OFFICE OF THE
INVESTOR ADVOCATE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

MEMORANDUM

TO: **U.S. Securities and Exchange Commission**

FROM: **Rick A. Fleming, Investor Advocate**[1]

DATE: **February 27, 2018**

RE: **Recommendation of the Investor Advocate**
File No. SR-CHX-2017-04

RECOMMENDATION:

Reverse the Order granting approval of a proposed rule change from the Chicago Stock Exchange, Inc. to adopt the CHX Liquidity Enhancing Access Delay on a pilot basis.

I. Introduction

Pursuant to Section 4(g)(4) of the Securities Exchange Act of 1934 ("Exchange Act"),[2] the Office of the Investor Advocate is responsible for, among other things, analyzing the potential impact on investors of proposed rules of self-regulatory organizations ("SROs"). As appropriate, we make recommendations to help ensure that the interests of investors are fully considered as those rules are adopted. In furtherance of this objective, we submit this recommendation to the Commission regarding a rule proposal from the Chicago Stock

[1] This Recommendation expresses solely the views of the Investor Advocate. It does not necessarily reflect the views of the Commission, the Commissioners, or staff of the Commission, and the Commission disclaims responsibility for all analyses, findings, and conclusions contained herein.

[2] 15 U.S.C. § 78d(g)(4) (2012).

Exchange, Inc. ("CHX" or the "Exchange") to adopt the CHX Liquidity Enhancing Access Delay ("LEAD") on a pilot basis.[3]

As amended, the rule would, on a 24-month pilot basis, require that all new incoming orders, cancels, and cancel/replace messages sent to CHX by market participants first be delayed by a 350-microsecond speedbump, except for liquidity-providing orders and cancelation messages from a new class of CHX market makers ("LEAD Market Makers") that would bypass the speedbump.[4] To qualify for the beneficial treatment of orders and cancelations, the LEAD Market Makers would commit to provide ongoing, specific levels of liquidity on CHX that are higher than the obligations already in place for CHX market makers.[5]

According to CHX, this differential treatment would address the Exchange's current lack of resting liquidity.[6] We understand there are no registered market makers on CHX currently, nor have there been any for some time.[7] As CHX cannot incentivize its members to become market makers and has been unsuccessful at encouraging them to otherwise submit displayed orders,[8] it has "little to no resting liquidity in the vast majority of NMS securities[.]"[9] CHX

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[3] Notice of Filing of Amendments No. 1 and No. 2 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendments No. 1 and No. 2, To Adopt the CHX Liquidity Enhancing Access Delay on a Pilot Basis, Securities Exchange Act Release No. 81913 (Oct. 19, 2017), 82 Fed. Reg. 49433 (Oct. 25, 2017), File No. SR-CHX-2017-04, https://www.gpo.gov/fdsys/pkg/FR-2017-10-25/pdf/2017-23122.pdf [hereinafter CHX Order].

[4] *See* CHX Order, *supra* note 3, at 49433.

[5] *See id.*

[6] *See id.* at 49434.

[7] *See* Letter from James G. Ongena, Executive Vice President, General Counsel, CHX, to Eduardo A. Aleman, Assistant Sec'y, SEC at 7, n. 48 (June 30, 2017) https://www.sec.gov/comments/sr-chx-2017-04/chx201704-1834258-154593.pdf [hereinafter CHX June Letter].

[8] *See* CHX Partial Amendment No. 1 at 10 (Sept. 19, 2017) https://www.sec.gov/comments/sr-chx-2017-04/chx201704-2583844-161106.pdf [hereinafter CHX Amendment No. 1].

[9] *See* CHX Order, *supra* note 3, at 49440.

argues that the proposed benefits of the LEAD program may encourage its members to register as LEAD Market Makers and begin displaying liquidity. Because privileged quotations would be able to bypass the proposed speedbump, LEAD Market Makers would face less market risk and, therefore, would have an incentive to display larger orders at more aggressive prices on CHX. CHX believes this could ultimately benefit the overall market.[10]

In October 2017, the Division of Trading and Markets, acting under delegated authority, approved the rule proposal, as amended on a pilot basis (the "Order").[11] Subsequently, the Commission, acting under Rule of Practice 431, elected to review the delegated action and stayed the Order pending its review.[12]

The Exchange Act requires that the Commission determine that rules of a national securities exchange be designed, in general, to protect investors and the public interest, and, in relevant part, to not permit unfair discrimination between customers, issuers, brokers, or dealers.[13] With this in mind, the Office of the Investor Advocate has reviewed CHX's proposed rule, as amended, and the Order approving the rule. In short, we do not support CHX's efforts to discriminate in favor of certain market makers. We believe the Commission should reconsider the findings in the Order because, as more fully described below, CHX's proposed rule change is unfairly discriminatory and inconsistent with investor protection and the public interest. Accordingly, we recommend that the Commission reverse the Order.

