



December 20, 2019

Via Electronic Submission

Vanessa Countryman  
Secretary  
Securities and Exchange Commission  
100 F Street, NE  
Washington, D.C. 20549-1090

Re: Release No. 34- 86168, File No. SR-CboeEDGA-2019-012

Dear Ms. Countryman:

Cboe EDGA Exchange, Inc. (“EDGA” or the “Exchange”) appreciates the opportunity to respond to comments submitted to the Securities and Exchange Commission (“Commission”) on the above-referenced proposed rule change (the “Proposal”).<sup>1</sup> The Proposal was filed on June 7, 2019 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. On August 22, 2019, the Exchange filed its initial response letter, addressing a number of comments received on the Proposal, and explaining the potential for the proposed Liquidity Provider Protection (“LP<sup>2</sup>”) to reduce adverse selection risks for liquidity providers, and benefit the market through improvements to market quality.<sup>2</sup> On September 24, 2019, the Commission instituted proceedings to determine whether to approve or disapprove the Proposal (“Order Instituting Proceedings”),<sup>3</sup> and a number of additional comments have subsequently been filed by

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<sup>1</sup> See Securities Exchange Act Release No. 86168 (June 20, 2019), 84 FR 30282 (June 26, 2019) (SR-CboeEDGA-2019-012) (“Notice”).

<sup>2</sup> See Letter from Adrian Griffiths, Assistant General Counsel, Cboe Global Markets, dated August 22, 2019 (“Initial Response Letter”).

<sup>3</sup> See Securities Exchange Act Release No. 87096 (September 24, 2019), 84 FR 51657 (September 30, 2019) (SR-CboeEDGA-2019-012) (“Order Instituting Proceedings”).

industry participants. The Exchange continues to believe that the Proposal would encourage fair, orderly, and efficient markets that benefit investors, including both liquidity providers and market participants that access liquidity on EDGA. This comment letter responds to comments filed after the Initial Response Letter and the Order Instituting Proceedings.<sup>4</sup>

I. *It is not Unfairly Discriminatory to Treat Liquidity Providing Orders Differently from Liquidity Taking Orders in an effort to Enhance Market Quality*

Section 6(b)(5) of the Exchange Act requires that the rules of an exchange not be “designed to permit unfair discrimination between customers, issuers, brokers, or dealers.”<sup>5</sup> As detailed in the Exchange’s Initial Response Letter, the Proposal is designed to promote improved market quality, and thereby benefit investors, including when those investors add or remove liquidity from the EDGA Book. That is, the Proposal is designed to reduce adverse selection risks of liquidity providers, and, in turn, assist those liquidity providers in making better markets to the benefit of liquidity removers. All market participants that are not engaged in the latency arbitrage strategies that the Proposal is designed to discourage can benefit from the Proposal, either through submitting liquidity providing orders that benefit directly from the LP<sup>2</sup> delay mechanism,<sup>6</sup> or through submitting liquidity removing orders that may benefit from improved market quality.

The fact that the LP<sup>2</sup> delay mechanism is designed to discourage latency arbitrage, and would therefore be applied to a subset of orders entered on EDGA (those that remove liquidity) but not others (those that add liquidity) does not render the Proposal unfairly discriminatory. First, as explained in the Initial Response Letter, there are relevant differences between orders that add liquidity and those that remove liquidity that justify providing protections specific to those orders that provide liquidity to investors. Although both liquidity adding and liquidity removing orders are necessary for a healthy trading ecosystem, liquidity providing orders, in particular, offer a

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<sup>4</sup> This letter provides additional color on items addressed in recent comment letters, and is meant to be read in conjunction with the Initial Response Letter. The Exchange incorporates by reference all information provided in the Initial Response Letter.

<sup>5</sup> 15 U.S. Code § 78f(b)(5).

