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, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such 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–CboeBZX–2019–082, and should be submitted on or before October 21, 2019.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[16]

Jill M. Peterson,

Assistant Secretary.

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–87096; File No. SR–CboeEDGA–2019–012]

Self-Regulatory Organizations; Cboe EDGA Exchange, Inc.; Order Instituting Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change To Introduce a Liquidity Provider Protection Delay Mechanism on EDGA

September 24, 2019.

I. Introduction

On June 7, 2019, Cboe EDGA Exchange, Inc. ("EDGA" or "Exchange") filed with the Securities and Exchange Commission ("Commission"), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Exchange

Act")[1] and Rule 19b–4 thereunder,[2] a proposed rule change to introduce a delay mechanism on EDGA. The proposed rule change was published for comment in the **Federal Register** on June 26, 2019.[3] On August 5, 2019, the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether the proposed rule change should be disapproved.[4] The Commission received twenty-one comment letters from eighteen commenters on the proposed rule change, including a response from the Exchange.[5] This order institutes

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

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 86168 (June 20, 2019), 84 FR 30282 ("Notice").

[4] *See* Securities Exchange Act Release No. 86567, 84 FR 39385 (August 9, 2019).

[5] *See* Letters from: R.T. Leuchtkafer, dated July 12, 2019 ("Leuchtkafer Letter I"); Steve Crutchfield, Head of Market Structure, CTC Trading Group, LLC, dated July 15, 2019 ("CTC Letter"); Tyler Gellasch, Executive Director, Healthy Markets, dated July 16, 2019 ("Healthy Markets Letter"); Larry Tabb, Founder and Research Chairman, TABB Group, dated July 16, 2019 ("Tabb Group Letter"); Stephen John Berger, Managing Director, Global Head of Government and Regulatory Policy, Citadel Securities, dated July 16, 2019 ("Citadel Letter"); Mehmet Kinak, Vice President & Global Head of Systematic Trading & Market Structure, and Jonathan D. Siegel, Vice President & Senior Legal Counsel (Legislative & Regulatory Affairs), T. Rowe Price, dated July 16, 2019 ("T. Rowe Price Letter"); Adam Nunes, Head of Business Development, Hudson River Trading LLC, dated July 16, 2019 ("Hudson River Trading Letter"); Joanna Mallers, Secretary, FIA Principal Traders Group, dated July 16, 2019 ("FIA Letter"); Ray Ross, Chief Technology Officer, Clearpool, dated July 16, 2019 ("Clearpool Letter"); Eric Swanson, CEO, XTX Markets LLC (Americas), dated July 16, 2019 ("XTX Letter I"); John Thornton, Co-Chair, Hal S. Scott, President, and R. Glenn Hubbard, Co-Chair, Committee on Capital Markets Regulation, dated July 16, 2019 ("CMR Committee Letter"); Kirsten Wegner, Chief Executive Officer, Modern Markets Initiative, dated July 17, 2019 ("MMI Letter"); Theodore R. Lazo, Managing Director and Associate General Counsel, SIFMA, dated July 18, 2019 ("SIFMA Letter"); Eric Swanson, CEO, XTX Markets LLC (Americas), dated July 31, 2019 ("XTX Letter II"); Mark D. Epley, Executive Vice President & Managing Director, General Counsel, and Jennifer W. Han, Associate General Counsel, Managed Funds Association, dated August 2, 2019 ("MFA Letter"); Hubert De Jesus, Managing Director, Global Head of Market Structure and Electronic Trading, and Joanne Medero, Managing Director, Global Public Policy, Black Rock, dated August 2, 2019 ("Black Rock Letter"); Rich Steiner, Head of Client Advocacy and Market Innovation, RBC Capital Markets, dated August 15, 2019 ("RBC Letter"); Adrian Griffiths, Assistant General Counsel, Cboe Global Markets, dated August 22, 2019 ("Exchange Response Letter"); R.T. Leuchtkafer, dated August 23, 2019 ("Leuchtkafer Letter II"), R.T. Leuchtkafer, dated September 9, 2019 ("Leuchtkafer Letter III"), Joshua Mollner, Assistant Professor, Kellogg School of Management, Northwestern University, and Markus Baldauf, Assistant Professor, Sauder School of Business, University of British Columbia, dated September 12, 2019 ("Mollner & Baldauf Letter") available at *https://www.sec.gov/comments/sr-cboeedga-2019-012/srcboeedga2019012.htm.*

proceedings under Section 19(b)(2)(B) of the Exchange Act[6] to determine whether to approve or disapprove the proposed rule change.

II. Summary of the Proposal

EDGA proposes to adopt the Liquidity Provider Protection ("LP2") delay mechanism, which would delay all incoming executable orders for up to four milliseconds.[7] If an incoming executable order subject to the delay is no longer executable against orders resting on the EDGA Book (*e.g.,* resting orders on the book are cancelled or modified such that they are no longer marketable against the delayed incoming order), such incoming order will be immediately released from the queue.[8]

The LP2 delay mechanism also would apply to the cancel, cancel/replace, or modification messages that are associated with liquidity taking orders.[9] The Exchange would apply such messages after the liquidity taking order is released from the delay mechanism.[10] At the end of the delay period, incoming orders, cancel, and cancel/replace messages subjected to the delay mechanism would be processed after the System has processed, if applicable, all messages in the security received by the Exchange during such delay period which could result in a message being delayed for longer than four milliseconds depending on the volume of messages being processed by the Exchange.[11]

Certain order types, or orders with instructions, that are not eligible for execution upon entry would become subject to the LP2 delay mechanism when a potential execution is triggered by a subsequent incoming order. For example, orders entered with either a Stop Price or Stop Limit Price instruction would not be executed until elected, and would only be subject to the delay mechanism after the order is converted to either a Market Order or Limit Order. Similarly, orders entered with a time-in-force instruction of Regular Hours Only would be subjected to the delay mechanism when entered into the EDGA Book after an opening or re-opening process.[12]

An incoming order that is not executable upon entry would not be subject to the delay mechanism. For example, orders with instructions that

[6] 15 U.S.C. 78s(b)(2)(B).

[7] *See* Notice, 84 FR at 30284.

[8] *See* Notice, 84 FR at 30284.

[9] *See id.*

[10] *See id.*

[11] *See* Notice 84 FR at 30284, n. 11.

[12] *See* EDGA Rule 11.7 relating to the opening and re-opening process.

[16] 17 CFR 200.30–3(a)(12).

are not executable when entered due to its order instructions (*e.g.,* Minimum Quantity and Post Only) would not be subject to the LP2 Delay Mechanism. The one exception to this would be incoming orders with the EdgeRisk Self Trade Protection modifier.[13] These modifiers would be applied to the order after it is delayed. In addition, incoming routable orders that bypass the EDGA book would not be subject to the LP2 delay mechanism, but any returning, executable remainder of such a routed order would be subject to the delay mechanism.

Market Data

The Exchange proposes that the LP2 delay mechanism would not apply to inbound or outbound market data. Current, un-delayed data, would be used for all purposes including regulatory compliance and the pricing of pegged orders and the quotation and trade data would continue to be disseminated, without delay, to the applicable securities information processor (''SIP'') and direct market data feeds.[14]

Regulation NMS

In conjunction with the proposed LP2 delay mechanism, the Exchange proposes to disseminate a manual, unprotected quotation.[15] In addition, because certain Regulation NMS rules related to locked and crossed markets would apply differently to EDGA's manual, unprotected quotation, compared to its current automated, protected quotation, the Exchange proposed to make the two rule changes described below.

First, the Exchange proposes to add new EDGA Rule 11.10(a)(6) to provide that a bid (offer) on the EDGA Book is eligible to remain posted to the EDGA Book for one second after such bid (offer) is crossed by a Protected Offer (Protected Bid). The bid (offer) on the EDGA Book will be cancelled if it continues to be higher (lower) than a Protected Offer (Protected Bid) after this one second period. Because the delayed cancellation behavior set forth by proposed EDGA Rule 11.10(a)(6) 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 also proposes to amend EDGA Rule 11.10(a)(2) to provide that 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.