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[10] *See id.*

[11] *See* CHX Order, *supra* note 3.

[12] *See* Order Scheduling Filing of Statements on Review, Exchange Act Release No. 82034 (Nov. 8, 2017), 82 Fed. Reg. 52762 (Nov. 14, 2017) https://www.gpo.gov/fdsys/pkg/FR-2017-11-14/pdf/2017-24629.pdf.

[13] *See* 15 U.S.C. § 78f(b)(5) (2012).

II. Analysis

A. Background on the CHX Proposal

CHX states that the proposed asymmetric speedbump is designed to address a lack of resting liquidity in NMS securities by providing LEAD Market Makers with a risk management tool that would incentivize them to display larger orders at aggressive prices.[14] Market quality on CHX has declined over the years. Total CHX trading volume often comprises only 0.43% of total NMS market volume, and a vast majority of CHX's volume comes from cross orders, which are two-sided orders that neither provide nor remove liquidity from the CHX book.[15]

The original proposal from CHX was intended to address declining quoting and trading volume in a single security, the SPDR S&P 500 Exchange Traded Fund (the "SPY"), due to latency arbitrage strategies from Chicago-based derivatives markets. The revised proposal is now offered to address CHX's inability to attract significant volume across all securities.[16] CHX suggests that, while the LEAD will still enhance market quality in the small number of ETFs traded in its Chicago-based data center, including the SPY, the LEAD also has the potential to enhance market quality in the other 8,200 securities available for trading in its separate New York-based data center.[17]

As proposed, the LEAD asymmetric speedbump intentionally discriminates in favor of a new class of market makers on CHX.[18] Because the speedbump is discriminatory on its face, the

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[14] *See* CHX Order, *supra* note 3, at 49440.

[15] *See* CHX Amendment No. 1, *supra* note 8, at 8.

[16] *See id.* at 10.

[17] *See id.*

[18] *See* CHX Order, *supra* note 3, at 49440.

relevant regulatory question is whether the proposed advantage provided to LEAD Market Makers that meet new minimum performance standards is *unfair*.

CHX represented, and the Order found, that new quoting and transaction thresholds required of LEAD Market Makers are meaningful obligations, proportionate to and balanced with the time advantage conferred upon the LEAD Market Makers.[19] The Order noted that the new obligations are higher than CHX's existing market making obligations. The obligation to maintain bids and offers within 4% of the National Best Bid and Offer ("NBBO"), and to quote at the NBBO at least 10% of the time, is, of course, more burdensome than offering prices within 8% of the NBBO. Similarly, CHX has not previously required any market maker to participate in any percentage of transactions in a security, so the 2% threshold is a new burden.[20]

The Order found that the proposal strikes an appropriate balance between the discriminatory advantage conferred by the speedbump and these new obligations to provide a specific level of liquidity on an ongoing basis.[21] Thus, the Order determined that the proposal was appropriately designed to enhance overall market quality, and it concluded that the discrimination was consistent with the Exchange Act.[22] Given the two-year timeframe of the pilot, the Commission is expected to revisit these initial determinations with data on the impact of the asymmetric speedbump on market quality.

Nonetheless, we remain concerned that the proposal, despite being structured as a pilot subject to further Commission review, strikes an inappropriate balance and is insufficiently

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[19] *See* CHX Order, *supra* note 3, at 49441.

[20] *See id.*

[21] *See id.* at 49442.

[22] *See id.*

designed to enhance market quality. We believe there is a significant imbalance between, on the one hand, the speculative market quality benefits that might emerge from LEAD Market Makers' commitment to provide a specific level of liquidity and, on the other, the undisputed discriminatory benefit provided to the market makers by the speedbump.