<sup>6</sup> As explained in our Initial Response Letter, this includes not only registered market makers but a wide range of market participants that submit passive order flow, including institutional order flow that is typically managed using broker-dealer algorithms.

valuable service to investors. Notably, liquidity providing orders establish quoted prices and provide what the Commission has called a “free option”<sup>7</sup> to investors looking to trade with posted liquidity, thereby benefiting takers of liquidity whose interests are “inextricably linked”<sup>8</sup> with those of liquidity providers. Second, all market models necessarily involve treating certain orders differently from others in some manner based on one or more identifiable characteristics. For example, the standard price-time allocation model used by the majority of U.S. equities exchanges, including EDGA, preferences orders that are entered first in time over orders that are entered later in time. Yet, while price-time priority obviously provides certain efficiencies by encouraging market participants to be first to establish the best price, it is not the only way to prioritize orders. An exchange could, for example, reasonably determine to offer a price setter pro rata model similar to that employed by Nasdaq PSX to encourage larger orders and price setting behavior by market participants. Or, a competing market could instead choose to provide priority first to orders entered on behalf of retail investors, as is the case now on Cboe EDGX Exchange, Inc., which introduced retail priority on November 1, 2019. In each instance, the market operator must make certain determinations about what sort of market model would promote the maintenance of fair, orderly, and efficient markets. Market operators that do this successfully are rewarded with increased order flow and market share. Far from being unfairly discriminatory, improving market quality through innovative trading mechanisms is a core function of a national securities exchange.<sup>9</sup>

Presumably, the disagreement with certain commenters about whether the Proposal is unfairly discriminatory turns not on the fact that the Proposal involves treating certain kinds of orders differently from others, as is always the case, but instead on a substantive disagreement about who would benefit from the Proposal, and whether the Exchange would ultimately be successful in its goal of improving market quality for investors. For example, one commenter that has suggested that the Proposal is unfairly discriminatory has questioned the Exchange’s statement that the Proposal would benefit a wide range of market participants, including both liquidity

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<sup>7</sup> See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37495, 37526 (June 29, 2005) (S7-10-04) (“Reg. NMS Adopting Release”).

<sup>8</sup> Id. at 37526.

<sup>9</sup> See e.g. Securities Exchange Act Release No. 87327 (October 17, 2019), 84 FR 56956 (October 24, 2019) (Commission Statement on Market Structure Innovation for Thinly Traded Securities).

providers and liquidity takers.<sup>10</sup> In support of that proposition, the commenter cites a letter written by two academics that have written in favor of the Proposal based on their recent research, selectively quoting the following statement in isolation: “the immediate beneficiaries of the asymmetric speed bump will primarily be high-frequency liquidity providers.”<sup>11</sup> In full context, however, the Professors write: “*although* the immediate beneficiaries of the asymmetric speed bump will primarily be high-frequency liquidity providers—*they may not be the ultimate beneficiaries.*”<sup>12</sup> (Emphasis added) That is, the benefits are likely be passed on to investors, or as the Professors explain: “Although high-frequency liquidity providers will face better conditions because of the speed bump, competition among them will likely lead them to quote tighter and deeper markets, thereby passing some or all of the benefits on to other traders. These quotes might fade during episodes of latency arbitrage (to the detriment of high-frequency arbitrageurs), but they are likely to remain accessible during other times (to the benefit of most investors).”<sup>13</sup>

Related comments that are critical of the Proposal fail on similar grounds. One commenter, for example, has alleged that the Proposal would provide an inappropriate “investor-funded subsidy” to registered market makers on EDGA.<sup>14</sup> This allegation ignores the significant benefits the Proposal actually seeks to provide to investors. The LP<sup>2</sup> delay mechanism is intended to encourage better market quality, and would do this by reducing the effectiveness of certain harmful latency arbitrage strategies employed by a handful of liquidity removers. Although the cost of adverse selection is paid for directly by liquidity providers, reducing this cost would allow those liquidity providers to improve their quotations and increase available liquidity throughout the trading day. The LP<sup>2</sup> delay mechanism would therefore not only benefit liquidity providers – *i.e.*, the direct or “immediate” beneficiaries of the Proposal – but also the investors that rely on posted

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<sup>10</sup> See Letter from Stephen Berger, Managing Director, Global Head of Government and Regulatory Policy, Citadel Securities to Vanessa Countryman, Secretary, Commission, dated October 21, 2019.