Second, the Exchange proposes to amend EDGA Rule 11.10(f) related to the dissemination and display of ''Locking Quotations or Crossing Quotations''.[16] Because the Exchanges' quotations would be marked manual, Rule 610(d)(1)(ii) of Regulation NMS requires that the Exchange avoid locking or crossing any quotation in an NMS stock disseminated pursuant to an effective national market system plan. The Exchange proposes to amend EDGA Rule 11.10(f)(3) to provide that an EDGA quotation would not be considered a Locking or Crossing Quotation if the quotation being locked or crossed is a manual quotation that is allowed to be locked or crossed pursuant to an exemption request submitted by the Exchange.[17] In the Notice, the Exchange notes that it submitted an exemption request to the Commission pursuant to Rule 610(e) of Regulation NMS that, if granted by the Commission, would permit the Exchange to lock or cross manual quotations disseminated by the New York Stock Exchange LLC (''NYSE'').[18]

Eliminate or Modify Certain Order Types and Instructions

The Exchange proposes to eliminate or modify certain order types and instructions to reduce System complexity in light of the operation of the proposed LP[2] delay mechanism. Specifically, the Exchange proposes to eliminate the:

• Discretionary Range instruction [19] and the MidPoint Discretionary Order (''MDO''); [20]

• Pegged instruction,[21] including the Market Peg [22] and Primary Peg instruction;

• Supplemental Peg Orders; [23] and

• Non-Displayed Swap and Super Aggressive instructions.[24]

In addition, the Exchange proposes to modify the:

• MidPoint Peg Order (''MPO'') [25] by eliminating the optional functionality that allows a User to: (1) Peg the order to the less aggressive midpoint or one minimum price variation inside the same side of the NBBO, and (2) opt for executions during a locked market;

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[13] *See* Notice, 84 FR at 30283.

[14] *See id.*

[15] Rule 600(a)(37) defines a ''manual quotation'' as any quotation other than an automated quotation.

[16] 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).

[17] *See* Notice, 84 FR at 30285.

[18] *See* Notice, 84 FR at 30285; *see also* Letter from Adrian Griffiths, Assistant General Counsel, Cboe, to Vanessa Countryman, Acting Secretary, dated June 7, 2019 (requesting exemptive relief from certain requirements related to locked and crossed markets pursuant to Rule 610(e) of Regulation NMS).

[19] 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. *See* EDGA Rule 11.6(d).

[20] 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. *See* EDGA Rule 11.8(e).

[21] Pegged is an instruction to automatically re-price an order in response to changes in the NBBO, and can be entered as either a Market Peg or Primary Peg. *See* EDGA Rule 11.8(b)(9).

[22] 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. *See* EDGA Rule 11.6(j)(1).

[23] Supplemental Peg Orders are non-displayed Limit Orders that are 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. *See* EDGA Rule 11.8(g).

[24] Currently, 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. 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 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. *See* EDGA Rule 11.6(n)(2), (n)(7).

[25] MPOs are non-displayed, market or limit orders 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. *See* EDGA Rule 11.9(c)(9).

• Price Adjust [26] and Display-Price Sliding [27] instructions to eliminate the functionality to allow orders with these instructions to adjust multiple times to a more aggressive price in response to changes to the prevailing NBBO; [28]

• Post Only instruction to (1) limit the use of the instruction to displayed orders and MPOs and (2) eliminate the ability of such orders to execute on an incoming basis; and

• Market Maker Peg Orders to require the use of a Post Only instruction with such orders.[29] Finally, the Exchange proposes related, conforming changes to rules referencing the current Post Only functionality that would permit an incoming order to be executed.[30]

III. Summary of Comments

The Commission received twenty-one comments from eighteen commenters on the proposed rule change, including a response letter from the Exchange.[31] Three commenters supported the proposal [32] and twelve commenters opposed the proposal.[33] One commenter conditioned support for the proposal on the Exchange's quote not being included in the SIP.[34] One commenter did not explicitly express support for, or, opposition to, the proposed rule change.[35]

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[26] 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). *See* EDGA Rule 11.6(l)(1)(A).

[27] 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). *See* EDGA Rule 11.6(l)(1)(B).

[28] *See* EDGA Rule 11.6(l)(1)(A)(i),(B)(iii).

[29] A Market Maker Peg Order is designed to assist market makers maintain compliance with their continuous quoting obligations. Specifically, it 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.

[30] *See e.g.,* EDGA Rule 11.6(l)(A)(4),(B)(4) and EDGA Rule 11.8(c)(5).

[31] *See supra* note 5.

[32] *See* CTC Letter; Mollner & Baldauf Letter; XTX Letter I; XTX Letter II.

[33] *See* Black Rock Letter; Citadel Letter; CMR Committee Letter; FIA Letter; Healthy Markets Letter; Hudson River Trading Letter; R.T. Leuchtkafer Letters I, II, and III; MFA Letter; MMI Letter; RBC Letter; SIFMA Letter; T. Rowe Price Letter.

[34] *See* Clearpool Letter at 4.

[35] *See* Tabb Group Letter.

A. Impact on Market Participants/Impact on Orders

Two commenters believed that the proposal was consistent with the Exchange Act.[36] One commenter believed the proposal was not unfairly discriminatory under the Exchange Act because it targets a behavior, latency arbitrage, and not specific market participants.[37]

Two commenters noted the proposal would protect all orders that add liquidity.[38] One commenter suggested that, by protecting the resting orders of both liquidity providers and end users, the proposal would afford "the best service and pricing to investors while still preserving the opportunity for those who wish to pursue higher speeds to benefit from doing so." [39] One commenter suggested that the delay mechanism would protect the passive orders routed by commercially available order placement algorithms, including the orders of institutional investors.[40] The commenter explained that an end users' passive orders would only miss fills if they cancelled their orders, and if this were the case, they would only miss adverse fills.[41] One commenter noted the proposal would allow market participants to interact with their resting orders, *e.g.,* by canceling the order or modifying the order's size, without being subject to the delay.[42] This commenter believed the ability for liquidity providers to "fade away" was important in light of today's fragmented, fast moving markets.[43]

Two commenters believed that the asymmetric delay is not akin to the "last look" practice in foreign exchange markets.[44] One commenter explained that the information leakage and pre-hedging activity associated with "last look" would not be possible under the current proposal because the liquidity provider would have no knowledge of any order attempting to access the liquidity provider's quote until an execution occurs against that quote.[45] One commenter indicated that the asymmetric speedbump is not a last

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[36] *See* CTC Letter at 3–4; XTX Letter I at 2–4; XTX Letter II at 3.

[37] *See* XTX Letter I at 3. A subsequent comment by the same commenter also characterized the proposal as "not discriminatory" but "rather a rational response to address behavior that imposes explicit and implicit costs on investors and the wider market in the form of spread and market impact." *See* XTX Letter II at 2.

[38] *See* XTX Letter I at 3; CTC Letter at 3.

[39] *See* CTC Letter at 3.

[40] *See* XTX Letter II at 5.

[41] *See id.*

[42] *See* Clearpool Letter at 2.

[43] *See id.*

[44] *See* Tabb Group Letter at 4; XTX Letter I at 6.

[45] *See* XTX Letter I at 6.

look because it "does not enjoy the ability to fade against a specific order." [46]

Eleven comments raised concerns about the proposal being unfairly discriminatory among market participants.[47] One commenter stated that intentional delays associated with speed bumps should be equally applied, not asymmetrically applied, to all market participants.[48] Two commenters stated the proposal would discriminate unfairly against liquidity takers.[49] Another commenter did not believe that the Exchange justified why investors accessing EDGA quotations should be "systematically disadvantaged over those who provide quotations." [50] One commenter suggested the proposal would impede the ability of ETF market makers to reliably access displayed quotations in underlying securities for hedging purposes, potentially increasing the risks associated with providing ETF liquidity and resulting in wider spreads, the costs of which would be "disproportionately borne by retail investors." [51] Two commenters were concerned that EDGA liquidity providers could be disadvantaged compared to faster EDGA liquidity providers, and an inability to respond quickly enough to market signals would create a riskless arbitrage opportunity for faster liquidity providers.[52] One commenter believed that market makers with superior resources would be able to avoid price volatility and the effects of latency arbitrage would be shifted to market participants without fast and expensive technology.[53]

The Exchange responded that liquidity providers are subject to asymmetric risks because liquidity takers determine the time of a trade and are able to remove liquidity before a liquidity provider can reprice its resting orders.[54] The Exchange explained that sophisticated liquidity takers can use information about impending price changes to purchase or sell shares.[55] The Exchange stated that limit orders can essentially serve as a "free option" for liquidity takers that use marketable

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[46] *See* Tabb Group Letter at 4.

