

**SECURITIES AND EXCHANGE COMMISSION**  
(Release No 34-86168; File No. SR-CboeEDGA-2019-012)

June 20, 2019

Self-Regulatory Organizations; Cboe EDGA Exchange, Inc.; Notice of Filing of a Proposed Rule Change to Introduce a Liquidity Provider Protection on EDGA

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on June 7, 2019, Cboe EDGA Exchange, Inc. (the “Exchange” or “EDGA”) filed with the Securities and Exchange Commission (the “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**

Cboe EDGA Exchange, Inc. (“EDGA” or the “Exchange”) is filing with the Securities and Exchange Commission (the “Commission”) a proposed rule change to introduce a Liquidity Provider Protection on EDGA. The text of the proposed rule change is attached [sic] as Exhibit 5.

The text of the proposed rule change is also available on the Exchange’s website ([http://markets.cboe.com/us/equities/regulation/rule\\_filings/edga/](http://markets.cboe.com/us/equities/regulation/rule_filings/edga/)), at the Exchange’s Office of the Secretary, 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

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

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

proposed rule change. The text of these statements may be examined at the places specified 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 purpose of the proposed rule change is to introduce a delay mechanism on EDGA that is designed to protect liquidity providers and thereby enable those liquidity providers to make better markets in equity securities traded on the Exchange. The Liquidity Provider Protection (“LP<sup>2</sup>”) delay mechanism would function similarly to delay mechanisms adopted by the Investors Exchange LLC (“IEX”) and NYSE American LLC (“NYSE American”) in that it is an intentional access delay applied to a subset of order messages in order to allow resting orders to be updated before opportunistic traders can trade with them at stale prices.<sup>3</sup> The LP<sup>2</sup> delay mechanism, however, is unique in that it is designed primarily to enhance market quality by promoting price forming displayed liquidity in addition to the non-displayed liquidity encouraged by both IEX and NYSE American. Liquidity provision is critical to the proper functioning of the equities markets, and finding ways to enhance the ability of firms to provide that liquidity to investors is one of the central functions of a national securities exchange. The LP<sup>2</sup> delay mechanism would provide a market structure that has the potential to increase market quality and provide a fair and orderly market for all market participants that choose to trade on EDGA.

I. Background

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<sup>3</sup> See Securities Exchange Act Release Nos. 78101 (June 17, 2016), 81 FR 41141 (June 23, 2016) (File No. 10-222) (“IEX Exchange Approval”); 80700 (May 16, 2017), 82 FR 23381 (May 22, 2017) (SR-NYSEMKT-2017-05) (“MKT Approval Order”).

The increasing speed and efficiency of trading in the U.S. equities markets over the last several years has resulted in significant gains to market participants and investors. These gains in speed, however, are not entirely without cost as they have facilitated certain latency arbitrage techniques that act as a tax on liquidity provision. In adopting Regulation NMS, the Commission emphasized the need to promote greater depth and liquidity in NMS Stocks.<sup>4</sup> While the Commission sought to achieve this result largely through the adoption of the Rule 611, i.e., the “Order Protection Rule,” changes in the market since the adoption of Regulation NMS also warrant innovation by the exchanges that are tasked with promoting liquidity in today’s high speed market. The Exchange is therefore proposing to introduce a delay mechanism that is specifically designed to encourage liquidity provision by reducing the ability for firms to engage in latency arbitrage, in general, and cross-asset latency arbitrage, in particular.<sup>5</sup>

Today, liquidity providers are frequently unable to adjust their displayed quotes based on changes in market information, including cross-asset class signals, before the fastest trading firms can trade against their stale quotes. Market makers and other liquidity providers use

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<sup>4</sup> The Commission has stated that “increased displayed liquidity [is] a principal goal of the Order Protection Rule.” See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37514 (June 29, 2005) (“Regulation NMS Adopting Release”). The Commission has also stated that “[t]o the extent that competition among orders is lessened, the quality of price discovery for all sizes of orders can be compromised. Impaired price discovery could cause market prices to deviate from fundamental values, reduce market depth and liquidity, and create excessive short-term volatility that is harmful to long-term investors and listed companies. More broadly, when market prices do not reflect fundamental values, resources will be misallocated within the economy and economic efficiency—as well as market efficiency—will be impaired.” Id. at 37499.

<sup>5</sup> The Chicago Stock Exchange, Inc. (“CHX”) also recently received approval for a delay mechanism that was designed to encourage liquidity provision. See Securities Exchange Act Release No. 81913 (October 19, 2017), 82 FR 49433 (October 25, 2017) (SR-CHX-2017-04) (Approval Order). CHX withdrew that filing after the Commission determined to review the Staff’s approval by delegated authority, and as a result the original Approval Order was set aside. See Securities Exchange Act Release No. 84337 (October 2, 2018), 83 FR 50720 (October 9, 2018) (SR-CHX-2017-04) (Order Setting Aside).

sophisticated pricing algorithms to determine how to price securities in the often hundreds or thousands of equity securities that they quote. A single tick of an index futures contract thus often requires firms to adjust their quotes in a number of related equity securities at once.<sup>6</sup> The potential for trading at stale prices increases risk for firms that wish to provide liquidity to the market, and harms market quality by causing liquidity providers to enter quotes that are wider or for a smaller size than they may otherwise be willing to trade.

At the same time, existing delay mechanisms do not provide any protection to market makers and other participants that primarily post displayed, two-sided markets, despite the critical function that these participants play in the equities markets. The Exchange believes that reducing cross-market latency arbitrage would enable liquidity providers to increase market quality by maintaining tighter spreads, longer inside quote durations, and posting larger size. Furthermore, the expected improvements in market quality have the potential to benefit all market participants, and contribute to the maintenance of a fair and orderly market.

## II. Delay Mechanism

The proposed rule change would introduce the LP<sup>2</sup> delay mechanism, which seeks to promote liquidity provision by reducing the opportunity for cross-asset latency arbitrage. Other equities exchanges, i.e., IEX and NYSE American, have recently introduced delay mechanisms that slow down certain incoming and outbound messages. These “speed bumps” are a market reaction to the increased prevalence of opportunistic traders that can react to market signals before slower market participants can update their quoted prices. Both IEX and NYSE American have market structures that are designed to benefit resting non-displayed orders that

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<sup>6</sup> For example, a tick in S&P 500 Index futures on the Chicago Mercantile Exchange (“CME”) may result in liquidity providers updating quotes in the SPDR S&P 500 ETF and each of the five hundred underlying securities in the S&P 500 Index.

are pegged to the national best bid or offer (“NBBO”) as updates to the prices of these orders do not go through their respective delay mechanisms.<sup>7</sup> As a result, market participants that enter pegged orders can avoid unwanted executions at stale prices because their orders are pegged to new market prices before opportunistic traders are able to “pick off” these orders at the stale price. While delay mechanisms like those currently available on these exchanges are beneficial to a particular subset of market participants, the Exchange believes that there is room for additional improvement. Specifically, the Exchange believes that there is an opportunity to use a similar delay mechanism to promote market quality by excluding all orders that add liquidity from the speed bump. The paragraphs that follow describe the proposed delay mechanism, and how it would be applied to different incoming/outbound messages processed by the System:<sup>8</sup>

Liquidity Removing Orders. The proposed LP<sup>2</sup> delay mechanism would subject all incoming executable orders that would remove liquidity from the EDGA Book on entry to a short intentional access delay.<sup>9</sup> As mentioned above, this delay is designed to provide an opportunity for liquidity providers to process cross-asset class signals, and update their published quotations accordingly, before trading at stale prices with orders submitted by opportunistic

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<sup>7</sup> See IEX Exchange Approval, supra note 3, 81 FR at 41157; MKT Approval Order, supra note 3, 82 FR at 23384.

<sup>8</sup> The term “System” refers to the electronic communications and trading facility designated by the Board through which securities orders of Users are consolidated for ranking, execution and, when applicable, routing away. See EDGA Rule 1.5(cc).

<sup>9</sup> The term “EDGA Book” refers to the System’s electronic file of orders. See EDGA Rule 1.5(d). An order that, by its terms, is not eligible to be executed on entry would be evaluated for delay when such order is ultimately entered into the EDGA Book for processing. For example, orders entered with a Stop Price or Stop Limit Price are not executable until elected, and would therefore only be eligible for delay after the order is converted to a Market Order or Limit Order, as applicable. Similarly, orders entered with a time-in-force instruction of Regular Hours Only would only be evaluated for delay when entered into the EDGA Book after the opening or re-opening process pursuant to EDGA Rule 11.7.

trading firms that benefit from a latency advantage. So as to avoid unnecessarily queueing orders that are not executable when entered, order instructions that could prevent an incoming order from being executed and removing liquidity on entry (e.g., Minimum Quantity and Post Only) would be considered prior to subjecting the order to the delay mechanism. The one exception to this would be the EdgeRisk Self Trade Protection (“ERSTP”) Modifiers, which are an optional risk protection that prevents the execution of orders originating from the same market participant identifier (“MPID”), Exchange Member identifier or ERSTP Group identifier. ERSTP Modifiers would be applied after the order is delayed, and would not be considered in evaluating whether an incoming order is deemed executable and therefore subject to the delay mechanism.