<sup>11</sup> Id.

<sup>12</sup> See Letter from Joshua Mollner, Assistant Professor, Northwestern University, and Markus Baldauf, Assistant Professor, University of British Columbia to Vanessa Countryman, Secretary, Commission, dated September 12, 2019.

<sup>13</sup> Id.

<sup>14</sup> See Letter from R. T. Leuchtkafer to Vanessa Countryman, Secretary, Commission dated October 21, 2019.

liquidity. The Exchange continues to believe that this is a valuable goal, and one that can be achieved through the introduction of the LP<sup>2</sup> delay mechanism.

Our Initial Response Letter illustrates the market structure issues that the LP<sup>2</sup> delay mechanism is designed to solve. The missed cancel analysis detailed in that letter illustrates the impact of trades where the liquidity provider understands that it is quoting an incorrect or “stale” price but is unable to revise its published bid or offer before its quotation is accessed by a faster market participant. The commenter challenging this analysis has chosen to identify the benefits of the Proposal in reducing these risks as a “subsidy” being offered to liquidity providers. We disagree with this characterization. Correcting market inefficiencies is not an inappropriate “subsidy,” nor would the benefits to liquidity providers come at the expense of investors, who may more accurately be considered the ultimate beneficiaries of the Proposal. Only a very small minority of market participants are capable of targeting millisecond or microsecond level price changes, and the benefits the Proposal would offer in terms of reduced adverse selection risk for liquidity providers would come primarily from the reduced ability of those firms to continue engaging in potentially harmful latency arbitrage strategies. In fact, far from being an investor-funded subsidy for EDGA market makers, the Exchange expects that a meaningful portion of any savings earned by liquidity providers would be passed on to investors in the form of better market quality. It is beneficial to the U.S. equities ecosystem to offer an exchange where investors that are not latency sensitive can interact with liquidity providers that are willing to offer their best quotations in a market with materially reduced adverse selection risk. In doing so, the Exchange intends to incentivize tighter spreads, larger size, and longer quote durations that would benefit the majority of the investors. Indeed, it is these benefits that would attract liquidity takers to choose to send order flow a market that is not protected under Regulation NMS.

Ultimately, and as already described in detail in the Initial Response Letter, there are good reasons to believe that the Proposal would encourage more competitive quoting on the Exchange. Adverse selection risks are carefully accounted for by liquidity providers who must price this risk into their posted quotations. A four millisecond speed bump, roughly equivalent to the difference in latencies experienced over microwave and fiber connections between Illinois and New Jersey, should largely eliminate this risk. And through competition we believe that the benefits of this reduced risk would accrue not just to liquidity providers, but also to investors, as those liquidity providers compete to offer the best quoted prices on the EDGA Book. The Exchange understands

that certain commenters have a different view – *i.e.*, the Proposal would benefit liquidity providers without their passing on any commensurate benefit to investors. These are factual questions that can only be answered with finality by implementing such a mechanism and attempting to improve the market for investors.

Of course, different market participants involved in the U.S. equities markets will always have different views about whether a particular market structure proposal will, or will not, be effective in meeting its goals. This is not a good reason to avoid innovation. Factual disagreements aside, it is plainly not unfairly discriminatory, or otherwise inconsistent with the Exchange Act, to implement innovations that are designed to enhance market quality merely because a handful of market participants have expressed doubts that such innovations will be successful. This is particularly the case where, as is true here, the proposed market structure would be offered on a purely voluntary basis without any regulatory obligations for market participants to access liquidity posted on an exchange disseminating a manual, unprotected, quotation.