[47] *See* Black Rock Letter at 1–2; Citadel Letter at 3; CMR Committee Letter at 1–2; Leuchtkafer Letter I at 1, 8, 11 and 15; FIA Letter at 1; Healthy Markets Letter at 9–10; Hudson River Trading Letter at 1 and 5; MFA Letter at 1–2; MMI Letter at 2; RBC Letter at 1; T. Rowe Price Letter at 1.

[48] *See* CMR Committee Letter at 2.

[49] *See* Black Rock Letter at 2; Healthy Markets Letter at 2.

[50] *See* Healthy Markets Letter at 2.

[51] *See* Citadel Letter at 2.

[52] *See* Leuchtkafer Letter I at 8; RBC Letter at 2.

[53] *See* Leuchtkafer Letter I at 8.

[54] *See* Exchange Response Letter at 2, 3, and 7.

[55] *See id.* at 3.

orders to access posted liquidity, and that the liquidity takers essentially can lock in a risk-free profit if the liquidity provider is not able to react and reprice its posted liquidity.[56] The Exchange indicated that liquidity providers are mindful of this "free option" when they price their quotes, and reasoned that it is important to protect liquidity providers "given the service that they provide to the market" and because "quotations posted by liquidity providers determine the quality of executions received by investors that submit marketable order flow." [57] The Exchange suggested different types of market participants that provide liquidity would benefit from the delay mechanism since it would attract a wider range of participants that could compete on factors other than speed, such as quality of execution, and noted a "significant amount" of institutional order flow is managed through broker-dealer algorithms that could response to market information in less than the 4 millisecond timeframe.[58]

Five commenters expressed concern about unfair discrimination among orders because the delay mechanism would apply asymmetrically to only liquidity-taking orders.[59] One commenter noted that the speedbumps previously approved by the Commission are applicable to all inbound and outbound communications, whereas the EDGA speedbump is asymmetric and only applies to incoming executable orders.[60] Another commenter stated that each time a liquidity provider utilizes the asymmetric speed bump to cancel or reprice a displayed quote, any incoming order that would have otherwise immediately executed would be negatively impacted.[61] The commenter explained that in the event that a large institutional order is routed to multiple exchanges simultaneously, the EDGA portion of the order would likely be filled at a worse price since EDGA liquidity providers would be able to cancel or reprice their displayed quotes based on the most recent market data showing liquidity being taken from other venues.[62] Another commenter suggested that enabling market makers to obtain superior order book queue position could discourage the use of limit orders by retail and institutional investors over time by increasing these

investors' transaction costs.[63] One commenter noted that under the proposal non-marketable orders could be canceled at any time, while marketable orders could not be cancelled while the order queues because of the delay mechanism.[64] This commenter suggested that marketable orders would be harmed because they would not be allowed to be updated during the delay to adjust market information that is revealed during the delay.[65]

The Exchange responded to the comment suggesting that the proposed asymmetric delay that would only be applicable to incoming executable orders is unfairly discriminatory by stating the previously approved delay mechanisms may delay all incoming and outgoing orders, but treat orders resting on the book differently.[66] Specifically, the Exchange noted that the repricing instructions for non-displayed pegged orders on IEX and NYSE American are not subject to a delay and suggested that the proposed delay mechanism would similarly protect resting orders while allowing liquidity providers to improve displayed prices as opposed to relying on exchange-driven algorithms "designed solely to match prices quoted on other markets." [67]

Three commenters asserted that the benefit liquidity providers receive as a result of the proposed rule change would be material or significant.[68] Five commenters expressed concern that liquidity providers with a speed advantage could use the asymmetric delay to engage in price discovery on other venues in order to gain an informational advantage at the expense of other market participants.[69] These commenters were concerned that liquidity providers would observe trading on other venues during the delay and cancel resting orders (*i.e.,* back away or quote fade) on EDGA to avoid executions against delayed incoming orders.[70] Two commenters believed the proposal bore some similarities to the "last look" practice in foreign exchange markets, wherein a market participant disseminates non-

firm quotes to clients, and upon receiving a request to trade against its quoted price, has a final opportunity to accept or reject the trade request.[71] One commenter expressed that approving the proposal would be "akin to institutionalizing the practice of 'last look'" but without the "mitigating controls and prudential supervision" associated with that practice.[72] One commenter believed that liquidity providers would cancel or reprice displayed quotes to selectively avoid incoming orders.[73] This commenter expressed that EDGA liquidity providers would be advantaged over EDGA liquidity takers because access to the Exchange's displayed quotations would be negatively impacted if the market moved in favor of the liquidity taker, while liquidity takers would have no equivalent mechanism to avoid executions if the market moves against them.[74]

One commenter stated that the proposal would discriminate unfairly against liquidity takers since they would be exposed to an increase in adverse selection and stale executions after the delay.[75] Another commenter suggested that the advantages liquidity providers would receive raise concerns that the proposal "is inconsistent with the objectives of Section 11A of the Act to assure fair competition among brokers and dealers, and among exchange markets." [76] Another commenter, a long-term institutional trader, indicated that their exposure to adverse selection and unfavorable fills would increase if highly sophisticated market makers could adjust their displayed quotes based on market signals.[77] This commenter elaborated that the proposal could lead to an artificial increase in passive bids and offers by EDGA Market Makers, which could result in EDGA being "similar to other venues where buy-side participants and other institutions struggle" to receive quality executions.[78]

One commenter suggested that it may be a violation of the Quote Rule to permit some market participants to modify or cancel their quotations while incoming orders seeking to access those quotations are delayed.[79] Another commenter suggested that the proposal could create problems for brokers or dealers with respect to complying with

[56] *See id.*

[57] *See* Exchange Response Letter at 4, 7.

[58] *See id.* at 9–10.

[59] *See* Citadel Letter at 2–3; Leuchtkafer Letter I at 10; Hudson River Trading Letter at 3; MFA Letter at 1–2; SIFMA Letter at 2.

[60] *See* MFA Letter at 2.

[61] *See* Citadel Letter at 2.

[62] *See id.*

[63] *See* Leuchtkafer Letter I at 9.

[64] *See* Hudson River Trading Letter at 3.

[65] *See id.*

[66] *See* Exchange Response Letter at 6.

[67] *See id.* at 6–7.

[68] *See* Black Rock Letter at 2; Citadel Letter at 2; FIA Letter at 2.

[69] *See* Citadel Letter at 2; Hudson River Trading Letter at 3; Leuchtkafer Letter I at 10–11; MFA Letter at 2; RBC Letter at 1.

[70] *See* Citadel Letter at 2–3; Hudson River Trading Letter at 3; Leuchtkafer Letter I at 7; MFA Letter at 2; RBC Letter at 2.

[71] See Black Rock Letter at 3; Citadel Letter at 3.

[72] See Black Rock Letter at 3.

[73] *See* Citadel Letter at 2.

[74] *See id.* at 5.

[75] *See* Black Rock Letter at 2.

[76] *See* MFA Letter at 3.

[77] *See* T. Rowe Price Letter at 2.

[78] *See id.*

[79] *See* Healthy Markets Letter at 11.