Based on the geographical latencies currently experienced between the Chicago Mercantile Exchange (“CME”) data center in Aurora, IL and the Exchange’s primary data center in Secaucus, NJ, the Exchange proposes that the intentional access delay applied to incoming executable orders be four milliseconds. The Exchange believes that this delay would negate the advantages that opportunistic trading firms that use the latest microwave connections have over liquidity providers using traditional fiber connections.<sup>10</sup> Once a liquidity taking order enters the LP<sup>2</sup> delay mechanism it would wait the full four milliseconds before trading with resting orders on the order book but would be released early if resting orders are cancelled or modified such that the incoming order is no longer executable against such orders.<sup>11</sup>

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<sup>10</sup> Quincy Data advertises a latency of 4.005 milliseconds for its high speed microwave connection, or about half the 7.75 milliseconds of latency experienced over a fiber connection provided by ICE Global Network. See <https://www.quincy-data.com/product-page/#latencies>; [https://www.theice.com/publicdocs/ICE\\_Data\\_Services\\_Topology.pdf](https://www.theice.com/publicdocs/ICE_Data_Services_Topology.pdf).

<sup>11</sup> After the delay period, incoming orders, cancel, and cancel/replace messages that have been delayed by the delay mechanism would be processed after the System has processed, if applicable, all messages in the security received by the Exchange during

Liquidity Providing Orders. In order to encourage liquidity provision from the widest range of possible market participants, the proposed delay would not apply to any non-executable orders that would add liquidity. These orders would instead be immediately ranked on the EDGA Book without executing against resting liquidity. Furthermore, market participants would be able to interact with their resting orders (e.g., by cancelling the order or modifying the order's size) without being subject to the delay mechanism. As a result, the LP<sup>2</sup> delay mechanism would benefit traditional market makers that post price forming displayed liquidity, as well as a range of other market participants, including investors that use hidden pegged orders similar to those that account for a significant portion of volume traded on IEX and NYSE American.

Cancel and Cancel/Replace Messages. The LP<sup>2</sup> delay mechanism is designed to protect orders that add liquidity to the EDGA Book by giving Users the opportunity to adjust their quotes based on market signals before trading at a stale price. As such, orders resting on the EDGA Book would be eligible for immediate cancellation without being subjected to a delay. Cancel messages for liquidity taking orders that are being processed by the delay mechanism would instead be queued and applied to the remaining quantity of the order after the order has exited the delay mechanism and executed against any resting orders on the EDGA Book. If a User submits a cancel/replace message,<sup>12</sup> the cancel portion of that instruction would be applied to the order based on whether the order is resting on the EDGA Book or is being processed by the delay mechanism. Specifically, the cancel portion would be applied immediately in the case of a resting order, or queued in the case of an order that has not exited the delay mechanism. The

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such delay period. As a result, a message may be delayed for longer than four milliseconds depending on the volume of messages being processed by the Exchange.

<sup>12</sup> See EDGA Rule 11.10(e).

replace portion would subsequently be handled subject to the same logic as the entry of a new order – i.e., re-evaluated and delayed only if the amended order is executable against the EDGA Book. If a User enters multiple cancel or cancel/replace messages for a liquidity taking order during the four millisecond delay period, the first such cancel or cancel/replace message entered would be queued and all subsequent messages would be ignored.

Routable Orders. Since the LP<sup>2</sup> delay mechanism is designed to protect resting orders on EDGA, incoming executable orders are processed by the delay mechanism when the order would remove liquidity from the EDGA Book. As such, orders that are routed on entry would not be eligible for delay until entered for execution with resting orders on the EDGA Book. The unrouted balance of a routable order that is entered into the EDGA Book would be treated as a new incoming order and evaluated as such by the delay mechanism.

Market Data. The LP<sup>2</sup> delay mechanism would not apply to inbound or outbound market data. As such, the System would use current, un-delayed data, for all purposes including regulatory compliance (e.g., trade-through) and pricing of orders pegged to the NBBO. In addition, quotation and trade data would be disseminated to the applicable securities information processor (“SIP”) and direct market data feeds immediately without being processed by the delay mechanism, thereby ensuring that the most up to date information about orders and executions on the EDGA Book is shared with investors and other market participants. As described in the section below on protected market status, the Exchange is proposing to disseminate quotation information to the SIP as a “manual” rather than “automated” quotation under Regulation NMS. Manual quotations are not protected pursuant to the Order Protection Rule but are included in the

NBBO disseminated by the SIP to ensure that the best available prices for a security are made available to broker-dealers and investors.<sup>13</sup>

Examples. The examples that follow illustrate the operation of the LP<sup>2</sup> delay mechanism:

**Example 1:**

- Protected NBBO: \$10.00 x \$10.05
- Order 1: Buy 100 shares @ \$10.00
- Order 2: Sell 100 shares @ \$10.00, t = 12:00:00:000
- The incoming sell order, i.e., Order 2, is executable against the EDGA Book and therefore delayed for 4 milliseconds.
- Order 2 would execute against Order 1, selling 100 shares at \$10.00, after it exits the delay mechanism at 12:00:00:004.

**Example 2:**

- Protected NBBO: \$10.00 x \$10.05
- Order 1: Buy 100 shares @ \$10.02, Non-Displayed
- Order 2: Sell 100 shares @ \$10.00, t = 12:00:00:000
- The incoming sell order, i.e., Order 2, is executable against the EDGA Book and therefore delayed for 4 milliseconds.
- Order 2 would execute against Order 1, selling 100 shares at \$10.02, after it exits the delay mechanism at 12:00:00:004.<sup>14</sup>

**Example 3:**

- Protected NBBO: \$10.00 x \$10.05

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<sup>13</sup> See Regulation NMS Adopting Release, 70 FR at 37537.

<sup>14</sup> The System delays all liquidity taking orders, regardless of whether such orders would trade with displayed or non-displayed interest on the EDGA Book.

- Order 1: Buy 100 shares @ \$10.00
- Order 2: Sell 100 shares @ \$10.04, t = 12:00:00:000
- The incoming sell order, i.e., Order 2, is not executable against the EDGA Book and therefore posts to the EDGA Book immediately at 12:00:00:000.

**Example 4:**

- Protected NBBO: \$10.00 x \$10.05
- Order 1: Buy 100 shares @ \$10.00
- Order 2: Sell 100 shares @ \$10.00, Post Only, t = 12:00:00:000
- The incoming sell order, i.e., Order 2, is not executable against the EDGA Book because of the Post Only instruction and is cancelled immediately at 12:00:00:000.<sup>15</sup>

**Example 5:**

- Protected NBBO: \$10.00 x \$10.05
- Order 1: Buy 100 shares @ \$10.01
- Order 2: Sell 100 shares @ \$10.01, t = 12:00:00:000
- Cancel Order 1: t = 12:00:00:001
- The incoming sell order, i.e., Order 2, is executable against the EDGA Book and therefore delayed for 4 milliseconds.
- One millisecond after Order 2 enters the delay mechanism, a cancellation message is entered to cancel Order 1. Cancellation messages for resting orders are not delayed so as to permit sufficient time for liquidity providers to update stale quotes, and therefore Order 1 is immediately cancelled at 12:00:00:001.

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<sup>15</sup> This example is based on amended Post Only behavior described later in this proposal that would prevent a Post Only Order from removing liquidity, including in circumstances where doing so may be economically beneficial for the entering party.

- As Order 2 is no longer executable against any resting orders on the EDGA Book it would be released early from the delay mechanism, and posted to the EDGA Book immediately after the cancellation message for Order 1 is processed.

**Example 6:**

- Protected NBBO:       \$10.00 x \$10.05
- Order 1:                Buy 100 shares @ \$10.00
- Order 2:                Sell 200 shares @ \$10.00, t = 12:00:00:000
- Cancel Order 2:        t = 12:00:00:001
- The incoming sell order, i.e., Order 2, is executable against the EDGA Book and therefore delayed for 4 milliseconds.
- While Order 2 is being processed by the delay mechanism, the entering firm submits a cancellation message. This message is not processed until the order exits the speed bump and trades against resting orders.
- Order 2 would execute against Order 1, selling 100 shares at \$10.00, after it exits the delay mechanism at 12:00:00:004, at which point the cancellation message would be processed and the remaining quantity of Order 2 would be cancelled.