II. *EDGA's Proposed Manual Quotation would not Adversely Impact the National Market System, and is Consistent with both Regulation NMS, which Authorizes the Dissemination of Manual Quotations, and the Commission's Guidance on Automated Quotations*

The Exchange continues to believe that EDGA's manual quotation should be included in the NBBO as clearly and unambiguously *required* pursuant to Regulation NMS. Certain commenters have nonetheless continued to express concerns with the regulatory structure imposed by the Commission, or in some cases have attempted to differentiate between the floor based manual quotations that were explicitly contemplated at the time with the manual quotation that would be disseminated by EDGA. These arguments remain unconvincing. The Commission determined to include manual quotations in the NBBO in order to ensure that the best prices available in NMS stocks are transparent to investors. This applies to all manual quotations, regardless of whether those manual quotations are disseminated from a trading floor, or from a fully electronic exchange that disseminates a manual quotation pursuant to the Commission's guidance on automated quotations under Regulation NMS.

Still, certain commenters have suggested that including EDGA's manual quotation in the NBBO was “not the type of situation contemplated when Regulation NMS considered the manual

vs. automated debate”<sup>15</sup> and should therefore not be permitted despite the Commission’s clear dictate. These arguments fail on a number of grounds. First, the Exchange is not aware of any provision of Regulation NMS that would allow it to distinguish between manual quotations that should be made transparent to investors through inclusion in the NBBO, and those that should not. Second, any differences between floor based manual quotations and the proposed EDGA manual quotation actually weigh *in favor* of including the EDGA manual quotation in the NBBO. Of course, innovations like the LP<sup>2</sup> delay mechanism were not around at the time Regulation NMS was adopted. Indeed, this particular innovation arguably may not have been necessary in the market structure that existed at that time – *e.g.*, prior to the introduction of microwave connectivity and other enhancements in the speed of trading that have taken place over the last decade and a half. That said, from the perspective of an investor that the Commission has determined should have transparency into the best prices available in the market, the main difference between the EDGA manual quotation and manual quotations that were contemplated in 2005 is that EDGA’s manual quotation would be multiple orders of magnitude *faster* than manual quotations emanating from a trading floor. Surely, had the Commission had the opportunity to view the future evolution of the U.S. equities markets when determining what quotations to include in the NBBO, it would not have chosen to exclude manual quotations subject to a short four millisecond delay while including slower manual quotations that are subject to human intervention and therefore significantly less accessible than EDGA’s proposed manual quotation.

Rehashed arguments about the potential to complicate broker-dealers’ best execution analysis by including manual quotations in the NBBO disseminated by the SIPs do not make these interpretations any more convincing.<sup>16</sup> Indeed, commenters raised – and the Commission rejected – similar arguments during the Regulation NMS notice and comment process. As the Commission explained in the Regulation NMS Adopting Release: “[S]ome commenters continued to assert that manual quotations should be excluded from the NBBO... They argued that including manual quotations in the benchmark against which a broker-dealer’s best execution responsibility is

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<sup>15</sup> See Letter from Ray Ross, Chief Technology Officer, Clearpool Group to Vanessa Countryman, Secretary, Commission, dated October 21, 2019.

<sup>16</sup> As the Exchange explained in its Initial Response Letter, the Commission has already addressed the impact of manual quotations on a broker-dealers’ duty of best execution in Regulation NMS, and firms already account for a number of different venues in making routing decisions. See Initial Response Letter, *supra* note 2 at 11-15.

judged provides an unfair standard of comparison, particularly to the extent manual quotations are not accessible.” After considering those comments, the Commission determined that the commenter’s concerns were outweighed by the potential for eroding transparency into the best prices available in the market, and decided to include manual quotations in the NBBO.

The Exchange understands that some commenters may continue to disagree with the Commission’s decision despite its concern that a failure to include manual quotations in the NBBO: (1) “would exclude not only inaccessible manual quotations, but also manual quotations that truly establish the best available price for a stock,” and (2) “could lead to decreased execution quality for investors in these stocks by allowing broker-dealers to ignore the best available quotations when executing customer orders.”<sup>17</sup> That said, this longstanding disagreement between commenters and the Commission about what quotations should, or should not, be included in the NBBO is not germane to the Proposal, which must comply with Regulation NMS as written. The Commission’s rules here are clear and unambiguous. Those rules require that manual quotations be included in the NBBO so that investors are informed of the best prices available in the market. As explained in our Initial Response Letter, market participants are free to determine how to use that information.<sup>18</sup> That freedom does not extend to the decision of what information should be shared with the investing public. The ultimate aim of the Proposal is to improve market quality for investors that rely on the public markets. This purpose may be thwarted if investors are not appropriately apprised when the EDGA manual quotation is better than the quotations published by competing U.S. equities exchanges. The Exchange therefore continues to believe that investors are best served by including all manual quotations in the NBBO as required by Regulation NMS.