Rule 602(b) of Regulation NMS, which requires a broker or dealer to honor its quotes when an order is presented to trade with those prices.[80] This commenter noted that the speedbump is designed to delay the incoming order from being presented to a broker or dealer in order to provide the broker or dealer with additional time to update its prices, which would effectively allow the broker or dealer to not honor its quotation when the incoming order was presented (*i.e.,* received and processed by the Exchange).[81]

The Exchange responded that commenter concerns related to quote fading were unwarranted because post execution prices are relatively stable for most investors and such liquidity should continue to be available despite the four millisecond delay.[82] The Exchange responded that the proposal is consistent with the Quote Rule. According to the Exchange, the Quote Rule only requires quotations to be firm when presented to a broker-dealer for execution.[83] Under the proposed rule change, the liquidity provider has no knowledge of the incoming order and thus the incoming order is not presented to the liquidity provider for execution until the incoming order exits the delay mechanism.[84] The Exchange opined that since the liquidity provider would be unable to refuse the trade at this point, the liquidity provider's quotation would be firm ''consistent with both the letter and the spirit of the Quote Rule.'' [85] The Exchange also asserted that the proposal is distinguishable from ''last look'' functionality on the foreign exchange markets because EDGA liquidity providers would not have the opportunity to avoid executions with an incoming marketable order after it has been presented for execution.[86] Rather, the Exchange suggested that liquidity providers would continue to quote prices based on available market information, and the liquidity taking order would only become known when the order is presented for execution after exiting the delay mechanism.[87] The Exchange believed that the proposal could reduce the risk of adverse

selection for liquidity providers by giving them an opportunity to update their posted quotations before trading at a potentially stale price.[88] The Exchange indicated that reduced adverse selection risks for liquidity providers, as opposed to reduced liquidity for investors, was the more likely outcome, which could benefit investors by facilitating more aggressive quoting and effective price discovery on EDGA.[89] The Exchange was not persuaded by the argument that liquidity providers would free ride price discovery because the Exchange believed such a strategy would be unsuccessful and result in EDGA having inferior intermarket priority for liquidity taking orders.[90] The Exchange noted that liquidity providers on EDGA would still need to compete with each other to establish the Exchange BBO in order to trade with incoming marketable order flow, which should improve market quality on EDGA.[91]

B. Competition

Two commenters asserted that the proposal would reduce barriers to entry for new liquidity providers,[92] and three commenters believed the proposal would encourage competition among existing liquidity providers.[93] One commenter expected that the proposal would result in greater competition between EDGA market makers on the basis of price and order size.[94] One commenter characterized the proposal as ''explicitly pro-competitive'' and suggested it would help foster competition by ensuring all market participants have at least some minimum amount of time to react to price changes in related markets, which would likely reduce the advantage that would otherwise be held by the small number market participants that use ''extreme'' low-latency technology to ''pick off'' participants who take slightly longer to reprice resting orders in response to new information.[95]

Four commenters were concerned that proposal would impose a burden on competition.[96] Three commenters suggested that EDGA liquidity providers would be advantaged over liquidity providers on other markets because non-EDGA liquidity providers would not

have a mechanism to avoid unfavorable executions.[97] One commenter suggested that the proposal did not address the burden on competition that could be caused by allowing EDGA liquidity providers to ''free-ride'' on price discovery on other markets that do not employ an asymmetric delay, and how such free-riding could discourage the order display of liquidity providers on competing exchanges and potentially diminish liquidity and price discovery on those other markets.[98]

The Exchange responded that the proposal would serve to increase competition among liquidity providers by attracting a wider range of participants that could compete on factors other than speed.[99] The Exchange suggested that market participants that routinely enter two sided quotations and traded actively would benefit from the proposal relative to the amount of liquidity provided, but the benefits of the proposal would not be restricted to liquidity providers.[100] The Exchange indicated that, for instance, institutional order flow that is managed by a broker-dealer algorithm would also benefit from the ability to react to market signals during the four millisecond delay.[101] The Exchange stated that different kinds of market participants would directly benefit from the LP2 delay mechanism as liquidity providers and liquidity takers because of improved market quality.[102]

C. Impact on Market Quality

Four commenters expected that the proposal would result in improved market quality.[103] One commenter believed that the proposal would aid in attracting liquidity and positively impact order routing behavior, execution quality, and general market quality.[104] One commenter theorized that liquidity and informative prices were desirable market attributes but that such objectives sometimes conflicted and thus a tradeoff was necessary; the commenter suggested an asymmetric speedbump may be a means to achieve these dual goals because it would help to eliminate latency arbitrage.[105] Two commenters believed that the proposal would allow liquidity providers to

[80] *See* Hudson River Trading Letter at 4.

[81] *See* Hudson River Trading Letter at 4.

[82] *See* Exchange Response Letter at 5. The Exchange believes that statistics provided in the response letter related to markouts for liquidity providers on EDGA in July 2019 demonstrate that published quotations accessed by the majority of investors tend to be relatively stable in the 20 milliseconds following an investor removing liquidity posted on the EDGA order book. *See id.*

[83] *See* Exchange Response Letter at 15–16.

[84] *See id.* at 16.

[85] *See id.*

[86] *See id.* at 15.

[87] *See* Exchange Response Letter at 15–16.

[88] *See id.* at 2, 5.

[89] *See id.* at 5.

[90] *See id.* at 8.

[91] *See id.*

[92] *See* CTC Letter at 3–4; XTX Letter I at 5; XTX Letter II at 1, 8.

[93] *See* CTC Letter at 3–4; Mollner & Baldauf Letter at 2; XTX Letter I at 5; XTX Letter II at 1, 8.

[94] *See* XTX Letter II at 2.

[95] *See* CTC Letter at 1, 3.

[96] *See* Citadel Letter at 5; FIA Letter at 2; Hudson River Trading Letter at 1; MFA Letter at 1.

[97] *See* Citadel Letter at 5; Hudson River Trading Letter at 2; MFA Letter at 3.

[98] *See* Hudson River Trading Letter at 2.

[99] *See* Exchange Response Letter at 9.

[100] *See id.* at 8.

[101] *See id.* at 10.

[102] *See id.*

[103] *See* Clearpool Letter at 1; CTC Letter at 1–2; Mollner & Baldauf Letter at 2; XTX Letter I at 3; XTX Letter II at 9.

[104] *See* Clearpool Letter at 1.

[105] *See* Mollner and Baldauf Letter at 1.

narrow spreads and display larger size.[106] One commenter indicated that although high-frequency liquidity providers were likely to be the immediate beneficiaries of the asymmetric speedbump, competition among them would likely result in tighter and deeper markets that would benefit other traders, and these traders may be the ultimate beneficiaries of the asymmetric speedbump.[107] This commenter explained that even though quotes may fade during episodes of latency arbitrage, these quotes are likely to remain accessible during other times, to the benefit of most investors.[108] Another commenter believed that the proposal would make the market more fair, encourage displayed liquidity and promote efficient price discovery.[109]

Two commenters believed that a positive outcome of the proposal would be a reduced reliance on the speed of market connectivity, which would decrease the need for market participants to invest in technology in order to attain small, incremental speed advantages (*i.e.,* microseconds).[110] One of these commenters suggested that some latency sensitive firms engage in illegal or untoward activity to attain speed advantages in order to trade at stale prices, which impose an operational tax on liquidity providers that is passed on to investors.[111] This commenter believed that providing liquidity providers with the ability to identify and react to latency arbitrage strategies should result in tighter pricing and deeper books for investors.[112] This commenter indicated that even if the LP2 delay mechanism slowed down price discovery on EDGA, it would not materially affect investors because investors tend to have long-run economic exposures (*e.g.,* days, weeks, or months) and their trading or hedging activity is not motivated by market developments at the millisecond timescale.[113] This commenter noted that other commenters referenced an Australian study suggesting that an asymmetric speedbump had a negative impact on market liquidity on the TSX Alpha Exchange in Canada, however this commenter believed a subsequent academic study lacked evidence that the asymmetric speedbump had a negative

impact on liquidity, trading costs or execution quality.[114]

Nine commenters were concerned that the proposal could negatively impact market quality.[115] Three commenters noted that an asymmetric speedbump could give a misleading impression of the availability of firm quotes and therefore result in illusory quotes or liquidity.[116] One commenter stated that although the proposal may enhance displayed liquidity on EDGA, such displayed liquidity would be "conditional and less accessible" since liquidity providers would be likely to quote larger sizes and tighter spreads only because of their ability to back away from these quotes during the delay.[117] One commenter expressed concern about the potential for an increase in quote fading at other exchanges resulting in adverse change to the NBBO, which could ultimately reduce the incentive for liquidity providers to post a larger size on EDGA.[118] One commenter stated that the proposal does not explain how it would incentivize "tighter quotes or other benefits."[119] Another commenter suggested that the proposal functions as an "opaque rebate" to liquidity providers because it affords them an advantage by allowing them to avoid adverse executions, and the economic value of this advantage is not quantifiable in advance.[120] This commenter suggested that the use of structural incentives such as LP2 raises concern that transparent pricing will be replaced by advantages that are difficult to quantify, and such advantages could impact the efficacy of Rule 610T, the Transaction Fee Pilot.[121]

