ability to enter order/quotes. Unlike BOE, OTTO is only for order submission and is similarly a proprietary protocol. BatsEDGX does not cap its fees and also does not offer any ports at no cost. The proposed fees are lower than BatsEDGX's fees.

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<sup>27</sup> See MEMO SBE V1.12 specifications. Specifications must be downloaded from MEMX's website to be viewed.

<sup>28</sup> MRX had no port fees for the first 6 years of trading.

<sup>29</sup> [https://www.miaxglobal.com/miax\\_emerald\\_user\\_manual.pdf](https://www.miaxglobal.com/miax_emerald_user_manual.pdf).

<sup>30</sup> [https://cdn.cboe.com/resources/membership/US\\_Options\\_BOE\\_Specification.pdf](https://cdn.cboe.com/resources/membership/US_Options_BOE_Specification.pdf).

In summary, (i) the proposed OTTO Port fees are (i) substantially similar to GEMX and MRX; (ii) comparable to C2; (iii) comparable, but less than BatsEDGX; and (iv) comparable, but higher than MEMX. Emerald offers a FIX Port but not a similar proprietary logical port.

The Proposal is equitable as the proposed fees would apply to all BX Participants in a uniform manner. Each BX Participant would be entitled to the first FIX Port at no cost. Also, the proposed BX OTTO fees would be assessed uniformly to each BX Participant that subscribes to OTTO. Finally, the proposed monthly cap would be applied uniformly to all BX Participants. The Proposal is not unfairly discriminatory. BX OTTO, a new protocol, would be an optional protocol available to all Participants on a non-discriminatory basis.

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 not necessary or appropriate in furtherance of the purposes of the Act.

**OTTO Protocol**

The OTTO protocol is a proprietary protocol of Nasdaq, Inc. The Exchange continues to innovate and modernize technology so that it may continue to compete among options markets. The ability to continue to innovate with technology and offer new products to market participants allows BX to remain competitive in the options space which currently has eighteen options markets and potential new entrants. The Exchange's proposal to adopt an OTTO Protocol does not impose an undue burden on intramarket competition. Today, all BX Participants utilize FIX to send orders to BX. The Exchange would offer each BX Participant the first FIX Port at no cost with this proposal. With the addition of OTTO Ports, a BX Participant may elect to enter their orders through FIX, OTTO, or both protocols, although both protocols are not necessary. The Exchange's proposal to adopt an OTTO Protocol does not impose an undue burden on

intermarket competition as other options exchanges offer multiple protocols today such as ISE, GEMX and MRX.

### **Other Amendments**

The Exchange's proposal to amend other rules within Options 3 to make clear where the FIX and OTTO protocols may be utilized does not impose an undue burden on intramarket competition as these rules will apply in the same manner to all Participants. The Exchange's proposal to amend other rules within Options 3 to make clear where the FIX and OTTO protocols may be utilized does not impose an undue burden on intermarket competition as other options exchanges may elect to utilize their order entry protocols in different ways.

### **Pricing**

Nothing in the proposal burdens inter-market competition (the competition among self-regulatory organizations) because approval of the Proposal does not impose any burden on the ability of other options exchanges to compete. BX OTTO fees are comparable to, and in some cases less than, those of other exchanges, as discussed above.

Nothing in the Proposal burdens intra-market competition (the competition among consumers of exchange data) because BX OTTO is available to any Participant at the same price and any Participant that elects to subscribe to OTTO may do so on a non-discriminatory basis.

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

No written comments were either solicited or 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 from the date on which it was filed, or such shorter time

as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act<sup>31</sup> and subparagraph (f)(6) of Rule 19b-4 thereunder.<sup>32</sup>

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 (<https://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include file number SR-BX-2024-048 on the subject line.

##### Paper Comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

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<sup>31</sup> 15 U.S.C. 78s(b)(3)(A)(iii).

<sup>32</sup> 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.

All submissions should refer to file number SR-BX-2024-048. This file number should be included on the subject line if email 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 website (<https://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 a.m. and 3 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright

protection. All submissions should refer to file number SR-BX-2024-048 and should be submitted on or before [INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>33</sup>

**Vanessa A. Countryman,**  
*Secretary.*

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<sup>33</sup> 17 CFR 200.30-3(a)(12).