### III. *Four Milliseconds is an Appropriate Duration for the LP<sup>2</sup> Delay Mechanism*

The Exchange continues to believe that four milliseconds is an appropriate delay to negate the advantages that trading firms using the latest microwave connections have over liquidity providers using traditional fiber connections. As an initial matter, the Exchange notes that a

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<sup>17</sup> See Reg. NMS Adopting Release, *supra* note 5, at 37537.

<sup>18</sup> The market center ID disseminated by the SIPs would identify any EDGA quotation that sets the NBBO as belonging to EDGA, and consequently manual in nature. Further, as explained in our Initial Response Letter, the SIPs would continue to disseminate top of book quotations for each U.S. equities exchange, which could be used to identify the best automated quotations where this information may be necessary or valuable for investors.

number of commenters seem to misunderstand the rationale for a four millisecond delay. For example, one commenter writes that they are “somewhat puzzled” as to how the Proposal would successfully protect liquidity providing orders on the EDGA Book since the length of the delay is shorter than the transmission time from Illinois to New Jersey.<sup>19</sup> As the Proposal clearly states, the LP<sup>2</sup> delay mechanism is designed to negate the advantage obtained by firms that utilize microwave connections to race to the equities market and trade at potentially stale prices before the liquidity provider can update its quotation. As explained in the filing, transmission time over fiber is around 7.75 milliseconds, while high speed microwave connections can provide latency of around 4.005 milliseconds, resulting in an “advantage” of 3.745 milliseconds. A four millisecond delay would therefore be appropriate to achieve this objective. Further, as the Exchange explained in its Initial Response Letter, the Exchange’s analysis shows that a four millisecond delay, the equivalent of one hundredth of a blink of an eye, would not be material for investors that have long term investment horizons and therefore are not sensitive to millisecond level price changes.

Indeed, investors with longer investment time horizons “may not be as sensitive to very short-term changes in the NBBO,”<sup>20</sup> and broker-dealers often do make tradeoffs between the speed of an execution and other factors (*e.g.*, price improvement and liquidity). In fact, although U.S. equities exchanges often preference speed as a primary factor in trading, speed of execution is in fact only one of many factors that a broker-dealer must consider in obtaining best execution for their clients.<sup>21</sup> In the case cited above, the Commission approved a Nasdaq Stock Market LLC (“Nasdaq”) proposal to introduce the midpoint extended life order (“MELO”), which contains a built-in speed bump of half a second (*i.e.*, 500 milliseconds). As with the MELO order type, the LP<sup>2</sup> delay mechanism “could create additional and more efficient trading opportunities... for investors with longer investment time horizons, including institutional investors.”<sup>22</sup>

In addition, evidence from OTC venues shows that investors that are not time sensitive frequently make similar tradeoffs to facilitate the best execution of client orders. For example, a

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<sup>19</sup> See Letter from Tyler Gellasch, Executive Director, Healthy Markets Association to Vanessa Countryman, Secretary, Commission, dated October 21, 2019.

<sup>20</sup> See Securities Exchange Act Release No. 82825 (March 7, 2018), 83 FR 10937 (March 13, 2018) (SR-NASDAQ-2017-074) (“MELO Approval Order”).

<sup>21</sup> See FINRA Rule 5310 (Best Execution and Interpositioning).