Two commenters were concerned about the potential for the proposal to have a negative impact on Intermarket Sweep Orders ("ISOs").[122] One commenter suggested that it would be likely that the EDGA portion of an ISO order would be filled at a worse price than other portions of the order since EDGA liquidity providers would be able to reprice displayed quotes based on recent market data.[123] The other

commenter believed that by the time the investor's order would exit the delay, the order it would have executed against on EDGA would almost certainly be gone.[124] Thus, the commenter queried how the market center would interact with ISOs that are effectively 4 milliseconds old in a scenario in which a customer seeks to access liquidity across multiple venues by sweeping the market at a given price level.[125]

One commenter suggested that marketable orders would likely be diverted to competing venues, which would result in increased adverse executions for liquidity providers on those venues since marketable orders on EDGA would be less likely to contribute to price discovery.[126] Two commenters suggested that because liquidity providers at exchanges without asymmetric delays would be likely to bear the costs of this increased adverse selection, spreads would likely widen at those venues.[127] One commenter suggested that such adverse selection would serve to reduce liquidity, degrade price discovery, and widen spreads market-wide.[128]

One commenter suggested that because similar proposals could be adopted by all or a substantial portion of the U.S. equities market, the potential impact on market quality and investor protection in such a scenario should be considered.[129] One commenter suggested approval should only be given on a pilot basis in order to limit the proposed rule change's "deleterious effects and enable collection of empirical data for assessing its impact on market quality."[130] One commenter noted that the proposal may encourage other exchanges to implement additional and longer delays, which could result in exchanges competing to execute orders more slowly.[131]

One commenter expressed that the proposed 4 millisecond delay would create "significant uncertainty of execution ("fill rates") and severely impede the ability of long-term investors to access displayed quotations simultaneously."[132] This commenter noted that MIDAS data indicated that 15.59% of quotes in large stocks are canceled within one millisecond, and because that timeframe is only one quarter of EDGA's proposed delay, it

[106] *See* XTX letter I at 1; Mollner & Baldauf Letter at 2.

[107] *See* Mollner & Baldauf Letter at 2.

[108] *See id.*

[109] *See* CTC Letter at 1.

[110] *See* XTX Letter I at 2; CTC Letter at 3.

[111] *See* XTX Letter I at 1–2.

[112] *See id.*

[113] *See* XTX Letter I at 8.

[114] *See* XTX Letter II at 8–9.

[115] *See* Black Rock Letter at 1; Citadel Letter at 10; FIA Letter at 1; Healthy Markets Letter at 7; Hudson River Trading Letter at 3–4; MMI Letter at 2; RBC Letter at 1–2; Tabb Group Letter at 2; T. Rowe Price Letter at 2.

[116] *See* Black Rock Letter at 3; FIA Letter at 2; RBC Letter at 2.

[117] *See* Hudson River Trading Letter at 3.

[118] *See* T. Rowe Price Letter at 2.

[119] *See* SIFMA Letter at 2.

[120] *See* Hudson River Trading Letter at 4.

[121] *See id.*

[122] *See* Citadel Letter at 9; Healthy Markets Letter at 14.

[123] *See* Citadel Letter at 4.

[124] *See* Healthy Markets Letter at 14.

[125] *See id.*

[126] *See* Hudson River Trading Letter at 3.

[127] *See* Black Rock Letter at 2; Hudson River Trading Letter at 3.

[128] *See* Hudson River Trading Letter at 3.

[129] *See id.* at 4.

[130] *See* Black Rock Letter at 3.

[131] *See* SIFMA Letter at 2.

[132] *See* T. Rowe Price Letter at 2.

could be expected that arbitrary cancellation rates would rise considerably if the proposal were implemented.[133] One commenter did not believe that the proposal sufficiently addressed the potential impact on financial products and asset classes traded on other venues.[134] Two commenters were concerned that the proposal would increase locked and crossed markets.[135] One commenter did not believe that the proposal addressed how trades would be conducted during locked and crossed markets which could frustrate investors receiving best execution.[136] The commenter also suggested that by ''enabling those who submit orders to modify or cancel those orders before execution, but after'' orders that could potentially match have been presented, the Exchange ''opens the door'' to potentially ''significant manipulative or abusive practices, including spoofing'', which should be addressed.'' [137] This commenter also questioned whether it was prudent to link a major market structure rule or delay mechanism to existing technology such as the high speed microwave connection, since technology is ''prone to frequent changes.'' [138]

Seven commenters referenced studies on the impact of an asymmetric speedbump on TSX Alpha, an unprotected exchange in Canada that delayed liquidity-taking orders, as a means to evaluate and critique the instant proposal.[139] One commenter noted that an Australian study on TSX Alpha suggested that even a millisecond of advance knowledge of institutional investors' trading intentions is valuable and could lead to substantial information leakage across venues resulting in an increase in total transaction costs and a reduction in order book resiliency.[140] Another commenter indicated that the Australian study found that liquidity, in the aggregate, was negatively impacted with increased market-wide costs for liquidity-takers.[141] One commenter noted that after the introduction of the speedbump, TSX Alpha's quoting at the NBBO fell immediately from 60% to

36%.[142] This commenter, while noting the structural differences between the Canadian and US markets, believed that TSX Alpha is analytically relevant to the current proposal.[143] One commenter suggested that the data related to the impact on speedbumps was unsettled because Australian and Canadian studies had yielded different conclusions, and noted that the Canadian study did not examine quote fading.[144] One commenter indicated the Canadian study found that TSX Alpha did not impact market-wide liquidity and further found negative effects for certain participants, such as buy-side investors.[145] The commenter also referenced an Ontario Securities Commission (''OSC'') staff notice that reported the OSC's own market quality measures did not materially change as a result of the TSX Alpha speedbump, as well as a survey of market participants by the OSC that found TSX Alpha added complexity into routing decisions and that fill rates on Alpha had decreased in certain situations, such as for orders that are expected to go through multiple price levels or need to be split and sent to multiple marketplaces simultaneously—*e.g.,* institutional orders.[146]

The Exchange responded that the proposal is designed to improve market quality by reducing the adverse selection risk for liquidity providers in order to encourage the provision of liquidity that is more aggressively priced with greater depth.[147] The Exchange indicated that liquidity takers could choose not to route to EDGA if liquidity providers did not step up and provide the expected market quality benefits in terms of increased depth or more aggressive prices.[148] The Exchange believed that the potential for liquidity takers to route to alternative venues would incent liquidity providers to improve market quality since their ability to trade is ''wholly contingent on attracting liquidity taking orders willing to access their quotations.'' [149] The Exchange stated that this is consistent with the current operation of EDGA liquidity providers.[150] The Exchange responded to comments related to the Australian TSX Alpha study and suggested that the results of the study had been contradicted by a subsequent

study and review performed by Canadian regulators which concluded that the TSX Alpha speedbump did not have an adverse effect on the market quality of the Canadian equity markets.[151] The Exchange also noted the significant differences between the U.S. and Canadian equities markets in terms of regulation and market structure, as well as material differences between the current proposal and the TSX Alpha speedbump.[152] The Exchange offered that to the extent that the Canadian perspective is instructive, the analysis done by Canadian regulators demonstrates the value of offering innovations similar to the instant proposal.[153]

D. Data and Support

Five commenters expressed concern that the Exchange did not provide data to support key assertions within the proposal.[154] One commenter stated that the proposal was ''inadequate in light of Susquehanna'' and noted that the proposal lacked ''quantitative detail'' related to EDGA's current marketplace, and how EDGA would achieve its stated goals if the proposal were implemented.[155] Four commenters indicated that EDGA did not provide the data necessary to demonstrate that cross-asset latency arbitrage negatively impacts liquidity on EDGA or that the proposed asymmetric speed bump would improve market quality.[156] One commenter noted that EDGA did not provide ''any data or analysis regarding how many members could be expected to increase quoting as a result'' of the proposal.[157] One commenter stated that EDGA did not provide data to evaluate the impact of the proposal on winners and losers—for example, the frequency with which liquidity providers are expected to use the delay, the impact on retail and institutional orders, and the impact on ETF market makers.[158] This commenter compared EDGA and EDGX market quality and postulated that the ''lower market quality of quotes on EDGA'' could be a function of the

[133] *See* T. Rowe Price Letter at 2 (referencing SEC's Quote Life Data Series on the MIDAS website).