**Example 7:**

- Protected NBBO:       \$10.00 x \$10.05
- Order 1:                Buy 100 shares @ \$10.00
- Order 2:                Sell 100 shares @ \$10.04
- Cancel/Replace Order 1: Buy 100 shares @ \$10.04, t = 12:00:00:000

- The cancel portion of the cancel/replace message is immediately applied to Order 1 at 12:00:00:000 but since the modified price would be executable against Order 2, which is resting on EDGA Book, Order 1 would be delayed for 4 milliseconds.
- Order 1 would then execute against Order 2, buying 100 shares at \$10.04, after it exits the delay mechanism at 12:00:00:004.

**Example 8:**

- Protected NBBO: \$10.00 x \$10.05
- Order 1: Buy 100 shares, Midpoint Peg
- Order 2: Sell 100 shares @ \$10.02, t = 12:00:00:000
- Protected NBBO: \$9.98 x 10.02, t = 12:00:00:001
- The incoming sell order, i.e., Order 2, is executable against the Midpoint Peg Order on the EDGA Book, which is ranked at \$10.025, and therefore delayed for 4 milliseconds.
- One millisecond after Order 2 enters the delay mechanism, the System receives an NBBO update, which is processed immediately to allow resting orders to be re-priced before trading at stale prices. Order 1 is now ranked at \$10.00 – i.e., the new midpoint.
- As Order 2 is no longer executable against any resting orders on the EDGA Book it would be released early from the delay mechanism, and posted to the book immediately after the re-pricing for Order 1 is processed.

III. Protected Market Status

Rule 611 of Regulation NMS provides intermarket protection against trade-throughs for automated quotations of NMS stocks. Under Regulation NMS, an “automated” quotation is one that, among other things, can be executed “immediately and automatically” against an incoming

immediate-or-cancel order.<sup>16</sup> The Commission has interpreted the word “immediate” in this context as not precluding a de minimis intentional delay – i.e., a delay so short so as to not frustrate the purposes of Rule 611 by impairing fair and efficient access to an exchange’s quotations.<sup>17</sup> Although the Commission refused to enumerate a numeric latency threshold for a delay that is sufficiently de minimis for the purposes of Rule 611,<sup>18</sup> the Staff of the Division of Trading and Markets has issued guidance stating the Staff’s belief that delays of less than one millisecond would qualify as de minimis.<sup>19</sup> Based on the Staff’s concern about granting protected market status to an exchange with an intentional delay exceeding this threshold, the Exchange has determined to begin disseminating a manual, un-protected, quotation in conjunction with the proposed implementation of its delay mechanism.<sup>20</sup>

In addition to no longer being eligible for protected market status, marking the EDGA quotation manual instead of automated, would also mean that other Regulation NMS rules on locked and crossed markets would apply differently to EDGA’s disseminated quotations. Specifically, Rule 610(d)(1)(ii) would require that EDGA avoid locking or crossing any quotation in an NMS stock disseminated pursuant to an effective national market system (“NMS”) plan instead of only protected quotations as required pursuant to Rule 610(d)(1)(i). The Exchange believes that this restriction is unintended and unwarranted when an otherwise

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<sup>16</sup> See Rule 600(a)(3).

<sup>17</sup> See Securities Exchange Act Release No. 78102 (June 17, 2016), 81 FR 40785 (June 23, 2017) (File No. S7-03-16) (“Commission Interpretation”).

<sup>18</sup> Id.

<sup>19</sup> See Staff Guidance on Automated Quotations under Regulation NMS (June 17, 2016), available at <https://www.sec.gov/divisions/marketreg/automated-quotations-under-regulation-nms.htm>.

<sup>20</sup> Rule 600(a)(37) defines a “manual quotation” as any quotation other than an automated quotation.

automated market is disseminating a manual quotation due solely to its introduction of a short intentional access delay on incoming orders. Concurrent with the submission of this proposed rule change the Exchange is therefore submitting a request for an exemption pursuant to Rule 610(e) of Regulation NMS. The requested exemption would permit the Exchange to continue to lock or cross potentially stale manual quotations disseminated by the New York Stock Exchange LLC (“NYSE”) pursuant to an effective NMS plan.<sup>21</sup> Broadly, the exemption would permit EDGA to continue to operate in the manner that it does today with respect to locked and crossed markets, notwithstanding the proposed dissemination of a manual, un-protected, quotation.

In light of the requested exemption, and the fact that EDGA would begin disseminating a manual quotation, the Exchange proposes to amend Rule 11.10(f), which deals with locking or crossing quotations in NMS Stocks. First, Rule 11.10(f)(1) describes the current prohibition on dissemination of locking or crossing quotations. Specifically, the rule discusses the dissemination and display of quotations that lock or cross a Protected Quotation, or manual quotations that lock or cross quotations previously disseminated pursuant to an NMS plan during Regular Trading Hours. The Exchange proposes to instead reference the dissemination and display of “Locking Quotations or Crossing Quotations” as defined in EDGA rules.<sup>22</sup> This

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<sup>21</sup> NYSE operates a trading floor that may disseminate manual quotations, and is the only equities exchange that does so today. The Exchange expects to file additional exemption requests in the future if other equities exchanges begin disseminating manual quotations.

<sup>22</sup> A “Locking Quotation” is the display of a bid for an NMS stock at a price that equals the price of an offer for such NMS stock previously disseminated pursuant to an effective national market system plan, or the display of an offer for an NMS stock at a price that equals the price of a bid for such NMS stock previously disseminated pursuant to an effective national market system plan in violation of Rule 610(d) of Regulation NMS. See EDGA Rule 11.6(g). A “Crossing Quotation” is the display of a bid (offer) for an NMS stock at a price that is higher (lower) than the price of an offer (bid) for such NMS stock previously disseminated pursuant to an effective national market system plan in violation of Rule 610(d) of Regulation NMS. See EDGA Rule 11.6(c).

change would increase the clarity of the rule given the Exchange's exemption request, and the fact that all quotations disseminated by the Exchange would be manual quotations.<sup>23</sup>

Second, EDGA Rule 11.10(f)(2) explains that, if a User displays a manual quotation that locks or crosses a quotation previously disseminated pursuant to an effective national market system plan, such User shall promptly either withdraw the manual quotation or route an ISO to execute against the full displayed size of the locked or crossed quotation. As EDGA Rule 11.10(f)(1) would already prohibit displaying a Locking Quotation or Crossing Quotation, subject to the exception provided in EDGA Rule 11.10(f)(iv), as amended below, the Exchange proposes to eliminate the redundant language contained in this paragraph.

Third, the Exchange proposes to eliminate EDGA Rule 11.10(f)(3)(iii), which applies to automated quotations, and amend EDGA Rule 11.10(f)(3)(iv) to remove specific references to manual quotations, and specify that a User displaying a Locking Quotation or Crossing Quotation would only qualify for this exception if the User simultaneously routed an ISO to execute against the full displayed size of the Locking Quotation or Crossing Quotation, instead of the current language which references only clearing locked or crossed manual quotations.

Finally, the Exchange proposes to introduce another exception under proposed EDGA Rule 11.10(f)(3)(v) that applies when the quotation displayed by the User is not a Locking Quotation or Crossing Quotation in violation of Rule 610(d) of Regulation NMS because the quotation being locked or crossed is a manual quotation that may be locked or crossed under an exemption granted pursuant to Rule 610(e) of Regulation NMS. Locking Quotations and Crossing Quotations are defined in Rule 11.6(c), (g), and reference the display of bids and offers

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<sup>23</sup> For example, as described in the paragraphs that follow, a quotation would not be considered a Locking Quotation or Crossing Quotation if the quotation being locked or crossed is a manual quotation of NYSE that is permitted to be locked or crossed pursuant to the Exchange's requested exemption pursuant to Rule 610(e) of Regulation NMS.

that lock or cross quotations disseminated pursuant to an NMS Plan “in violation of Rule 610(d).” The proposed language being introduced as EDGA Rule 11.10(f)(3)(v) is meant to codify the requested exemption by making clear that a quotation would not be considered a Locking Quotation or Crossing Quotation if the quotation being locked or crossed is a manual quotation that is allowed to be locked or crossed pursuant to the Exchange’s exemption request.

In addition, the Order Protection Rule requires trading centers to establish, maintain, and enforce written policies and procedures that are reasonably designed to prevent trade-throughs on that trading center of protected quotations in NMS stocks, unless an exception applies. Rule 611(b)(4) provides such an exception that applies when the markets are crossed but this exception applies solely to situations where a Protected Bid is crossed with a Protected Offer. It does not apply to situations where a Protected Bid or Protected Offer is crossed with the published bid or offer of a manual market. As a result, if an automated quotation were to cross EDGA’s disseminated manual quotation without also crossing another market’s protected quotation, the Exchange would not be permitted to execute incoming orders against its displayed quotation even though that quotation establishes the best price available in the market. The Exchange believes that this could be a disincentive to both providing and accessing liquidity on EDGA as the published quotation may not be executable in such circumstances solely due to the Exchange disseminating a quotation that has been marked “manual.” Furthermore, the quotations that would be impacted are the ones that actually set the best available prices in a security – i.e., the type of liquidity that the proposed delay mechanism is actively seeking to encourage.