<sup>22</sup> See MELO Approval Order, *supra* note 19.

number of broker-dealers have begun offering conditional orders that are only executable after a firm-up period that can range between 500 milliseconds and two seconds depending on the firm.<sup>23</sup> Market participants that utilize this functionality have clearly decided that the value of the execution provided by such orders outweighs the time that it may take to receive that execution – *i.e.*, they value the “quality” of the execution over its “immediacy.” Investors with longer investment time horizons should be able to make similar tradeoffs in the public markets, where such mechanisms would be subject to additional transparency and fair access requirements that are exclusive to national securities exchanges. The LP<sup>2</sup> delay mechanism, which contemplates a significantly shorter delay of four milliseconds, would provide such a venue. As is the case with OTC venues, investors could choose whether or not this model meets their needs as the Exchange has determined to forgo order protection with the introduction of the delay mechanism.

#### IV. *TSX Alpha Speed Bump: Evidence from Canada*

The Exchange highlighted in its Initial Response Letter comments about the implementation of a speed bump on TSX Alpha in Canada. As the Exchange explained, the results of the study cited in those initial comments were subsequently contradicted by the Investment Industry Regulatory Organization of Canada (“IIROC”) joint study with the Bank of Canada, and a review conducted by the Ontario Securities Commission. Although the Exchange acknowledged that “there are significant differences between the U.S. and Canadian equities markets, both in terms of regulatory regime and market structure,” it concluded that the evidence from Canada largely supported the introduction of a similar mechanism in the U.S. Nevertheless, certain commenters have continued to argue that the Canadian perspective should caution against the introduction of the LP<sup>2</sup> delay mechanism in the U.S. equities market. In fact, one commenter has gone so far as to conduct its own study of the Canadian market to attempt to illustrate their concerns with the Proposal. The Exchange believes that this comparison is ultimately unhelpful.

As an initial matter, the methodology employed in the commenter’s analysis appears to suffer from a number of fundamental flaws. For example, the “price-level depleting trade clusters”

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<sup>23</sup> See e.g. Credit Suisse Crossfinder Form ATS, *available at* <https://www.credit-suisse.com/media/assets/sites/aes/doc/form-ats-crossfinder-amd.pdf> (page 15); Morgan Stanley U.S. Cash Equity Order Handling & Routing Practices, *available at* [https://www.morganstanley.com/assets/pdfs/sales\\_and\\_trading\\_disclosures/MS\\_US\\_Cash\\_Equity\\_Order\\_Handling\\_and\\_Routing\\_FAQs.pdf](https://www.morganstanley.com/assets/pdfs/sales_and_trading_disclosures/MS_US_Cash_Equity_Order_Handling_and_Routing_FAQs.pdf) (page 12).

identified by the commenter based on characteristics it claims may be indicative of larger orders seeking liquidity across multiple venues, do not even appear to exclude orders entered by multiple broker-dealers despite the fact that broker attribution information is generally publicly available in Canadian market data. As a result, the analysis may mistakenly indicate unrelated trades – a fact that likely explains the abnormally high number of price-level trade depleting clusters identified.<sup>24</sup> More fundamentally, the analysis does not even attempt to differentiate between the impact on investor orders and orders originating from latency arbitrage strategies that such a speed bump is designed to eliminate. As the Exchange made clear in its Initial Response Letter, the LP<sup>2</sup> delay mechanism may make it more difficult for firms to engage in latency arbitrage because it allows liquidity providers to re-price their quotations before they can be executed at the stale price. This is, of course, the entire point of the delay mechanism. Put another way, the results of this analysis may actually indicate that the TSX Alpha speed bump was effective in protecting liquidity providers against such strategies.

Of course, as the Exchange mentioned in its Initial Response Letter, broker-dealers may have to make changes to their order handling in order to make the best use of the proposed market structure. This would include potentially timing orders sent to multiple exchanges to account for the length of the delay on EDGA. Indeed, such an approach is already used by many broker-dealers that monitor latency on a real time basis using heatmaps or other similar strategies to improve their order routing and obtain best execution for their clients. But, this is not the only possible approach. The evidence from the Canadian market studies has shown an increase in trade size on Alpha following the introduction of its speed bump. Thus, as certain commenters have suggested, market participants may be able to get their orders filled on a single venue (*i.e.*, EDGA) due to increased liquidity rather than being forced to route to multiple venues to secure sufficient liquidity. On the flip side, since EDGA would not be considered a protected market under Regulation NMS, a broker-dealer could choose to bypass EDGA completely and route solely to protected exchanges.