[134] *See* Healthy Markets Letter at 7.

[135] *See* Healthy Markets Letter at 12; RBC Letter at 2.

[136] *See* Healthy Markets Letter at 12.

[137] *See id.* at 13.

[138] *See id.*

[139] *See* Black Rock Letter at 2; Healthy Markets Letter at 10; Leuchtkafer Letter I at 13–14; Leuchtkafer Letter II at 5–6; Leuchtkafer Letter III at 7; MFA Letter at 2; SIFMA Letter at 2.

[140] *See* MFA Letter at 2.

[141] *See* SIFMA Letter at 2.

[142] *See* Black Rock Letter at 2.

[143] *See id.*

[144] *See* Leuchtkafer Letter II at 5–6.

[145] *See* Leuchtkafer Letter III at 7.

[146] *See* Leuchtkafer Letter III at 7.

[147] *See* Exchange Response Letter at 1–2.

[148] *See id.* at 8.

[149] *See id.*

[150] *See id.* at 15–16.

[151] *See id.* at 10. The Exchange referenced a joint study on the impact of the TSX Alpha redesign conducted by the Investment Industry Regulatory Organization of Canada and the Bank of Canada, as well as a review conducted by the Ontario Securities Commission. *See id.*

[152] *See* Exchange Response Letter at 11.

[153] *See id.*

[154] *See* Citadel Letter at 6 and 10; Leuchtkafer Letter I at 2–5; FIA Letter at 2; Healthy Markets Letter at 5–6; SIFMA Letter at 2.

[155] *See* Leuchtkafer Letter I at 3, 15 (citing Susquehanna Int'l Grp., LLP v. SEC, 866 F.3d 442 (D.C. Cir. 2017)).

[156] *See* Citadel Letter at 6–7; FIA Letter at 2; Healthy Markets Letter at 6; SIFMA Letter at 2.

[157] *See* Healthy Markets Letter at 7.

[158] *See* Citadel Letter at 7.

different fee and rebate structures of the exchanges.[159] This commenter believed that its comparison of market quality on these exchanges provided insight into the potential impact of the inverted fee structure on EDGA, and stated that EDGA did not explain how its inverted fee structure would interact with the proposal to deliver the benefits claimed.[160]

One commenter believed that the MIDAS data referenced by another commenter, *i.e.,* that 15.59% of orders in large stocks are cancelled within one millisecond, were irrelevant to whether the delay mechanism impacted the fill rates for institutional investors because it is unlikely that latency arbitrage would occur immediately after order placement.[161] Another commenter suggested that ''the proposal [has] some merits'' and suggested that quote and execution traffic should be examined in order to estimate how much quote fading would occur via market makers within 4 milliseconds of a price movement.[162] The commenter also suggested that it would be beneficial to analyze how the proposed Transaction Fee Pilot's reduced and no-rebate pricing tiers might impact liquidity, and how this could be countered by the introduction of an asymmetric speedbump.[163]

The Exchange responded by providing data and analysis that it believes illustrates the latency arbitrage problem. The Exchange presented a chart displaying markouts for liquidity providers on EDGA in SPY for July 2019 that was based on whether a transaction involved a missed cancel—*i.e.,* instances in which a liquidity provider attempted and failed to cancel or replace their quotation within 4 milliseconds after an execution.[164] The Exchange indicated that ''these statistics illustrate the difference between the execution price and the midpoint price at the time of the trade and in the milliseconds following an execution.''[165] The Exchange believed the data demonstrated that the midpoint price moves dramatically in the milliseconds immediately following transactions involving missed cancels, and that transactions in this category often involve a handful of faster firms that are routinely able to predict and

profit from prices that are about to change.[166] The Exchange expressed that when prices immediately move against the resting order in the milliseconds following the trade, the trade was likely to have been executed at a stale price.[167] The Exchange further explained its belief that by offering a four millisecond period for liquidity providers to update their posted quotations before trading at a stale price, the LP2 delay mechanism would reduce the effectiveness of latency arbitrage strategies.[168]

In response to the information provided by the Exchange, one commenter suggested that the sample selection in the chart does not necessarily show stale quotes being picked off by latency arbitrageurs in Chicago, but rather may demonstrate that the SPY signal to cancel is coming from somewhere closer than Chicago, or perhaps that some or all of the EDGA market makers use something faster than fiber.[169] This commenter also suggested that based on the graphs provided by the Exchange, the proposal could result in providing an ''investor-funded subsidy'' of $900 a day or more in SPY to EDGA market makers.[170] This commenter also suggested that the data likely shows the effect of investor equities market sweeps as opposed to latency arbitrage activity based on the futures markets in Chicago.[171]

E. Impact of the SIP Disseminating Manual, Unprotected Quotes

One commenter expressed support for the inclusion of EDGA's unprotected quote in the SIP, and ultimately emphasized that there should be an appropriate modifier denoting the unprotected status.[172] In its second letter, the commenter noted that no market participant would be required to access EDGA's unprotected quote and thus the Exchange would stand or fall on its own merits.[173] The commenter also stated that it would be reasonable for pegged orders to only peg off the protected BBO and exclude unprotected quotes, which the Exchange explained is how the Canadian markets handle the pricing of pegged orders today in a market with both protected and unprotected quotes.[174] The commenter also expressed it would be reasonable to exclude unprotected quotes from

consideration for regulatory references such as Regulation SHO's price test.[175]

Eight commenters expressed concern about the inclusion of EDGA's quotations to the SIP as manual, unprotected quotes.[176] Two of these commenters argued that EDGA quotations should be removed from the SIP.[177] One commenter suggested that the inclusion of EDGA's quotations in the SIP would allow EDGA to free ride the SIP.[178] Three commenters were concerned about the potential impact of EDGA quotes on the pricing of pegged orders, including midpoint orders.[179] As one commenter explained, many trading venues use the SIP NBBO for pegged orders, and to the extent EDGA sets the NBBO, the proposal could impact midpoint pegging prices on other venues with an inaccessible quotes that is artificially narrower than those on other venues.[180] One commenter suggested considering whether the SIPs should disseminate a new Protected Best Bid and Offer (''PBBO'') that would not include EDGA's non-protected quote and how EDGA's non-protected quote should be used in calculating midpoint values.[181] One commenter questioned how the NBBO would be determined when the SIP contains both protected and unprotected quotes, and whether it would be appropriate for a venue with only unprotected quotes to publish to the SIP—as well as what the implications would be for the different SIP Plans and for revenue sharing.[182] This commenter also queried how the routing of certain orders, such as ISOs, would be affected, and whether market participants would be required to make technological changes as a result.[183] Another commenter indicated the dissemination of unprotected, manual quotes to the SIP would add complexity and confusion to the national market system that could be harmful to long-term investors.[184]

The Exchange responded to comments suggesting that EDGA's quotation should be excluded from the NBBO disseminated by the SIP. The Exchange contended that eliminating EDGA's quotation from the SIP would

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[159] *See id.* at 7 and 10.
[160] *See id.* at 7.
[161] *See* XTX Letter II at 4 (referencing T. Rowe Price Letter, which provided data from the SEC's Quote Life Data Series on the MIDAS website).
[162] *See* Tabb Group Letter at 5.
[163] *See* Tabb Group Letter at 5.
[164] *See* Exchange Response Letter at 3–4, Appendix A.
[165] *See id.* at 3.

