July 31, 2019

Via Electronic Mail rule-comments@sec.gov

Vanessa Countryman
Secretary
Securities and Exchange Commission
100 F Street NE Washington, DC 20549

Re: SR-CboeEDGA-2019-012

Dear Ms. Countryman,

XTX Markets appreciates the opportunity to respond to comments filed on the above-referenced proposal by the EDGA exchange to introduce a Liquidity Provider Protection ("LP²"). As we noted previously, XTX Markets believes EDGA's LP² proposal will have the effect of enabling liquidity providers to narrow spreads and display larger size for the benefit of end investors while simultaneously reducing the barriers to entry for new liquidity providers who may have risk absorption appetite and unique pricing and time horizons. Nonetheless, we also recognize that LP² represents an innovation in the U.S. equity market and, as such, some market participants have raised concerns about its potential impact on both institutional and retail investors, as well as questions about precisely how it would integrate into the national market system, even as a market with a manual quote. XTX Markets agrees with concerns raised regarding the extent to which EDGA's unprotected quote should be considered as a reference price for certain pegging orders or regulatory triggers. However, XTX Markets believes many of the arguments against EDGA's LP² are meritless and reflect an over-reaction to a significant attempt by a national securities exchange to innovate and solve a legitimate problem in the marketplace.

At the outset, XTX Markets wants to address the concern raised by several commenters that the EDGA LP² will selectively advantage only a very small subset of liquidity providers,

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providing them an unfair advantage over other market participants.[1] This argument has no basis in fact. With respect to passive liquidity provision, LP² is designed to provide protection to all market participants. It simply is not the case that only a small subset of market participants would be able to benefit from that protection. In particular, XTX Markets understands that commercially available algos can process cross asset and cross market signals and reprice or cancel agency orders within LP²'s 4-millisecond protection period. Consequently, anyone accessing EDGA with passive liquidity via one of these algos would be protected from latency arbitrage, not just a small subset of market participants. And today, two-thirds of the passive liquidity on EDGA is from agency brokers on behalf of their investor customers, not professional liquidity providers.[2] To be clear this means that asset managers and other long-term investors who interact with the market via broker algorithms would benefit. And, importantly, because LP² lowers the barrier to entry to new market maker participants, one could expect an even wider breadth of liquidity providers quoting on EDGA.

With respect to aggressive orders, it is true that LP² is designed to disincentivize latency arbitrage. The question before the Commission under the Exchange Act is whether LP² is unreasonably discriminatory in that regard. We submit that it is not. As we noted in our initial comment letter on the proposal, the evidence of the extent to which firms will go in terms of incurring expense and engaging in rule violations to gain incremental microsecond informational advantages over their competitors is well-documented. LP² is 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. Moreover, under an anti-latency arbitrage mechanism like LP², one would not expect that professional liquidity providers would suddenly be able to extract outsized rents from their market making activity. For existing market makers, the incremental cost of launching market making on EDGA is immaterial. If LP² allows market makers to earn outsized returns, other market makers will enter the market and normalize it. In other words, market makers will compete against each other aggressively on EDGA on both price and order size, putting the dollars saved by avoiding latency arbitrage into the pockets of investors. If that is the outcome EDGA's LP² delivers to the marketplace, which we fully expect, the result is a marketplace that benefits investors and is not unreasonably discriminatory.

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1 See Letter from Mehmet Kinak, VP and Head of Systemic Trading & Market Structure, and Jonathan S. Siegel, VP and Senior Legal Counsel; T.Rowe Price, Jul. 18, 2019 ("T.Rowe Letter"); letter from Larry Tabb, Founder & Research Chairman, TABB Group, Jul. 17, 2019 ("Tabb Letter); letter from Tyler Gellasch, Executive Director, Healthy Markets Association, Jul. 17, 2019, ("Healthy Markets Letter"); and Letter from R.T. Leuchtkafer, Jul. 12, 2019 ("R.T. Leuchtkafer Letter").

http://www.cboe.com/blogs/options-hub/2019/07/26/fact-exchanges-want-to-give-public-investors-a-fair-shot July 26, 2019.

With LP^2, EDGA's quote would be unprotected, making it the first national securities exchange post implementation of Regulation NMS to be untethered from the Order Protection Rule ("OPR"). As a result, no market participant would be required to access EDGA's quote. EDGA as a marketplace will stand or fall on its own merits. If it fails to deliver the value intended, it will not succeed. If it does deliver the value intended, market participants will adopt it and it will succeed, but not because OPR has granted it a quasi-monopoly on its top of book, but solely because it presents a meaningful value proposition to the marketplace. Having an unprotected quote doesn't give a national securities exchange unfettered ability to employ any market model it wants into the national market system; however, for purposes of review for compliance with the Exchange Act the fact that a quote is unprotected is surely germane to the question of whether any particular market model is unreasonably discriminatory. In this case, given the problem LP^2 is attempting to solve, the potential benefits of its value proposition – better prices, larger displayed size, reduced barriers to entry – and that market participants are free to ignore it, XTX Markets believes EDGA's LP^2 proposal is a well-balanced proposal that complies with the Exchange Act.