Based on the Exchange’s analysis, crossed market scenarios are infrequent in today’s highly efficient market, and tend to be short lived, with 99% of crossed markets being resolved

within 25 milliseconds or less.<sup>24</sup> As a result, the Exchange is proposing to implement delayed cancellation behavior to allow an aggressively priced order to remain posted at its limit price for as long as it is executable pursuant to Rule 611(b)(8) – i.e., the “Flickering Quote Exception.” As proposed, a bid (offer) on the EDGA Book would be eligible to remain posted to the EDGA Book for one second after such bid (offer) is crossed by a Protected Offer (Protected Bid). Such bid (offer) would be executable during this one second period pursuant to Rule 611(b)(8) of Regulation NMS, notwithstanding the fact that it is higher (lower) than a Protected Offer (Protected Bid). In turn, the bid (offer) on the EDGA Book would be cancelled if it continues to be higher (lower) than a Protected Offer (Protected Bid) after this one second period. The following example illustrates the proposed behavior.

**Example 9:**

- Market is \$10.00 x \$10.03 (EDGA, BZX, Nasdaq).
- Liquidity provider on EDGA tightens quote to \$10.02 x \$10.03 improving the bid by two cents.
- Nasdaq subsequently updates its offer price to \$10.01.
- Incoming sell order on EDGA seeks to trade with the EDGA bid at \$10.02.
- The EDGA bid at \$10.02 would remain posted at this price for one second, during which time it would be executable against incoming sell orders seeking an execution at the best posted bid price in the market. As is the case today, an incoming sell order would be eligible trade with the EDGA bid at \$10.02, securing a favorable execution for the

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<sup>24</sup> Based on crossed markets occurring in SPY, IWM, AAPL, GE, C, GS, and XOM on October 5, 2018. Crossed markets present an effective arbitrage opportunity because in a crossed market the spread is inverted and it is therefore possible to purchase a security at a price below the prevailing price to sell.

investor seeking liquidity. In the unlikely event that the EDGA bid is still crossed with Nasdaq's offer after one second, it would be cancelled.

Since the proposed flickering quote delayed cancellation behavior would allow bids and offers on EDGA to remain posted and executable for up to one second if crossed by a Protected Bid or Protected Offer of another market, the Exchange would also amend Rule 11.10(a)(2) to ensure that the crossed market collars defined in that rule continue to apply to such aggressively priced bids and offers. Specifically, Rule 11.10(a)(2) generally provides that if a Protected Bid is crossing a Protected Offer, the Exchange will not execute any portion of a bid or offer at a price that is more than the greater of five cents or 0.5 percent through the lowest Protected Offer or highest Protected Bid, as applicable. This crossed market collar is designed to constrain the price of executions when there is a crossed market, and the Exchange believes that this protection should continue to be available when EDGA begins disseminating a manual quotation. As a result, the Exchange proposes to amend Rule 11.10(a)(2) to provide that protection is available when a bid (offer) on the EDGA Book is crossed by a Protected Offer (Bid) pursuant to proposed EDGA Rule 11.10(a)(6). As is the case today, a User would be able to instruct the Exchange to cancel an incoming order in such a scenario. The Exchange would therefore also amend the portion of the rule dealing with such an instruction to make clear that it would continue to apply when a bid (offer) on the EDGA Book is crossed by a Protected Offer (Bid).

#### IV. Order Types

The Exchange is also proposing a number of changes to the order types currently offered on EDGA. The proposed changes are designed to ensure that order types offered by the Exchange are consistent with the goals and operation of the LP<sup>2</sup> delay mechanism, and would therefore encourage continued participation by members and investors on EDGA. In many

cases, the Exchange has decided to eliminate, or adjust the operation of, certain rarely used order types and instructions that could increase System complexity if offered alongside the proposed delay mechanism. In addition, the Exchange has proposed changes to certain order types that the Exchange believes would be desirable for market participants after the implementation of the delay mechanism. The proposed amendments are detailed below:<sup>25</sup>

Discretionary Range. Discretionary Range is an optional instruction that a User may attach to an order to buy (sell) a stated amount of a security at a specified, displayed or non-displayed ranked price with discretion to execute up (down) to another specified, non-displayed price.<sup>26</sup> Determining whether an incoming order with this instruction is executable on entry, and hence subject to the delay mechanism, would therefore require the System to take into account both the order's ranked limit price and its discretionary price. The Exchange believes that this may add unnecessary complexity to the System, and is therefore proposing to eliminate the Discretionary Range instruction. In addition, the Exchange offers MidPoint Discretionary Orders ("MDO") that utilize the Discretionary Range instruction.<sup>27</sup> Specifically, a Midpoint Discretionary Order is a limit order to buy that is pegged to the NBB, with discretion to execute at prices up to and including the midpoint of the NBBO, or a limit order to sell that is pegged to the NBO, with discretion to execute at prices down to and including the midpoint of the NBBO. The Exchange also proposes to eliminate MidPoint Discretionary Orders.

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<sup>25</sup> The changes discussed in this section are reflected in EDGA Rules 11.6 and 11.8, which describe the order types and instructions being eliminated or amended, and where those order types or instructions are referenced in other parts of the rulebook, including EDGA Rule 11.7, Opening Process, EDGA Rule 11.9, Priority of Orders, and EDGA Rule 11.21, Compliance with Regulation NMS Plan to Implement a Tick Size Pilot Program.

<sup>26</sup> See EDGA Rule 11.6(d).

<sup>27</sup> See EDGA Rule 11.8(e).

Pegged Orders. Pegged is an instruction to automatically re-price an order in response to changes in the NBBO. A Pegged Order can be entered as either a Market Peg or Primary Peg.<sup>28</sup> A Market Peg is an order entered with an instruction to peg to the NBB, for a sell order, or the NBO, for a buy order.<sup>29</sup> A Primary Peg is as an order entered with an instruction to peg to the NBB, for a buy order, or the NBO, for a sell order.<sup>30</sup> The Exchange proposes to eliminate both Market Pegs and Primary Pegs. MidPoint Pegged Orders (discussed separately) would continue to be offered with minor changes to a few rarely used instructions.

The LP<sup>2</sup> delay mechanism is designed to delay inbound executable orders to allow liquidity providers sufficient time to adjust their quotes. Orders subject to the delay mechanism would be delayed once on entry, and would not be subject to any additional delays thereafter unless the entering firm were to change the price of the order such that a resting order becomes executable. Pegged Orders automatically re-price based on changes to the NBBO, and the Exchange believes that it is preferable not to subject these orders to another delay every time that the order is re-priced to an executable price, as doing so may hinder the ability of such orders to obtain an execution. At the same time, the Exchange believes that automatic re-pricing, without any delay, could enable firms using these order types to obtain an execution against a stale quote before the liquidity provider has been provided sufficient time to update their quote, thereby frustrating the goals of the delay mechanism. The Exchange has therefore determined to eliminate Market Pegs and Primary Pegs, which are lightly used, while retaining MidPoint Pegged Orders that the Exchange believes would continue to be useful to market participants seeking to trade at the midpoint.

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<sup>28</sup> See EDGA Rule 11.8(b)(9).

<sup>29</sup> See EDGA Rule 11.6(j)(1).

<sup>30</sup> See EDGA Rule 11.6(j)(2).

Supplemental Peg Orders. A Supplemental Peg Order is a non-displayed Limit Order that is eligible for execution at the NBB for a buy order and NBO for a sell order against an order that is in the process of being routed to an away Trading Center if such order that is in the process of being routed away is equal to or less than the aggregate size of the Supplemental Peg Order interest available at that price.<sup>31</sup> Although Supplemental Peg Orders differ from the Pegged Orders described above in that they do not remove liquidity,<sup>32</sup> the Exchange proposes to eliminate it in conjunction with the proposed changes described above for Pegged Orders.

MidPoint Peg Orders. A MidPoint Peg Order is a non-displayed market order or limit order with an instruction to execute at the midpoint of the NBBO, or, alternatively, pegged to the less aggressive of the midpoint of the NBBO or one minimum price variation inside the same side of the NBBO as the order. Although a number of order types that contain re-pricing logic would be eliminated with the introduction of the LP<sup>2</sup> delay mechanism, the Exchange would continue to offer MidPoint Peg Orders on EDGA as these orders are valuable to a range of market participants seeking an execution at the midpoint of the NBBO.<sup>33</sup> MidPoint Peg Orders are the most widely used pegging instruction by a wide margin today. Furthermore, the Exchange believes that MidPoint Peg Orders may be even more useful once the LP<sup>2</sup> delay mechanism is implemented as they would be protected from being executed at stale prices when the midpoint is about to change.