[166] *See id.*
[167] *See id.*
[168] *See id.* at 2, 4.
[169] *See* Leuchtkafer Letter III at 3.
[170] *See id.* at 5.
[171] *See id.* at 6.
[172] *See* XTX Letter I at 5; XTX Letter II at 7.
[173] *See* XTX Letter II at 3.
[174] *See id.* at 6.

[175] *See* XTX Letter II at 6.
[176] *See* Black Rock Letter at 3; Citadel Letter at 8; Clearpool Letter at 3–4; Healthy Markets Letter at 10; Hudson River Trading Letter at 3; RBC Letter at 3; SIFMA Letter at 3; T. Rowe Price Letter at 2.
[177] *See* Clearpool Letter at 3–4; Healthy Markets Letter at 13.
[178] *See* Healthy Markets Letter at 12.
[179] *See* Citadel Letter at 9; Healthy Markets Letter at 14; SIFMA Letter at 3.
[180] *See* Healthy Markets Letter at 14.
[181] *See* SIFMA at 3.
[182] *See* Citadel Letter at 8–9.
[183] *See id.* at 8.
[184] *See* T. Rowe Price Letter at 2.

only serve to reduce transparency into the best prices available for securities, which would likely result in investor orders being executed at worse prices.[185] The Exchange noted that broker-dealers would remain free to determine how to use EDGA's manual quotation information, such as for setting midpoint prices or using it as a reference price for the execution of customer orders on ATSs or other off exchange markets.[186] The Exchange noted the EDGA manual quote would be identified in SIP feeds in the same manner as manual quotations disseminated from the NYSE floor, and that firms choosing to ignore EDGA's quotations could continue to identify the PBBO for order routing and trade-through compliance purposes, among others.[187]

F. Impact on the National Market System

Four commenters expressed concern about how the proposal could impact the National Market System, particularly as it relates to the publication of manual, unprotected quotations and functions related to the NBBO.[188] One commenter questioned whether EDGA would continue to meet Rule 604 standards for displaying customer limit orders without protected quote status.[189] Five commenters were concerned about how the proposal would impact the calculation of Rule 605 metrics and execution quality disclosures.[190] One commenter suggested that the inclusion of EDGA's quotation in the benchmark used for calculating execution quality statistics under Rule 605 would allow EDGA to free ride such metrics.[191] This commenter explained that because only the best orders on the exchange would be executed, and statistical measures of execution quality do not currently account for how many quotations are "subject to backing away," execution quality metrics would likely show that EDGA's execution quality is better than execution quality on other exchanges, even if this is not the case.[192] Another commenter suggested that in addition to Rule 605 reporting, EDGA's best bid should not be used as a reference price

for Regulation SHO, best execution, mid-point executions, or OTC transactions, since it would not be immediately accessible.[193]

One commenter opined that market data would not be impacted by the proposal because liquidity providing and quote generating orders would not be subject to the delay mechanism, and execution information for those orders would not be delayed once they pass over the speedbump.[194]

Three commenters were concerned that the proposal could result in an increase in locked and crossed markets.[195] One commenter questioned whether the proposal is consistent with Rule 610 of Regulation NMS and was concerned that the proposal did not address trading during locked and crossed markets, which could increase the risk of investors not receiving best execution.[196] One commenter noted that EDGA would be able to lock and cross automated markets despite being defined as a manual market, and cautioned that crossed markets may be more frequent and last longer than expressed in the proposal.[197]

Nine commenters were concerned that this proposed rule change could result in increased market complexity if implemented as proposed.[198] Five commenters were concerned about the potential for this proposal to establish precedent that could result in substantially similar proposals from competing exchanges, which could serve to increase market complexity.[199] One commenter indicated that the proposal may actually create an incentive not to trade on EDGA, and suggested that it would be beneficial to ascertain "what types of liquidity incentives are valuable to the market and to the economy."[200] The commenter explained that because EDGA's inverted pricing model charges liquidity providers a fee when an order executes, the proposal would effectively allow liquidity providers to pull their quotes on EDGA as other markets move and incentivize quote fading to avoid

the fee that would be incurred in the event of an execution.[201]

One commenter believed that because the proposal would eliminate or adjust the operation of certain rarely used order types and instructions, the Exchange was taking steps to reduce the complexity of its market.[202]

G. Impact on Best Execution and Broker-Dealer Obligations

Eight commenters expressed concern about the impact of the proposed rule change on broker-dealers' regulatory obligations, particularly with respect to a broker-dealer's obligation to obtain best execution.[203] One commenter believed that Commission and FINRA guidance and the adopting release for Regulation NMS adequately addressees best execution obligations.[204] This commenter noted that the decision to access a manual quotation rests with the broker-dealer's review of execution quality.[205] Four commenters conveyed it would be important to issue new guidance or modernize existing guidance to address the application of best execution principles to routing quotes to an unprotected exchange as compared to protected exchanges if the proposal is approved.[206] One commenter requested clarification that broker-dealers do not necessarily have to access or route to an unprotected venue that displays the best quote.[207] One commenter questioned whether EDGA's request to extend the "Flickering Quote Exception" to unprotected quotes would be appropriate, given that this may result in situations where a quote published on the SIP is locked or crossed with a protected quote, leading to potential confusion regarding best execution obligations and executions occurring outside of the protected NBBO.[208] One commenter suggested that the proposal would disincentivize improving the best bid or offer displayed on away markets.[209]

The Exchange responded to comments related to best execution concerns. The Exchange posited that the Commission's guidance related to best execution provided in conjunction with

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[185] *See* Exchange Response Letter at 13–14.

[186] *See id.* at 14.

[187] *See id.* at 14–15.

[188] *See* Citadel Letter at 8; Healthy Markets Letter at 10–12; Hudson River Trading Letter at 3; RBC Letter at 3.

[189] *See* Citadel Letter at 8.

[190] *See* Black Rock Letter at 3; Citadel Letter at 8–9; Healthy Markets Letter at 11–12 and 14–15; Hudson River Trading Letter at 3; SIFMA Letter at 3.

[191] *See* Healthy Markets Letter at 12 and 14–15.

[192] *See id.* at 12.

[193] *See* Hudson River Trading Letter at 3.

[194] *See* Tabb Group Letter at 1.

[195] *See* Healthy Markets Letter at 12; Hudson River Trading Letter at 4 n.7; RBC Letter at 2.

[196] *See* Healthy Markets at 12,14.

[197] *See* RBC Letter at 2.

[198] *See* Black Rock Letter at 1; Clearpool Letter at 4; FIA Letter at 2; Hudson River Trading Letter at 4; Leuchtkafer Letter II at 5; MMI Letter at 1–2; RBC Letter at 3; SIFMA Letter at 2; T. Rowe Price Letter at 2 and 3.

[199] *See* Black Rock Letter at 2; Hudson River Trading Letter at 4; RBC Letter at 2; SIFMA Letter at 2; T. Rowe Price Letter at 2.

[200] *See* Tabb Group Letter at 4.

[201] *See* Tabb Group Letter at 4.

[202] *See* XTX Letter I at 6.

[203] *See* Black Rock Letter at 3; Citadel Letter at 9; Clearpool Letter at 3–4; Healthy Markets Letter at 11–12; Hudson River Trading Letter at 4; MFA Letter at 3; RBC Letter at 3; SIFMA Letter at 2.

[204] *See* XTX Markets Letter II at 6–7.

[205] *See id.* at 7.

[206] *See* Black Rock Letter at 3; Healthy Markets Letter at 13–14; MFA Letter at 3; SIFMA Letter at 3.

[207] *See* SIFMA Letter at 3.

[208] *See* Citadel Letter at 9.