XTX Markets addressed many of the arguments raised in the comment process in its initial comment letter and addresses some of the remaining points below.

1. Outcomes for Institutional Investors

Some commenters have indicated a belief that LP^2 will be bad for institutional investors. Two specific concerns have been raised in this regard. The first is that for aggressive orders, institutional investors' fill rates would decline leading to worse execution prices.[3] This argument is premised on the belief that there would be some meaningful percentage of missed fills because a liquidity provider would update its quote on EDGA while the investor's order is in the 4-millisecond processing queue. It should be extremely rare for an institutional investor, who by its nature is not engaging in latency arbitrage, to send a single order at the exact moment that an external market microstructure event is occurring that would cause that liquidity provider to update its quote.

XTX Markets acknowledges, however, that there is a scenario in which institutional investors could see a decline in fill rates, but that scenario simply highlights a difference in how institutional investors should trade EDGA and what to avoid. Specifically, today institutional investors will frequently send an order to sweep the top of book liquidity across multiple exchanges. This strategy may not be an effective way to access EDGA liquidity, unless the

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[3] See T.Rowe Letter; letter from Stephen Berger, MD, Global Head of Government and Regulatory Policy, Citadel Securities, Jul. 17, 2019 ("Citadel Letter"); and Tabb Letter.

orders are staged into the marketplace to account for EDGA's deterministic 4 millisecond delay (routing first to EDGA, waiting for the LP^2 delay, and then routing to the other exchanges). In the absence of staging the sweep into the marketplace, institutional investors could seek to access EDGA liquidity when EDGA can fulfill the full size of what would previously have been a market sweep order. By doing so, there is no reason why an institutional investor would experience a degradation in fill rates. And those opportunities should be present more than they are today because LP^2 is designed to incentivize liquidity providers to display larger size at the best possible prices.

Similar concerns were raised in Canada when the TMX launched an anti-latency arbitrage mechanism like LP^2 on its Alpha exchange in 2015. The Ontario Securities Commission ("OSC") conducted a review of market quality post implementation of the changes and published its results in February 2018.[4] With respect to this specific concern, the OSC found that dealers continued to route institutional investors' orders to Alpha, but the way they did so had changed:

> [I]n certain situations, fill rates on Alpha have decreased, often 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). Some dealers reported initial fill rates to be much lower on Alpha in these circumstances, and some have modified their routing strategies to achieve improved outcomes. For smaller orders that can be executed on a single marketplace, some dealers have experienced improved execution results that are consistent with observations of larger average trade sizes on Alpha.

So, while accessing liquidity on EDGA under LP^2 may require a different approach, evidence suggests that market participants can adapt their routing strategies and enjoy higher fill rates. And, again, of course, no one will be required to access EDGA's unprotected quote in the first instance.

One commenter also cited SEC MIDAS data demonstrating that 15.59% of orders in large stocks are cancelled in 1 millisecond, therefore raising concerns about the number of "arbitrary" cancelations that would occur in 4 milliseconds.[5] XTX Markets believes these statistics are irrelevant to arguments about LP^2's impact on institutional investors' fill rates. The fact that 15.59% of orders in certain securities are short-lived does not mean that 15.59% of the orders someone is trying to access are short-lived. There is nothing meaningful about these

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4 https://www.osc.gov.on.ca/documents/en/Securities-Category2/20180202_21-712_sn-alpha-impact.pdf

5 T.Rowe Letter

statistics in the context of EDGA's LP^2 proposal. The LP^2 protection period is not designed so that a liquidity provider can place an order and then cancel it 1-4 milliseconds later. Rather, the LP^2 protection period is designed to allow a liquidity provider to cancel an order before being subject to latency arbitrage, which is unlikely to occur immediately after order placement. There is nothing about the LP^2 design that would lead to an increase in these 1-4 millisecond short-lived orders, which themselves are rarely present in the NBBO for the vast majority of the day due to their short lifespan.

The second concern that has been raised is that the passive orders of institutional investors will more frequently be subject to latency arbitrage because of LP^2.[6] The concern is that only the most sophisticated traders will be able to use LP^2 to avoid latency arbitrage, leaving the orders of institutional investors to absorb the negative impact of latency arbitrage strategies. XTX Markets questions the legitimacy of this concern. As previously stated, XTX Markets understands that commercially available algos can process cross asset and cross market signals and reprice or cancel agency orders within LP^2's 4-millisecond protection period. Thus, again, LP^2 is not, as some commenters have suggested, a tool designed to protect a small subset of sophisticated liquidity providers. Instead, LP^2 will protect the passive orders of any investor using commercially available order placement algos. Further, there is no obligation for anyone to place an order on EDGA if they are concerned that their algo provider cannot benefit from LP^2.