Notwithstanding the general usefulness of MidPoint Peg Orders, however, the Exchange proposes to eliminate two optional features that account for a small amount of usage today.

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<sup>31</sup> See EDGA Rule 11.8(g).

<sup>32</sup> Id.

<sup>33</sup> As discussed earlier in this proposed rule change, the NBBO calculated by the Exchange would include EDGA quotes. As a result, MidPoint Peg Orders would be pegged to the midpoint of the NBBO, including EDGA's disseminated quotation.

First, in addition to regular midpoint logic that automatically adjusts the price of a MidPoint Peg Order to the midpoint, the Exchange currently offers alternative logic that pegs the order to the less aggressive midpoint or one minimum price variation inside the same side of the NBBO.<sup>34</sup> The Exchange proposes to amend the operation of this order type such that MidPoint Peg Orders entered on EDGA would not be permitted to alternatively peg to one minimum price variation inside the same side of the NBBO. Second, by default the MidPoint Peg Orders do not execute when the NBBO is locked or crossed, but Users may alternatively specify that they would prefer a MidPoint Peg Order to be executed in a locked market. The Exchange proposes to eliminate the optional feature that would allow a MidPoint Peg Order to be executed in a locked market.

Multiple Price Adjust and Multiple Display-Price Sliding. The Exchange offers two instructions that are designed to re-price orders in a manner that complies with Rule 610(d) of Regulation NMS – i.e., locking or crossing quotations. Price Adjust is an order instruction requiring that where an order would be a locking quotation or crossing quotation of an external market if displayed by the System on the EDGA Book at the time of entry, the order will be displayed and ranked at a price that is one minimum price variation lower (higher) than the locking price for orders to buy (sell).<sup>35</sup> Similarly, Display-Price Sliding is an order instruction requiring that where an order would be a locking quotation or crossing quotation of an external market if displayed by the System on the EDGA Book at the time of entry, will be ranked at the locking price in the EDGA Book and displayed by the System at one minimum price variation lower (higher) than the locking price for orders to buy (sell).<sup>36</sup> Both Price Adjust and Display-

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<sup>34</sup> See EDGA Rule 11.9(c)(9).

<sup>35</sup> See EDGA Rule 11.6(l)(1)(A).

<sup>36</sup> See EDGA Rule 11.6(l)(1)(B). A User may elect to have the System only apply the Display-Price Sliding instruction to the extent a display-eligible order at the time of entry would be a Locking Quotation. For Users that select this portion of the Display-Price

Price Sliding instructions allow the User to instruct the Exchange to adjust the order to a more aggressive price either once, or multiple times, in response to changes to the prevailing NBBO.<sup>37</sup>

The Exchange now proposes to modify these instructions to only permit their default operation, which is to adjust the order on entry and once following a change to the prevailing NBBO.<sup>38</sup>

Post Only. Post Only is an instruction that may be attached to an order that is to be ranked and executed on the Exchange or cancelled, as appropriate, without routing away to another trading center except that the order will not remove liquidity from the EDGA Book, other than in instances where economically beneficial to the firm entering the order with a Post Only instruction.<sup>39</sup> Specifically, an order with a Post Only instruction and a Display-Price Sliding or Price Adjust instruction will remove contra-side liquidity from the EDGA Book if the order is an order to buy or sell a security priced below \$1.00, or if the value of such execution when removing liquidity equals or exceeds the value of such execution if the order instead

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Sliding instruction, any order will be cancelled if, upon entry, such order would be a Crossing Quotation of an external market. Id.

<sup>37</sup> See EDGA Rule 11.6(l)(1)(A)(i),(B)(iii).

<sup>38</sup> EDGA Rule 11.6(l)(1)(B)(2) currently provides that in the event the NBBO changes such that an order subject to the Display-Price Sliding instruction would not be a Locking Quotation or Crossing Quotation, the order will receive a new timestamp, and will be displayed at the “most aggressive permissible price.” While the most aggressive permissible price would be up to the original limit price of the order in the case of Multiple Display-Price Sliding, orders subject to Single Display-Price Sliding are limited to being displayed at the original locking price. As such, the Exchange proposes to amend EDGA Rule 11.6(l)(1)(B)(2) to reference the original locking price.

Similarly, EDGA Rule 11.6(l)(1)(B)(4) currently provides that in the event the NBBO changes such that an order with a Post Only instruction subject to Display-Price Sliding instruction would be ranked at a price at which it could remove displayed liquidity from the EDGA Book, the order will be executed as set forth in Rule 11.6(n)(4) or cancelled. Orders subject to Single Display-Price Sliding, as opposed to Multiple Display-Price Sliding, are not re-ranked when displayed orders at the original locking price are on the opposite side of the EDGA Book. This scenario is thus impossible for orders subject to Single Display-Price Sliding and the Exchange proposes to delete this text from the rule.

<sup>39</sup> See EDGA Rule 11.6(n)(4).

posted to the EDGA Book and subsequently provided liquidity, including the applicable fees charged or rebates provided.<sup>40</sup> With the introduction of the LP<sup>2</sup> delay mechanism, the Exchange believes that a more straightforward variant of the Post Only instruction that would never remove liquidity, and would therefore never be subject to the delay mechanism, would be valuable to liquidity providers on EDGA. The Exchange therefore proposes to amend the Post Only instruction such that a Post Only order would never be eligible to remove liquidity.<sup>41</sup> Furthermore, to encourage liquidity providers to use this instruction to provide displayed liquidity, the Post Only instruction would be limited to displayed orders, or MidPoint Peg Orders, that, while non-displayed would provide price improvement all the way up to the midpoint of the NBBO.

Non-Displayed Swap and Super Aggressive. The Exchange offers two order instructions that contain a liquidity swap component – i.e., Non-Displayed Swap (“NDS”) and Super Aggressive. When an order entered with an NDS or Super Aggressive instruction is locked by an incoming order with a Post Only instruction that would not remove liquidity based on the economic impact of removing liquidity on entry compared to resting on the order book and subsequently providing liquidity, the order with the NDS or Super Aggressive instruction is converted to an executable order and will remove liquidity against such incoming order.<sup>42</sup> An

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<sup>40</sup> Id. To determine at the time of a potential execution whether the value of such execution when removing liquidity equals or exceeds the value of such execution if the order instead posted to the EDGA Book and subsequently provided liquidity, the Exchange will use the highest possible rebate paid and highest possible fee charged for such executions on the Exchange.

<sup>41</sup> The Exchange also proposes conforming changes to other rules that reference Post Only functionality that would cause an incoming Post Only Order to be executed on entry. See e.g., EDGA Rule 11.6(l)(A)(4),(B)(4) and EDGA Rule 11.8(c)(5).

<sup>42</sup> See EDGA Rule 11.6(n)(2), (n)(7). If an order that does not contain a Super Aggressive instruction maintains higher priority than one or more Super Aggressive eligible orders, the Super Aggressive eligible order(s) with lower priority will not be converted and the

order entered with an NDS instruction is not eligible for routing pursuant to EDGA Rule 11.11,<sup>43</sup> whereas an order entered with a Super Aggressive instruction would be routed if an away trading center locks or crosses the limit price of the order resting on the EDGA Book.<sup>44</sup> NDS and Super Aggressive are used by market participants that are very aggressively seeking liquidity and are therefore willing to liquidity swap with an incoming Post Only order, generating an execution when a trade would otherwise not occur by changing the economics for the incoming order. As mentioned in the paragraphs above, the Exchange is proposing to amend its handling of Post Only orders such that an order entered with a Post Only instruction would not trade on entry, regardless of the economics associated with such an execution. As such, the Exchange proposes to eliminate the NDS and Super Aggressive instructions. The Exchange would continue to offer the Aggressive instruction, which does not contain a liquidity swap component but is otherwise identical to the Super Aggressive instruction in that it directs the System to route the order if an away trading center locks or crosses the limit price of the order resting on the EDGA Book.<sup>45</sup>

Market Maker Peg Orders. A Market Maker Peg Order is a limit order that is automatically priced by the System at the Designated Percentage away from the then current NBB (in the case of an order to buy) or NBO (in the case of an order to sell), or if there is no NBB or NBO at such time, at the Designated Percentage away from the last reported sale from the responsible single plan processor. This automated pricing is done to assist market makers in maintaining compliance with their continuous quoting obligations, and happens both when the order becomes active in the System, i.e., upon entry or at the beginning of regular trading hours,

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incoming order with a Post Only instruction will be posted or cancelled in accordance with Rule 11.6(n)(4). This does not apply to orders entered with an NDS instruction.

<sup>43</sup> See EDGA Rule 11.6(n)(7).

<sup>44</sup> See EDGA Rule 11.6(n)(2).