B. Because the Proposal is Not Balanced, It Permits Unfair Discrimination

In our view, the proposal confers an unprecedented advantage on the LEAD Market Makers,[23] yet fails to require correspondingly unprecedented obligations in return. The Commission should carefully scrutinize comparisons to other existing exchange market maker obligations and the discriminatory benefits those market makers receive. In support of its proposal, CHX argues that its proposed obligations are at least similar to the minimum performance standards that the New York Stock Exchange, LLC ("NYSE") places on its designated market makers, and perhaps even greater.[24] CHX also argues that the discriminatory advantage provided to NYSE market makers, execution parity, is similar to the proposed speedbump, as they are both designed to reduce market makers' risk exposure.[25] CHX further asserts that its proposal, when combined with other existing economic incentives, may cause CHX market makers to improve the NBBO,[26] whereas the balance on NYSE merely incentivizes larger quoting at the NBBO. CHX notes that retail and institutional investors may benefit from a

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[23] *See* Letter from James G. Ongena, Executive Vice President, General Counsel, CHX, to Eduardo A. Aleman, Ass't Sec'y, SEC at 1 (Dec. 8, 2017) https://www.sec.gov/comments/sr-chx-2017-04/chx201704-2781425-161630.pdf ("LEAD is an innovation without precedence in our markets.").

[24] *See* CHX Order, *supra* note 3, at 49440 ("minimum performance standards that CHX states are similar to CHX's… .").

[25] *See* CHX June Letter, *supra* note 7, at 7.

[26] *See id.* (citing incentives in the CHX market data revenue rebate program.).

tighter NBBO, even when they do not trade with the LEAD Market Makers quotes,[27] and so any additional discriminatory advantages provided by its proposed speedbump are balanced by this additional market quality benefit.

In our view, however, it appears that the proposed speedbump would be an unprecedented advantage that should require correspondingly unprecedented obligations, not merely performance standards similar to those on NYSE, for the reasons discussed below.

1. The Proposed Obligations Do Not Appear to be Substantial Burdens

The Commission should evaluate whether the proposed performance obligations are substantial relative to historical trading on CHX. Our review of the data provided by CHX does not support such a conclusion. First, 76.1% of its Chicago-based accounts (where CHX hosts a meaningful amount of electronic trading for around 100 index-based ETFs) already trade in a manner that would satisfy all the proposed performance obligations for the securities, and do so with no discriminatory incentives.[28] These obligations would be a low bar for those CHX participants.

Second, 33.7% of its New York-based accounts (where CHX conducts a small amount of trading in around 8,200 other securities) also would have satisfied the proposed performance obligations in February 2017.[29] CHX suggests that this lower 33.7% passage rate demonstrates that the proposed obligations are substantial and meaningful.[30] However, additional information

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[27] *See* CHX Order, *supra* note 3, at 49440 ("… reduce transaction costs for retail investors, as wholesale broker-dealers price the majority of the retail orders they handle off the prevailing NBBO, and for institutional investors, as the execution costs for their orders would be reduced if the average NBBO spreads are narrowed.").

[28] *See* CHX June Letter, *supra* note 7, at 8.

[29] *See id.*

[30] *See id.*

provides important context that shows this number is still quite high in the absence of any discriminatory incentives. For example, the vast majority of CHX's single-sided matching activity occurs in its Chicago-based data center, leaving less incentive to trade via resting orders in New York.[31] Moreover, although the New York data center hosts only a minority of CHX's trading activity, there are a larger number of trading accounts in the New York data-center as compared to Chicago, many of which may have different business models but still serve to increase the denominator in this analysis.[32] It should not, therefore, be surprising that a smaller percentage of all New York-based trading accounts voluntarily behave like market makers in the absence of dramatic discriminatory incentives.

The Commission should consider the implications of the fact that, even with low New York-based CHX trading activity, a third of all CHX accounts still voluntarily take on the same minimum risk exposures as would be required of LEAD Market Makers, and do so without any unprecedented discriminatory benefit. To all these participants, the proposed minimum performance obligations would be meaningless and insubstantial obligations to accept in exchange for obtaining the significant discriminatory benefit provided by the proposed speedbump.