Evidence from the Canadian markets suggests that investors using a combination of these and other strategies designed or “optimized” to take advantage of TSX Alpha’s market structure may benefit from improved market quality without sacrificing order interaction. Chart 1 below,

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<sup>24</sup> The commenter claims that 70 % of overall market volume is associated with such directional trade clusters.

which was recently published by TSX Alpha,<sup>25</sup> shows order interaction rates on TSX Alpha based on the type of participant: (1) proprietary and high speed; (2) optimized retail; and (3) optimized institutional.<sup>26</sup> As shown, although proprietary and high speed participants may experience lower order interaction rates, as intended, order interaction rates remain high for retail and institutional orders routed by broker-dealers that have taken appropriate steps to account for the TSX Alpha delay mechanism. Specifically, TSX Alpha's analysis found that these categories of participants had average order interaction rates of: (1) 45.13% for proprietary and high speed; (2) 99.24% for optimized retail; and (3) 97.51% for optimized institutional. These results are also consistent with the findings of the Investment Industry Regulatory Organization of Canada ("IIROC") joint study with the Bank of Canada, which found that "[f]ollowing Alpha's redesign, both retail and buy-side heavy users experience significantly higher order fill rates and larger execution sizes."<sup>27</sup> Thus, while broker-dealers may need to make appropriate changes to their routing methodologies, the Exchange believes that a similar delay mechanism could benefit U.S. equities investors without harming their ability to access needed liquidity.

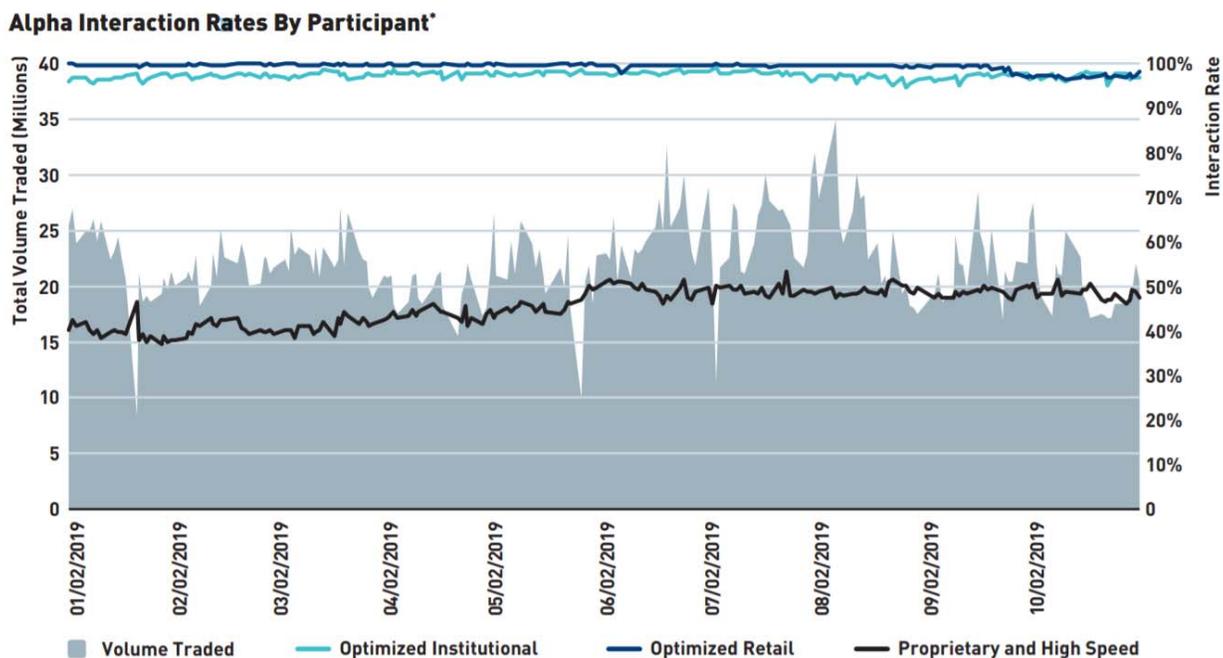
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<sup>25</sup> See TSX Alpha Market Quality Statistics (December 18, 2019) *available at* <https://www.tsx.com/resource/en/2167/tsx-alpha-market-quality-statistics-2019-12-20-en.pdf>.