2. Outcomes for Retail Investors

One commenter suggested that LP^2 will lead to worse outcomes for retail investors in the form of missed fills on EDGA because of the LP^2 delay.[7] Again, XTX Markets believes there is no merit to this argument and believes instead that retail investors will, if anything, benefit from LP^2. In the example given, a retail investor's broker routes 100 shares of a 300-share order to each of three exchanges, including EDGA, that are showing 100 shares at the top of book. Two of the orders are filled, and the third, routed to EDGA is not filled, because the liquidity provider on EDGA cancels its quote in response to executions occurring on the other two exchanges. As previously stated, market participants can avoid these outcomes by altering their behavior and, either staging orders in the marketplace to account for EDGA's deterministic 4-millisecond delay, or by not including EDGA's unprotected quote in an order sweeping multiple markets and, instead, accessing EDGA only when it is displaying enough shares at the best price to fulfill the client's entire order. Or again, ignoring EDGA's unprotected quote altogether.

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6 T.Rowe Letter

7 Citadel Letter

But regardless, today, aggressive retail orders are generally not routed to exchanges but are instead sent to wholesale market makers who internalize the orders at a price at or inside the NBBO. For these retail investors, a possible impact of EDGA's LP^2 could be that their orders are internalized at a better price than today should (1) LP^2 be successful in incentivizing liquidity providers to narrow the displayed best bid and offer on EDGA, and (2) should wholesale market makers choose to internalize retail orders by reference to those better prices.

3. Effect of Inclusion of EDGA's Unprotected Quote in the SIP and Best Execution Implications

As proposed, EDGA's quote would be unprotected and would be included in the SIP with an indicator that it is an unprotected quote. Several commenters have raised concerns that doing so will cause confusion over best execution requirements[8] and raised questions around whether EDGA's unprotected quotes should be used for such things as calculating the value of orders pegged to the NBBO or the midpoint of the NBBO at other trading venues, or for purposes of compliance with Regulation SHO's price test on short sale restricted securities.[9] XTX Markets acknowledges the legitimacy of some of these concerns. With respect to orders pegging to the NBBO or the midpoint of the NBBO, XTX Markets believes it would be reasonable for those orders to only peg off reference to the protected BBO and exclude unprotected quotes, which is exactly how the Canadian markets handle the pricing of pegged orders today in a market with both protected and unprotected quotes. Similarly, XTX Markets believes it would be reasonable to exclude unprotected quotes from consideration for regulatory references such as Regulation SHO's price test.

With respect to concerns that including EDGA's unprotected quote on the SIP creates confusion over best execution obligations, we aren't certain we fully understand this argument. The SEC and FINRA have provided various best execution guidance and whether the quote is included in the SIP would not seem relevant to the question of whether EDGA's manual quote would need to be accessed to satisfy best execution requirements. The SEC noted in the Regulation NMS final rule order[10] regarding the inclusion of manual quotes in the NBBO:

> The Commission continues to be concerned that eliminating all manual quotations from the NBBO would exclude not only inaccessible manual quotations, but also manual quotations that truly establish the best available price

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8 See Letter from Ray Ross, CTO, Clearpool Group, Jul. 17, 2019, ("Clearpool Letter"); Healthy Markets Letter; SIFMA Letter; and Citadel Letter.

9 Clearpool Letter; SIFMA Letter; Healthy Markets Letter, and HRT Letter.

10 https://www.sec.gov/rules/final/34-51808.pdf - page 158

> for a stock… Such a result 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.

The SEC further noted in the Reg NMS final rule order that the decision to access a manual quotation rests with the broker-dealer's review of execution quality:

> when the market for a stock is dominated by trading centers that display automated quotations, and a trading center that is not a dominant market for the stock displays manual quotations, a broker-dealer reasonably could determine, as part of its regular and rigorous review of execution quality, to bypass such a market with manual quotations in the particular stock if its prior experience demonstrated that attempting to access the market would not be in its customers' best interest. In making its assessment the broker-dealer would be entitled to consider both the likelihood of receiving an execution at displayed prices and the potential cost to its customers of failed attempts.

As such, it appears the Commission has squarely addressed the best execution concerns raised by commenters. And given these prior Commission statements, XTX Markets supports inclusion of EDGA's unprotected quote in the SIP, with the appropriate modifier denoting its unprotected status.