<sup>45</sup> See EDGA Rule 11.6(n)(1).

and at any time the price of the order reaches the Defined Limit or moves a specified number of percentage points away from the Designated Percentage toward the then current NBB or NBO, as applicable. Since this order type is designed to maintain compliance with a market maker's quoting obligations by *providing liquidity* at prices that are automatically adjusted to comply with these quoting obligations, the Exchange proposes to modify the Market Maker Peg Order such that all such orders would be entered into the System with a Post Only instruction.

## 2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the requirements of Section 6(b) of the Act,<sup>46</sup> in general, and Section 6(b)(5) of the Act,<sup>47</sup> in particular, in that it is designed to remove impediments to and perfect the mechanism of a free and open market and a national market system, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest and not to permit unfair discrimination between customers, issuers, brokers, or dealers. Specifically, the Exchange believes that the proposed LP<sup>2</sup> delay mechanism would reduce the opportunity for cross-asset latency arbitrage and thereby protect liquidity providers and encourage better market quality on EDGA.

Two registered national securities exchanges, IEX and NYE American, currently operate markets with delay mechanisms. The 350 microsecond delay mechanisms adopted on both of these markets are very similar, and are designed to reduce latency arbitrage opportunities by allowing resting non-displayed pegged orders to be updated based on changes in the NBBO prior to being picked off by opportunistic traders. Neither of these markets, however, address the critical need to encourage liquidity provision by market makers and other market participants that are vital to the proper functioning of the equities markets. While the LP<sup>2</sup> delay mechanism

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<sup>46</sup> 15 U.S.C. § 78f(b).

<sup>47</sup> 15 U.S.C. § 78f(b)(5).

would also protect non-displayed orders pegged to the midpoint of the NBBO, it is designed first and foremost to protect price forming, displayed liquidity.

To accomplish this result, the Exchange would implement a four millisecond delay on incoming executable orders that would take liquidity on entry. The delay mechanism is designed to provide liquidity providers sufficient time to update their quotes based on cross-asset signals, primarily from the futures markets. The Exchange has found that, today, liquidity providers are at risk of trading at stale prices when futures prices change as certain opportunistic trading firms that utilize microwave connections, instead of the traditional fiber, can race to the equities markets and trade with resting liquidity before liquidity providers can adjust their quotes appropriately. This effect is further compounded when market makers and other providers of liquidity are quoting in many different securities and may therefore need to simultaneously modify quotes across a number of securities simultaneously. This is a significant disincentive to firms that actively provide liquidity, and often results in those firms being unwilling to display the best possible prices, or size, to the market. As markets evolve, the Exchange believes that it is its responsibility to respond to these changes in a manner that continues to promote a free and open market and national market system. The Exchange has therefore designed a unique delay mechanism to protect liquidity providers, which has the potential to benefit both liquidity providers and the ordinary investors that rely on the liquidity they supply to the market.

The Exchange believes that its approach has two important benefits over the delay mechanisms introduced to date. First, it would give liquidity providers the ability to control their own trading interest, rather than requiring that firms use complex pegged order types that cede pricing discretion to the Exchange in order to benefit from the delay mechanism.<sup>48</sup> Second, it

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<sup>48</sup> IEX and NYSE American provide discretionary pegged orders that have discretion to

would protect displayed orders in addition to the non-displayed orders that are protected by existing delay mechanisms. When the Commission adopted the Order Protection Rule, it stated its view that “strengthened protection of displayed limit orders would help reward market participants for displaying their trading interest and thereby promote fairer and more vigorous competition among orders seeking to supply liquidity.”<sup>49</sup> The Exchange believes that this statement remains true today. Displayed limit orders are important to the national market system because they inform the prices at which all transactions take place. Even without protected market status, the Exchange believes that more displayed liquidity increases pricing information available to investors and contributes to more robust price formation.

The Exchange also believes that these benefits would accrue to market participants without unnecessarily burdening the ability of investors to access displayed liquidity on EDGA. Although the proposed four millisecond delay is longer than the one millisecond delay contemplated by the Staff’s guidance on automated quotations under Regulation NMS, or the 700 millisecond roundtrip delay experienced on IEX and NYSE American, the Exchange believes that this delay is nonetheless sufficiently short so as to not impede the ability of long term investors to access the Exchange’s displayed quotations. Moreover, the Commission’s approval of delay mechanisms on both IEX and NYSE American indicates that a speed bump that is appropriately designed based on geographic latencies between trading venues where latency arbitrage opportunities exist can be a suitable mechanism for addressing that arbitrage, and thereby protecting investors. The LP<sup>2</sup> delay mechanism, which is designed to reduce latency arbitrage based on signals that originate from the futures markets in Aurora, IL and must travel

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execute at prices up to some discretionary price, except when the exchange has detected an unstable quote. See IEX Rule 11.190(b)(8),(10); NYSE American Rule 7.31E(h)(C).

<sup>49</sup> Regulation NMS Adopting Release, 70 FR at 37501.

to the Exchange's data center in Secaucus, NJ, would introduce a delay that is shorter than existing geographic latencies between those markets in order to protect liquidity providers.<sup>50</sup>

In addition, the proposed delay would be shorter than existing geographic latencies within the national market system for equities based on the time it takes for a message to traverse the distance between the Exchange's data center and the NYSE Chicago, Inc. ("CHX") CH2 data center, which is located in Chicago, IL. While CHX trades the vast majority of symbols out of its data center in Secaucus, NJ, it trades a number of ETPs out of the CH2 data center to reduce latency with respect to the related index futures contracts. The proposed LP<sup>2</sup> delay mechanism would produce a similar result by delaying incoming messages based on geographical latencies between EDGA's data center in Secaucus, NJ and CME's data center for futures trading in Aurora, IL, and, more specifically, the difference in latencies between a high speed microwave connection and a traditional fiber connection. As such, the Exchange believes that the proposed delay mechanism is narrowly tailored to reduce cross-asset latency arbitrage without impairing the proper functioning of the equities markets. Furthermore, in the SEC's interpretive guidance regarding automated quotations under Regulation NMS, the Commission itself relied, in part, on geographic latencies experienced between data centers located in northern NJ, where the Exchange's own data center is located, and the CH2 data center in Chicago, IL.<sup>51</sup>

The proposed LP<sup>2</sup> delay mechanism is also consistent with Rule 602 of Regulation NMS (i.e., the "Quote Rule").<sup>52</sup> Generally, the firm quote provisions of the Quote Rule require each

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<sup>50</sup> A fiber connection between Aurora, IL and Secaucus, NJ would be subject to around 7.75 milliseconds of latency. See supra note 10. The proposed four milliseconds of latency would level the playing field between market participants that use a standard fiber connection and opportunistic traders that use the fastest microwave connections.

<sup>51</sup> See Commission Interpretation, supra note 17, 81 FR at 40789.

<sup>52</sup> 17 CFR 242.602(b)(2).

responsible broker or dealer to execute an order presented to it, other than an odd lot order, at a price at least as favorable as its published bid or published offer, in any amount up to its published quotation size. This obligation does not apply if the responsible broker or dealer has communicated a revised bid or offer before the incoming order is presented to such broker or dealer.<sup>53</sup> The LP<sup>2</sup> delay mechanism would not result in violations of the firm quote provisions of the Quote Rule because no information is communicated about executable orders until those orders go through the LP<sup>2</sup> delay mechanism. As such, those orders would not be “presented” to liquidity providers as contemplated by the Quote Rule until they have gone through the delay mechanism and are released for execution. Once the executable order has gone through the delay mechanism and is presented to resting orders on the EDGA Book, no liquidity provider would be given an opportunity to update its prices in response to that information.

Furthermore, while the LP<sup>2</sup> delay mechanism is designed to improve market quality, firms with executable order flow that believe that their execution quality is harmed by the delay mechanism would be permitted to ignore the Exchange’s manual quotations and route their orders to other trading venues. The Exchange is proposing to give up its protected quote status in conjunction with the introduction of the LP<sup>2</sup> delay mechanism. As a result, no market participants would be required to access liquidity on EDGA in order to meet their obligations under the Order Protection Rule, and would only need to trade on EDGA if they see the anticipated benefits, such as lower quoted and effective spreads, or larger size at the inside.

Although EDGA would operate without protected quote status, the Exchange believes that expected improvements to market quality would continue to make the Exchange an

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<sup>53</sup> 17 CFR 242.602(b)(3).

attractive venue for the trading of NMS stocks.<sup>54</sup> Routing orders to EDGA would therefore be consistent with a broker-dealer's best execution obligations to the extent that the proposal is successful in encouraging improved market quality in the form of better prices, available size, or fill rates. The duty of best execution requires broker-dealers to execute customers' orders at the most favorable terms reasonably available under the circumstances, i.e., at the best reasonably available price.<sup>55</sup> A broker-dealer would therefore be permitted to send orders for execution on EDGA, consistent with this obligation, if it finds that the Exchange offers more favorable execution opportunities to its customers, taking into account the prices and sizes posted by liquidity providers on the Exchange, as well as other factors such as the likelihood of execution. In the absence of such expected improvements to market quality, however, the Order Protection Rule would not obligate firms to access liquidity on a "manual" exchange. The Exchange believes that the anticipated improvements to market quality as a result of the proposed delay mechanism would make EDGA a competitive choice for investors seeking liquidity.