2. The Proposed Market-wide Benefits Appear to be Too Speculative

The Commission should carefully consider the weight to be given, if any, to speculative benefits to overall market quality. Although the proposal describes how the asymmetric speedbump could *potentially* result in price improving quotations to the benefit of retail and

[31] *See* CHX June Letter, *supra* note 7, at 8, n. 49.

[32] *See id.*

institutional investors in the market,[33] the *actual* minimum performance obligations are not adequately designed to provide such a benefit to market quality. The proposed quoting obligations require only that LEAD Market Makers maintain a quote close to the NBBO, matching it ten percent of the time. LEAD Market Makers are not obliged to provide any price improvement.

We understand CHX's argument for the possibility that new LEAD Market Maker quotations would tighten the NBBO spread through voluntarily action.[34] First, the discriminatory advantage of a speedbump combined with minimum performance standards and other economic incentives could incentivize market participants to first become LEAD Market Makers and to then post larger-size and more aggressively-priced quotes on CHX.[35] CHX predicts that, as a secondary effect, its LEAD program will result in a slight narrowing of the NBBO because of a new willingness by its LEAD Market Makers to take additional execution risk.[36] It notes that a narrower NBBO could reduce transaction costs for both retail investors and institutional investors even in off-exchange transactions.[37]

We are concerned, however, that speculation about the potential for market-wide benefits seems to serve as the basis for allowing this significant discrimination. Especially here, the primary way that retail investors would stand to benefit from this proposal is only if LEAD Market Makers voluntarily do more than required by the actual minimum performance standards.

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[33] *See* CHX Order, *supra* note 3, at 49434 ("*To the extent the LEAD would incentivize* LEAD MMs to improve the price and size…") (emphasis added).

[34] *See id.* at 49441.

[35] *See id.*

[36] *See id.* at 49443, n. 124.

[37] *See id.*

In effect, retail investors are being asked to accept the risk that the two-year pilot significantly degrades market quality without being able to count on any definite benefit.

There may be instances where it is appropriate to consider the possibility of benefits flowing to investors from secondary effects of voluntary market participant behavior. However, given the current market participant behaviors described in the proposal, it would not seem appropriate to expect behavior beyond the proposed minimum performance standards here. The CHX proposal is expressly designed to *reduce* the execution risk for its LEAD Market Makers.[38] This is necessary because some CHX members need an incentive to increase their execution risk by placing orders at the NBBO some of the time. It does not seem reasonable to expect these same market participants to suddenly begin voluntarily increasing their execution risk beyond the new minimum performance standards by submitting quotes more aggressive than the NBBO. And therefore, it does not seem reasonable to expect retail and institutional investors to benefit from a tighter NBBO.

While the proposed speedbump is a guaranteed discriminatory benefit for LEAD Market Makers, there do not appear to be definite benefits for retail or institutional investors under this proposal. We understand that the pilot is designed to examine how often, how long, and at what size the LEAD Market Makers are alone at the NBBO, and will also look at the effective spreads experienced by market participants.[39] However, the potential benefits for retail and institutional investors are too uncertain and speculative to justify a proposal that is discriminatory on its face and where the corresponding obligations of market makers are not sufficient to make the discrimination "fair."

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[38] *See, e.g.*, CHX June Letter, *supra* note 7, at 7.

[39] *See* CHX Order, *supra* note 3, at 49435-38.

C. The Academic Literature Should Be Given Further Consideration

The Order notes, but quickly distinguishes, academic studies of TSX Alpha,[40] a Canadian exchange that implemented an asymmetric delay that degraded overall market quality, harmed institutional order routers and increased effective spreads.[41] We agree that, compared to the CHX Proposal, the delay on TSX Alpha was a longer, randomized delay of 1-3 milliseconds and occurred in a different market with a different pricing structure and regulatory environment.[42] Nonetheless, there appear to be sufficient parallels to warrant that the Commission afford the studies' findings meaningful weight in its consideration. As noted in the study, like here, Canadian market liquidity is fragmented across multiple venues, some lit and some dark.[43] Like here, we deduce that TSX Alpha intended its change to improve, rather than degrade, market quality. Real-world studies should inform the Commission's data-driven consideration, rather than be summarily dismissed for their differences.