4. <u>Effect on Volatility</u>

One commenter suggested that LP^2 would lead to an increase in volatility as liquidity providers will withdraw their quotes on EDGA during periods of market stress.[11] While it is true that liquidity providers tend to widen and, in some cases, withdraw their quotes during periods of market stress, one of the main reasons spreads widen is because the rate of latency arbitrage activity increases during these periods. Consequently, a marketplace that offers protection against latency arbitrage, and which enables liquidity provision from a wider group of market participants with diverse risk absorption capabilities and investment horizons, should offer relatively tighter spreads over volatility spikes. Consequently, we would expect EDGA's LP^2 to result in a reduction in market volatility.

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[11] <u>See</u> R.T. Leuchtkafer Letter.

5. Free-Riding Price Discovery

One commenter expressed concern that LP^2 will discourage liquidity providers from actively participating in price discovery on other exchanges because they will likely have their prices copied by liquidity providers on EDGA who will be taking on less risk because they will have greater ability to avoid latency arbitrage strategies.[12] All other things being equal, XTX Markets agrees the potential for someone to free-ride on another liquidity provider's quotes exists. However, all other things aren't equal and if EDGA were to charge liquidity providers instead of paying them rebates, as it does today (and which we recommend it continue under LP^2) then this concern about free-riding on price formation at rebate-paying exchanges is non-existent. Simply put, a liquidity provider paying a fee and forgoing a rebate would be unable to free-ride on another liquidity provider's quote. It is also worth clarifying that LP^2 does not delay passive orders, meaning that if a liquidity provider is concerned about free-riding, it can set the NBBO on EDGA and it will be rewarded with queue priority in the same way as occurs today. There would be no possibility for other EDGA participants to 'free ride' on quotes since their orders would be placed behind those of the original liquidity provider.

But, just as importantly, XTX Markets doesn't believe the concern raised here rises to the level of a regulatory issue but is instead a commercial issue among the exchanges. The concern simply highlights that more price discovery will shift to EDGA upon implementation of LP^2. By eliminating latency arbitrage, EDGA will provide a marketplace where competition among liquidity providers, both on price and size, will thrive. Ultimately, this is a good thing for investors.

6. Analysis of TSX Alpha in Canada

The TMX Exchange Group operates an unprotected exchange, TSX Alpha, in Canada with 1-3 millisecond randomized delay on orders to remove liquidity that is reasonably comparable to EDGA's proposed LP^2. Two commenters have seized on that comparison to cite academic research on the impact TSX Alpha has had on the Canadian equity markets to suggest that EDGA's LP^2 would have a negative impact on liquidity.[13] In both cases the commenters neglected to reference a subsequent academic study that found no evidence that TSX Alpha

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12 See Letter from Adam Nunes, Head of Business Development, Hudson River Trading LLC, Jul. 19, 2019, ("Hudson River Letter"); see also Citadel Letter.

13 SIFMA Letter and Healthy Markets Letter, both citing to the academic study The Value of a Millisecond: Harnessing Information in Fast, Fragmented Markets (Chen, Foley, Goldstein, Ruf, 2016).

negatively impacted market-wide liquidity, market-wide trading costs or execution quality.[14] In 2018, the Ontario Securities Commission published its own review of TSX Alpha's effect on the Canadian equity market and found no negative impact to market quality.[15]

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Thank you for the opportunity for XTX Markets to provide these additional comments. As previously stated, XTX Markets supports EDGA's LP² proposal and believes it brings an important innovation to the U.S. equity marketplace that will enable liquidity providers to narrow spreads and display larger sizes for the benefit of end investors. XTX Markets agrees, however, that there are legitimate concerns about how orders in the marketplace that peg to the NBBO should be priced and the extent to which the EDGA quote should be included in other regulatory reference calculation such as for the price test under Regulation SHO. Ultimately, however, these are relatively minor issues that can be addressed in an amended filing or Commission interpretation; not issues that should that should cause denial of approval of this innovation. If you have any questions about our views, please don't hesitate to contact me.

Sincerely,

Eric Swanson
CEO, XTX Markets LLC (Americas)

Cc: The Honorable Jay Clayton, Chairman
The Honorable Robert J. Jackson, Jr., Commissioner
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman
The Honorable Allison Herron Lee, Commissioner
Brett Redfearn, Director, Division of Trading and Markets
Elizabeth Baird, Deputy Director, Division of Trading and Markets
Christian Sabella, Deputy Director, Division of Trading and Markets
David Shillman, Associate Director, Division of Trading and Markets

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14 Speed Segmentation on Exchanges: Competition for Slow Flow (Anderson, Andrews, Devani, Mueller, and Walton, 2018).

15 https://www.osc.gov.on.ca/documents/en/Securities-Category2/20180202_21-712_sn-alpha-impact.pdf