<sup>26</sup> The order interaction rate reflects the percentage of volume that was marketable on entry that subsequently traded after exiting the speed bump. For each order, TSX Alpha capped the order interaction rate at one. As such, an order that was able to execute additional volume due to new liquidity being posted during the delay would have an order interaction rate of one (*i.e.*, 100%) even though *additional* shares were traded. As a result, these figures may actually understate the accessibility of liquidity on TSX Alpha.

<sup>27</sup> See Speed Segmentation on Exchanges: Competition for Slow Flow, *available at* [https://www.iiroc.ca/Documents/2018/25d5b306-3420-43cc-b260-a1527b82bfc3\\_en.pdf](https://www.iiroc.ca/Documents/2018/25d5b306-3420-43cc-b260-a1527b82bfc3_en.pdf); IIROC Notice 18-0009, *available at* [https://www.iiroc.ca/Documents/2018/18e78548-3f29-40d1-a356-69885029a09b\\_en.pdf](https://www.iiroc.ca/Documents/2018/18e78548-3f29-40d1-a356-69885029a09b_en.pdf) ("IIROC Notice").

Chart 1: Order Interaction Rates on TSX Alpha



\* For each order, the maximum interaction rate is capped at one, meaning that if new liquidity is made available during the time that an order is within the speedbump leading more executed volume than was marketable, the additional volume is ignored. Symbol set includes all TSX/V listed.

V. *The Commission Should Promote Investor Choice by Allowing Equities Market Participants to Decide Whether to Interact with an Innovative Venue Designed to Improve Market Quality.*

A number of commenters, including equities and options market makers and academic researchers have come out in support of the Proposal. At the same time, a number of other commenters have expressed skepticism about its benefits. The Exchange continues to believe that the Proposal would benefit the U.S. equities ecosystem by reducing adverse selection costs of liquidity providers and enabling them to improve market quality in equity securities traded on EDGA. Even more importantly, the Exchange believes that market participants should have the ability to choose for themselves whether the innovative solution proposed for dealing with this adverse selection risk is, on balance, beneficial to the marketplace and the investors that it serves. Today, broker-dealers may choose from a wide array of different trading venues, including a large number of OTC venues, to facilitate the best execution of their client orders. The LP<sup>2</sup> delay mechanism would provide additional investor choice in the public markets, and would allow the Exchange to offer a competitive mechanism that is subject to greater transparency, fair access, and other regulatory requirements. As proposed, EDGA would begin disseminating a manual, unprotected, quotation in connection with the introduction of the LP<sup>2</sup> delay mechanism. As such, market participants that are skeptical about the intended benefits of the Proposal, or feel that the perceived costs of the delay mechanism

outweigh the intended benefits, are under no regulatory obligation to access, or post, liquidity on EDGA. Ultimately, the Exchange believes that the Proposal represents a significant advance in equity market structure that would encourage material improvements in market quality and better trading outcomes for investors. Market participants should be given the chance to reap these benefits, particularly when they would be offered on a voluntary basis on an unprotected exchange. We therefore urge the Commission to allow us to continue to innovate and improve the experience of investors trading on our markets.

Sincerely,

A handwritten signature in blue ink, appearing to read 'A. Griffiths', with a long, sweeping horizontal stroke extending to the right.

Adrian Griffiths  
Assistant General Counsel