[209] *See* Black Rock Letter at 2.

the adoption of Regulation NMS remained relevant, and broker-dealers should continue to be able to determine how to best to route their clients' orders.[210] The Exchange noted that broker-dealers already account for different types of execution venues in making best execution decisions, and the majority of these venues are not national securities exchanges and do not publicly disseminate a protected quotation, or display any quotation at all.[211] The Exchange agreed with reasoning set forth in the Regulation NMS adopting release suggesting that that exclusion of manual quotations from the NBBO could result in broker-dealers ignoring the best available quotations when executing customer orders.[212] The Exchange therefore contended that a similar best execution analysis would apply when determining whether to route an order to an unprotected exchange disseminating a manual quotation.[213] The Exchange further noted that if the proposal does not yield the intended market quality benefits on EDGA, broker-dealers would be free to route their clients' orders elsewhere according to their analysis of the best market for the security under prevailing market conditions.[214]

H. Operation of the Delay

Two commenters noted that there is no precedent for an asymmetric speedbump in the U.S. equities market.[215] One commenter noted that the instant proposal differed from the intentional delays implemented by NYSE American and IEX in that the 4 millisecond delay is approximately ten times longer than the 350 microsecond delays on IEX and NYSE American, and that EDGA proposes to waive order protection for its quotes, whereas the quotes on IEX and NYSE American would continue to be protected.[216] One commenter believed that a delay somewhat shorter in length than 4 milliseconds would suffice, although the proposal was a "step in the right direction."[217]

One commenter believed that while the proposed delay is longer in duration than those of the symmetric speedbumps implemented by IEX and NYSE American, the four-millisecond speed bump "appropriately recognizes the realities of U.S. market structure,

where highly correlated instruments including equities, futures, and ETFs are variously traded in data centers across the New York-New Jersey metro area as well as in and around Chicago."[218] This commenter believed the duration of the proposed delay reasonably reflected the technological realities of cross-market securities and derivatives trading and hedging strategies.[219]

One commenter expressed concern that the proposal was not sufficiently clear in regard to how the proposed delay mechanism would operate, particularly in circumstances where intervening actions occur.[220] This commenter noted the examples provided by the Exchange did not address orders of different types or sizes, or orders from additional market participants.[221] This commenter posed the following questions about how a 200 share order that is submitted might interact with a 100 share order that is resting on the Exchange: (1) Whether the full 200 share order would be delayed; (2) if 100 shares were delayed, whether the other 100 shares would be permitted to post; (3) whether the non-delayed 100 shares would be sent to other market centers; (4) whether the firm who submitted the resting order that triggered the delay would be able to modify its order to increase its size in the interim, perhaps to 200 shares, and the impact of this change; (5) whether the answers to these questions are dependent upon order types used or other factors, and if so, what those factors are and how would they be determinative; (6) whether a new order that is submitted while a delayed order is waiting would be able to immediately execute against the now-delayed order once it waits out the four milliseconds, or if it would also be subject to a delay.[222] The commenter also requested an explanation related to why the first cancel or cancel/replace message entered would be queued and all subsequent messages would be ignored if a user enters multiple cancel or cancel/replace messages for a liquidity taking order during the delay period.[223] The commenter also inquired about the outcome in a scenario in which a quote is not canceled for one second in order to comply with the flickering quote rule.[224]

IV. Proceedings To Determine Whether To Approve or Disapprove SR–CboeEDGA–2019–012 and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Exchange Act [225] to determine whether the proposed rule change should be approved or disapproved. Institution of such proceedings is appropriate at this time in view of the legal and policy issues raised by the proposed rule change. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, as stated below, the Commission seeks and encourages interested persons to provide comments on the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Exchange Act,[226] the Commission is providing notice of the grounds for disapproval under consideration. The Commission is instituting proceedings to allow for additional analysis of the proposed rule change's consistency with: (1) Section 6(b)(5) of the Exchange Act, which requires, among other things, that the rules of a national securities exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers;[227] (2) Section 6(b)(8) of the Exchange Act, which requires that the rules of a national securities exchange not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act;[228] and (3) Section 11A of the Exchange Act.[229]

V. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their views, data, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal. In particular, the Commission invites the written views of interested persons concerning whether the proposal is consistent with Sections 6(b)(5), 6(b)(8), and 11A of the Exchange Act, any other provision of the Exchange Act, or any other rule or regulation under the Exchange Act. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of views, data, and

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[210] *See* Exchange Response Letter at 12.

[211] *See id.* at 12–13.

[212] *See* Exchange Response Letter at 14.

[213] *See* Exchange Response Letter at 13.

[214] *See id.*

[215] *See* Black Rock Letter at 1–2; Citadel Letter at 1.

[216] *See* Tabb Group at 1.

[217] *See* Mollner & Baldauf Letter at 2.

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[218] *See* CTC Letter at 3.

[219] *See id.*

[220] *See* Healthy Markets Letter at 6–7.

[221] *See id.*

[222] *See id.* at 7.

[223] *See* Healthy Markets Letter at 7.

[224] *See id.*

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[225] 15 U.S.C. 78s(b)(2)(B).

[226] *Id.*

[227] 15 U.S.C. 78f(b)(5).

[228] 15 U.S.C. 78f(b)(8).

[229] 15 U.S.C. 78k–1.

arguments, the Commission will consider, pursuant to Rule 19b–4, any request for an opportunity to make an oral presentation.[230]

Interested persons are invited to submit written data, views, and arguments regarding whether the proposal should be approved or disapproved by October 21, 2019. Any person who wishes to file a rebuttal to any other person's submission must file that rebuttal by November 4, 2019. The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal, in addition to any other comments they may wish to submit about the proposed rule change. In particular, the Commission seeks comment on the following:

1. Do commenters agree with the Exchange's assertion that the proposal would reduce cross-market latency arbitrage and improve market quality by enabling liquidity providers to maintain tighter spreads for longer durations and with greater size? Why or why not? How should enhancements to market quality be measured?

2. According to several commenters, EDGA liquidity would be ''illusory'' because the Exchange's liquidity providers could update their quotations while incoming orders are delayed. Do commenters believe that the proposed rule change would lead to quote fading? Why or why not? Do commenters believe that the proposed rule change would impact fill rates? Would the ''illusory'' liquidity be a significant portion of the Exchange's overall liquidity?

3. Some commenters assert that the proposal is not unfairly discriminatory under the Exchange Act because the proposal addresses a particular behavior as opposed to specific class or type of market participants. Is this assertion accurate? Why or why not?

4. Will the proposal increase the risk of adverse selection for liquidity takers and market participants that are unable to react to market signals in order to adjust their quotes within four milliseconds?

5. Is an intentional delay of four milliseconds necessary to minimize the effectiveness of latency arbitrage strategies? Will the delay negate the advantages that trading firms using the latest microwave connections have over liquidity providers using traditional fiber connections? Should the delay be shorter or longer to accomplish this goal? Is four milliseconds an appropriate duration for a delay? Is such delay consistent with the Act? Why or why not?

6. Is the proposal tailored in a manner such that its potential benefits outweigh the potential or likelihood of harm or unintended consequences to the national market system?

7. Should the Exchange's unprotected, manual quote be allowed to lock or cross manual quotations disseminated by another manual market? Why or why not?

8. What impact, if any, would the dissemination of an unprotected, manual quote have on the national market system? Should EDGA's unprotected, manual quote be disseminated by the SIP? If so, should the SIP disseminate a modifier to indicate that EDGA's quote is manual? Should the EDGA quote be used to calculate the NBBO? Should the EDGA quote be used to calculate midpoint values?

9. How will the dissemination of EDGA's unprotected, manual quote impact a broker-dealer's obligation to obtain best execution?

10. What would be the impact, if any, on the national market system if other national securities exchanges, with a larger percentage of overall trading volume, adopted a similar proposal? In particular, how would the proposal affect market quality?

11. What are commenters' views on how the proposal would affect trading activity, in general, and liquidity providers, in particular, on other markets? Would the LP2 delay mechanism impose systemic risks and create informational disparities across the national market system? Would the proposal provide EDGA liquidity providers with the option to leverage or free ride price discovery that occurs at other trading venues?

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 email to *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 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 (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of these filings 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 October 21, 2019. Rebuttal comments should be submitted by November 4, 2019.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[231]

Jill M. Peterson,
Assistant Secretary.
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SECURITIES AND EXCHANGE COMMISSION

Submission for OMB Review; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736.

Extension:

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[230] Section 19(b)(2) of the Exchange Act, as amended by the Securities Act Amendments of 1975, Public Law 94–29 (June 4, 1975), grants the Commission flexibility to determine what type of proceeding—either oral or notice and opportunity for written comments—is appropriate for consideration of a particular proposal by a self-regulatory organization. *See* Securities Act Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).

[231] 17 CFR 200.30–3(a)(57).