The Exchange also believes that the proposed approach is not unfairly discriminatory since orders would be subject to the LP<sup>2</sup> delay mechanism on an equal basis based solely on whether the incoming order is priced to remove or add liquidity on entry. The Exchange believes that it is appropriate to provide protection for orders that provide liquidity because these orders provide an important service to the market and face asymmetric risks due to the fact that the market may move while they are posted to the order book. Furthermore, in contrast to other delay mechanisms that target very narrow subsets of orders as deserving of protection, the LP<sup>2</sup>

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<sup>54</sup> The Order Protection Rule does not supplant or diminish the broker-dealer's responsibility for achieving best execution, including its duty to evaluate the execution quality of markets to which it routes customer orders. See Regulation NMS Adopting Release, 70 FR at 37538.

<sup>55</sup> See Regulation NMS Adopting Release, 70 FR at 37538.

delay mechanism is designed broadly to protect all liquidity providing orders, and is not limited to protecting either specific order types or specific categories of market participants. The Exchange therefore believes that the LP<sup>2</sup> delay mechanism would promote liquidity provision without unfairly discriminating against specific segments of the market.

While market makers are the most likely to benefit from the proposed delay mechanism due to their obligations to continuously quote across a number of securities,<sup>56</sup> the proposal would protect a wide range of orders that provide liquidity to the market, and thereby promote better market quality. The LP<sup>2</sup> delay mechanism is therefore designed to encourage liquidity provision by market makers entering displayed two-sided quotes on a continuous basis throughout the trading day, investors seeking to trade at the midpoint of the NBBO, and any of a wide range of other market participants entering resting limit orders. The Exchange believes that it is preferable to provide this benefit to all liquidity providing orders rather than specific segments of the market because its goal is to broadly encourage liquidity provision. Any market participants that provide liquidity to the market would benefit from the LP<sup>2</sup> delay mechanism in relative proportion to the amount of liquidity they provide.

The Exchange does not believe that it is unfairly discriminatory to subject orders that would remove liquidity on entry to the proposed delay mechanism. By design, all speed bumps must be applied to certain inbound/outbound messages and not others. For example, the delay mechanisms adopted by both IEX and NYSE American do not apply to the repricing of non-displayed orders pegged to the NBBO. This allows those orders to be updated based on their pegging instruction before opportunistic traders can trade with them at the stale price. Similarly, the proposed LP<sup>2</sup> delay mechanism would apply only to orders that remove liquidity, while

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<sup>56</sup> See EDGA Rule 11.20(d)(1).

exempting orders that add liquidity so that resting orders can be modified before opportunistic traders can pick off quotes at the stale price. Reducing this form of opportunistic trading is consistent with the protection of investors and the public interest, and removes impediments to and perfects the mechanism of a free and open market and a national market system.

The Exchange does not believe that it is unfairly discriminatory to subject all liquidity removing orders to the delay mechanism, including orders entered by market participants not engaged in latency arbitrage. The proposed delay mechanism is designed to give liquidity providers the ability to update their quotes in response to changed market conditions (e.g., a price change in a futures contract) before trading at stale prices. The Exchange believes that this approach is superior to relying on complicated non-displayed pegged orders managed by the exchange operator, as the chosen approach encourages liquidity providers to actually improve displayed prices rather than simply following prices displayed by other equities exchanges. Since the liquidity provider would never be apprised of the existence of an incoming liquidity removing order before it exits the delay mechanism, updated quotations would be more likely to impact latency sensitive market participants attempting to trade at times when the market is about to move to a new price level. In turn, ordinary investors that are not specifically seeking these opportunities would benefit from better price discovery as the price at which their orders are executed would better reflect the current market for a given security, as potentially improved by liquidity providers due to decreased adverse selection risk. The LP<sup>2</sup> delay mechanism is designed to encourage liquidity provision, and therefore has the potential to benefit all market participants, including market participants that submit executable orders subject to the delay mechanism. As the Commission explained when it adopted Regulation NMS, the interests of liquidity providers and market participants that submit marketable orders are “inextricably linked

together.”<sup>57</sup> Displayed limit orders, in particular, are responsible for setting the market for a security and are the primary driver of public price discovery in addition to supplying needed liquidity to other market participants. Ultimately, the goal of the LP<sup>2</sup> delay mechanism is to protect liquidity providers from opportunistic trading strategies so as to improve execution quality for investors that submit marketable order flow.

In fact, the success of the Exchange under the proposed market structure is entirely contingent on providing improved market quality (e.g., quoted spreads, size at the inside, and fill rates) to marketable orders. Because the proposal contemplates disseminating a manual quotation that is not protected under the Order Protection Rule, interaction with resting order flow on the EDGA Book would be entirely voluntary. That is, no market participant would be required to access liquidity on the EDGA under Regulation NMS. Without the protection normally afforded to displayed quotations by the Order Protection Rule, the decision to route order flow to the Exchange would depend on the entering firm’s independent assessment that EDGA offers favorable execution quality when compared to competing markets. As such, the decision to route orders to the Exchange would reflect that firm’s assessment that the economics associated with improved market quality outweigh any perceived costs associated with the delay mechanism.

Given the importance of ensuring that liquidity providers can quote aggressively with the introduction of the delay mechanism, the Exchange also believes that the proposed flickering

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<sup>57</sup> See Regulation NMS Adopting Release, 70 FR at 37527. “Displayed limit orders are the primary source of public price discovery. They typically set quoted spreads, supply liquidity, and in general establish the public “market” for a stock. The quality of execution for marketable orders, which, in turn, trade with displayed liquidity, depends to a great extent on the quality of markets established by limit orders (i.e., the narrowness of quoted spreads and the available liquidity at various price levels).” Id.

quote functionality would remove impediments to and perfect the mechanism of a free and open market and a national market system. As explained in the purpose section of this proposed rule change, the proposed behavior is designed to ensure that the EDGA quote would remain accessible to investors if the Exchange's manual quotation is crossed by a protected quotation. This change is necessitated by a difference in rules that apply to automated and manual quotations: specifically, the fact that the crossed market exception under Rule 611(b)(4) of Regulation NMS only applies when a Protected Bid is crossed with a Protected Offer. As proposed, if the Exchange's previously disseminated manual quotation is crossed by a protected quotation, aggressively priced orders on the EDGA Book would remain displayed and executable at EDGA's quoted price for one second. If the Exchange's quote is still crossed by a protected quote after this one second period, the System would cancel the crossed order(s), which would no longer be posted at an executable price. In turn, this would ensure that the best quoted prices displayed in the market remain accessible to investors. The Exchange believes that permitting orders to remain posted and executable for the one second period allowed under the Flickering Quote Exception is consistent with the protection of investors and the public interest as it ensures that market participants would be able to access EDGA's disseminated quotation when EDGA has established the best price available in the market.

The Exchange also believes that the proposed changes to its locked and crossed market rules under EDGA Rule 11.10(f), and the changes to its crossed market collars as described in Rule 11.10(a)(2), are necessary and appropriate as these changes would increase transparency around the proposed operation of the Exchange as a "manual" market that would no longer disseminate an automated quotation. Specifically, and as described in more detail in the purpose section of the proposed rule change, these changes are designed to ensure that the Exchange's

rules properly reflect the fact that EDGA would be disseminating a manual quotation, subject to an exemption requested pursuant to Rule 610(e) of Regulation NMS that would allow the Exchange to continue locking or cross manual quotations disseminated by NYSE. The Exchange believes that the proposed changes are consistent with the Exchange's obligations as an equities exchange disseminating a manual quotation, as modified by the requested exemption.

Finally, the Exchange believes that the proposed order type changes are consistent with the protection of investors and the public interest. The Exchange has reviewed the order types offered on EDGA to determine how best to serve the needs of members and investors, while striving to reduce System complexity with the introduction of the delay mechanism. While the Exchange offers a wide array of order types, not all of those order types are frequently used by market participants that trade on EDGA. In addition, some of the order types offered today would be more difficult to implement in a way that is consistent with the operation and goals of the proposed LP<sup>2</sup> delay mechanism, while others could be made to more useful by making small tweaks to their operation. The Exchange believes the proposed changes to its order types satisfy its twin goals of providing functionality that is the most useful to market participants and investors that trade on EDGA while reducing System complexity surrounding the proposed delay mechanism. Each of the order type changes is discussed in turn below.