The Order speculates that the study may not be relevant to the Commission's evaluation of the CHX proposal because: (1) the randomized delay could have negatively impacted order routing; (2) adjusted order routing could have driven informed volume to other exchanges to the detriment of overall market quality; and (3) the pricing structure of the taker-maker exchange did not incentivize the TSX market makers to improve the then-degraded best bids and offers.[44]

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[40] *See* Haoming Chen, Sean Foley, Michael Goldstein &Thomas Ruf, The Value of a Millisecond: Harnessing Information in Fast, Fragmented Markets, at 6 (Nov. 18, 2017) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2860359 [hereinafter, The Value of a Millisecond].

[41] *See* CHX Order, *supra* note 3, at 49444.

[42] *See id.*

[43] *See* The Value of a Millisecond, *supra* note 40, at 6.

[44] *See* CHX Order, *supra* note 3, at 49444.

These speculations should be revisited, as they do not appear to be borne out by some of the data presented in the study.

For example, from our review it appears that the study found that liquidity seekers did not cease to route to TSX Alpha as part of their multi-venue submissions, even though that exchange no longer even had the benefit of a protected quotation.[45] Those TSX Alpha limit orders not subject to the speedbump were still being traded against and were no better at avoiding adverse selection, suggesting that orders were still being routed to the exchange rather than avoiding it entirely.[46] Further, while the fraction of actual smart order router trades did decline on TSX Alpha, the exchange continued to receive a substantial amount of market orders, despite no longer being quote protected, as part of a multi-venue submission from smart order routers.[47]

Similarly, there is only speculation that the structure of the CHX LEAD program will incentivize LEAD Market Makers to improve the NBBO. As noted above, LEAD Market Makers are only obliged to provide quotes matching the NBBO 10% of the time. Prior to the impact of latency arbitrage, and without any affirmative obligations, liquidity providers on CHX were already incentivized by CHX's pricing structure to quote the SPY at the NBBO 44.36% of the time, but were only involved in 5.73% of total trading volume for SPY. Without further information, this suggests that CHX participants were not often alone at the NBBO versus other exchange market makers.

To the extent that CHX developed this proposal, in part, to alter the balance between CHX liquidity providers and latency arbitrage traders, we might expect CHX participants to

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[45] *See* The Value of a Millisecond, *supra* note 40, at 21.

[46] *See id.* at 22.

[47] *See id*.

return to prior practices, rather than becoming even more aggressive and risk-seeking. As acknowledged by CHX, even with the speedbump and upgraded market maker technology, it would expect that LEAD Market Makers in SPY would only be able to avoid having stale quotes picked off around 50% of the time.[48] It is not clear what would cause a LEAD Market Maker in SPY to be incentivized to improve the NBBO, given the risk. The Commission should therefore consider the significant possibility that CHX participants, like those on TSX Alpha, would merely be incentivized to match prices made elsewhere for securities like the SPY, rather than to take the additional risk to establish a new, tighter NBBO.

III. Conclusion

If an exchange seeks to introduce measures that create significant discrimination, the exchange should be expected to clearly demonstrate that the discrimination is not unfair. Here, CHX has failed to make a showing that its proposed market maker obligations will be meaningful, proportionate to and balanced with the advantages of the asymmetric speedbump. On the contrary, the obligations do not appear meaningful and do not appear designed to sufficiently enhance market quality. Three of four Chicago-based and one of three New York-based trading accounts on CHX already satisfy the proposed new quoting and trading obligations without any discriminatory incentives.[49] Providing a further discriminatory advantage along with minimal obligations may increase resting liquidity at the NBBO, but such an increase in the quotations at the NBBO on CHX should not be the kind of market quality enhancement that, standing alone, justifies the significant discriminatory impact of the speedbump. The other potential enhancements to market quality appear too speculative. The proposal does not oblige

[48] *See* CHX June Letter, *supra* note 7, at 13-14.

[49] *See id.* at 8, n. 49.

LEAD Market Makers to provide any benefits beyond meeting the minimum standards, and current activity on CHX raises significant questions about whether there is any reason to expect participants to voluntarily embrace additional execution risk. While providing definite market-wide benefits to retail and institutional investors would make the proposal more balanced, such benefits could only be expected to occur if the minimum standards required market makers to provide those benefits in the first place.

Accordingly, we recommend that the Commission reverse the Order approving the CHX proposal.