First, the Exchange has decided to eliminate the Discretionary Range instruction and the related MDO order type as continuing to offer orders that include this instruction would add complexity to the System in the context of a delay mechanism that applies to all liquidity taking orders. Specifically, implementation of the Discretionary Range instruction alongside the proposed LP<sup>2</sup> delay mechanism would require that the System consider both an order's limit price and its discretionary price in determining whether an order would be subject to the speed

bump. Based on current usage of this order instruction, the Exchange does not believe at this time that continuing to offer it would provide sufficient benefit to market participants to warrant the increased complexity of building this feature to coexist with the delay mechanism. With respect to MDOs, which contain a Discretionary Range instruction that is pegged to the midpoint of the NBBO, the Exchange notes that investors that desire a midpoint execution would be able to continue using MidPoint Peg Orders. As noted below, while a number of orders with automated re-pricing logic would be eliminated with the proposed introduction of the LP<sup>2</sup> delay mechanism, EDGA would continue to offer MidPoint Peg Orders.

Second, the Exchange has decided to eliminate a number of order types that would automatically re-price based on changing prices in the prevailing market. These include Pegged Orders (i.e., Primary Peg and Market Peg), and orders that include a Multiple Price Adjust or Multiple Display-Price Sliding instruction. The Exchange believes that eliminating orders that re-price automatically is consistent with the goals of the proposed delay mechanism as these orders could potentially be used to obtain an execution against stale quotes that should have been protected by the delay mechanism. For example, assume the NBBO is \$9.98 x \$10.00, and the EDGA Book contains a displayed limit order at the NBO of \$10.00, and a non-displayed Primary Peg Order entered to buy with an offset of one cent better than the NBB, currently ranked at \$9.99. If the NBBO were to update to \$9.99 x \$10.02, the Primary Peg Order would be immediately re-priced to \$10.00 and trade against the contra-side sell order at the stale NBO price without going through the delay mechanism. By contrast, if the buy order were instead a non-displayed limit order and the member had entered a cancel/replace message to update it to \$10.00, the price update would be subject to the delay mechanism, allowing the liquidity provider to update its sell price based on changes to the market, as intended. While the

Exchange could subject automated re-pricing to the delay mechanism instead, as it has proposed for User initiated modifications, the Exchange believes that the proposed approach better serves the needs of members and investors as continuously subjecting an order that re-prices automatically to a delay may limit the ability of such an order to reasonably obtain an execution. The Exchange therefore believes that it is consistent with the protection of investors and the public interest to eliminate a number of current order types and order instructions that contain automated re-pricing logic. The Exchange also believes that it is appropriate to eliminate Supplemental Peg Orders in connection with the changes to other Pegged Orders described above. Although Supplemental Peg Orders are designed to not remove liquidity, use of Supplemental Peg Orders is minimal, and removing this order type along with other similar instructions would therefore reduce system complexity without any significant impact to market participants.

At the same time, the Exchange has determined to keep MidPoint Peg Orders, which account for a significant portion of pegged volume traded today, and would continue to be valuable to a number of market participants that seek to trade at the midpoint. As explained in the purpose section of this proposed rule change, MidPoint Peg Orders may become even more useful when the Exchange implements the LP<sup>2</sup> delay mechanism since these orders would be automatically re-priced to the new midpoint before being accessed at a stale price. In addition, a resting MidPoint Peg Order is willing to provide liquidity at the midpoint of the NBBO, thereby providing price improvement opportunities for investors accessing liquidity on EDGA.

Although the Exchange is keeping MidPoint Peg Orders, which are beneficial to members and investors, the Exchange is removing two related instructions. First, the Exchange is eliminating an optional feature that would peg a MidPoint Peg Order to the less aggressive of

the midpoint or one minimum price variation inside the same side of the NBBO. These alternative MidPoint Peg Orders function in the same manner as a Primary Peg Order with an offset, except in situations where the market is one tick wide, and therefore would be eliminated along with Primary Peg Orders. The Exchange believes that this is consistent with the goal of reducing executions that result from re-priced orders bypassing the delay mechanism, unless the order is a true midpoint seeking order. Second, the Exchange is eliminating an option that a User has to request that a MidPoint Peg Order be executed when the NBBO is locked. The Exchange believes that this change is consistent with the public interest because avoiding an execution when the midpoint is locked would prevent such orders from trading with displayed orders represented at the NBBO before those orders could be updated by liquidity providers.<sup>58</sup> Furthermore, the Exchange believes that the majority of Users of MidPoint Peg Orders do not want their orders executed in a locked market where there is no true midpoint execution.

The Exchange has also decided to amend the Post Only instruction such that it would never be eligible to remove liquidity. Currently, the Exchange's Post Only logic would allow a Post Only order to remove liquidity in certain cases where doing so would be economically beneficial to the party entering the order. The New York Stock Exchange ("NYSE") offers a similar but less complicated "Add Liquidity Only" or "ALO" instruction that would not remove liquidity from the NYSE book in such circumstances.<sup>59</sup> The Exchange believes that market makers and other liquidity providers would find such an instruction useful as it would allow them to ensure that orders entered to provide liquidity would not inadvertently remove liquidity and thus be subject to a delay. Market makers and similar market participants typically prefer to

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<sup>58</sup> MidPoint Peg Orders would be able to re-price and trade with hidden orders resting between the NBB and NBO without going through the delay mechanism.

<sup>59</sup> See NYSE Rule 13(e)(1).

provide liquidity to the market, entering quotes to capture the spread, and may not desire an execution that removes liquidity even when the economics of such an execution would appear to be beneficial to such party. The Exchange therefore believes that it is appropriate to amend its Post Only instruction in connection with the introduction of the LP<sup>2</sup> delay mechanism such that a Post Only Order would never remove liquidity from the EDGA Book.

Based on the proposed changes to the Post Only instruction, the Exchange is also proposing to eliminate the NDS and Super Aggressive Order instructions. As previously mentioned, NDS and Super Aggressive both contain a built in liquidity swap component that the Exchange believes is inconsistent with the proposed changes to the Post Only instruction. Specifically, NDS and Super Aggressive are instructions that are used to specify the terms under which a resting order would execute with an incoming Post Only order that would not otherwise remove liquidity because the amount of price improvement offered by such an execution was insufficient. Since the Exchange is proposing to never execute an incoming Post Only order with resting liquidity in order to avoid having such orders go through the proposed delay mechanism, these liquidity swap instructions would be rendered obsolete.

Finally, the Exchange proposes to modify the operation of Market Maker Peg Orders such that all Market Maker Peg Orders would include a Post Only instruction. The Exchange believes that this change is appropriate because Market Maker Peg Orders are designed to enable market makers to provide liquidity in compliance with their continuous quoting obligations, and are not intended to remove liquidity. Today, Market Maker Peg Orders usually add rather than remove liquidity today since they are priced a designated percentage away from the NBBO when there is an appropriate NBBO. However, it is possible that a Market Maker Peg Order could remove liquidity, for example, when there is no applicable NBB or NBO, in which case such

orders are priced based on the last reported sale. The Exchange therefore believes that it is appropriate to systematically enforce the requirement that these orders do not remove liquidity.

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

The Exchange does not believe that the proposed rule change would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. To the contrary, the proposal is a competitive response to delay mechanisms available on other markets such as IEX and NYSE American, and is designed to foster competition between both markets and orders as contemplated by Regulation NMS. The LP<sup>2</sup> delay mechanism seeks to enhance available liquidity and optimize price discovery by deemphasizing speed as a key to trading success in order to further serve the interests of all investors. It does this by subjecting all liquidity taking orders to a short delay of a few milliseconds, while exempting all liquidity providing orders from this delay mechanism. Every order entered on EDGA would be subjected, or not subjected, to the delay mechanism based on whether the order adds or removes liquidity, and regardless of the order type used or identity of the entering firm.

The Exchange believes that the resulting market structure benefits of the proposal are likely to accrue to a wide range of market participants that add liquidity on the Exchange. This includes market makers that serve a critical function of providing liquidity to the market, as well as a range of other investors, including those that seek to trade at the midpoint of the NBBO. In addition, to the extent that the proposal is successful in reducing risk for liquidity providers, and encouraging those liquidity providers to improve market quality, the expected benefits would also extend to market participants that choose to access liquidity on EDGA. In sum, the Exchange believes that the proposed rule change is designed to promote a more vibrant and

competitive market for the vast majority of market participants and investors that do not rely on opportunistic trading strategies that exploit differentials in speed.

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

No comments were solicited or received on the proposed rule change.

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

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission will:

- A. by order approve or disapprove such proposed rule change, or
- B. institute proceedings to determine whether the proposed rule change should be 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](mailto:rule-comments@sec.gov). Please include File Number SR-CboeEDGA-2019-012 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.

All submissions should refer to File Number SR-CboeEDGA-2019-012. 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 website (<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, D.C. 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.

Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to

make available publicly. All submissions should refer to File Number SR-CboeEDGA-2019-012 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.<sup>60</sup>

Vanessa A. Countryman  
Acting Secretary

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<sup>60</sup> 17 CFR 200.30-3(a)(12).