January 21, 2020

Vanessa Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: Release No. 34-87814; File No. SR-IEX-2019-15; Investors Exchange LLC; Notice of Filing of Proposed Rule Change to Add a New Discretionary Limit Order Type

Dear Ms. Countryman:

Hudson River Trading LLC ("Hudson River Trading") appreciates the opportunity to comment on Investors Exchange's ("IEX") above captioned proposal. Hudson River Trading is a global, multi-asset class market making and principal trading firm that develops automated trading strategies that provide liquidity and facilitate price discovery on exchanges and alternative trading systems. Our affiliate, HRT Financial LLC, is a member of all U.S. equities exchanges and is a registered market maker in over 4,000 stocks and exchange-traded funds.

Hudson River Trading believes it is critical that the Securities and Exchange Commission ("Commission") ensures impartial, orderly, and efficient markets. The proposed Discretionary Limit Order ("D-limit") is designed to use a price prediction signal in order to "fade" displayed limit orders by repricing D-limit orders to an inferior price. IEX imposes an intentional 350 microsecond delay, or speed bump, on incoming orders. However, once certain orders, including D-limit orders, are entered on the IEX limit order book, any price changes made by IEX are not subject to the IEX speed bump. As IEX explains, "All of these aspects of IEX's design – the speed bump, the pegged order types, and the CQI – are designed to work together…"[1] The D-limit order raises several issues as it is designed to compete with broker systems that attempt to price securities because the D-limit order takes advantage of its unique access to IEX that permits it to bypass the IEX speed bump in order to update the price of such orders. The D-limit order is designed to impair market participants' ability to access Protected Quotes during certain times in a manner that violates Rule 611 and the "Commission Interpretation Regarding Automated Quotations Under Regulation NMS"[2] ("Protected Quote Interpretation"). The proposed rule is not designed to remove impediments to and perfect the mechanism of a free and open market and a national market system, is not designed to protect investors and the public interest, aims to permit unfair discrimination, and would impose an unnecessary and inappropriate burden on competition.

Use of Price Prediction and Making of Investment Decisions by Exchanges

A core function of an exchange is the facilitation of price discovery through the display of non-marketable limit orders as well as the dissemination of executions resulting from the matching of buy and sell orders. The prices of these orders are based on the investment decisions of market

[1] *See* SR-IEX-2019-15. https://www.sec.gov/rules/sro/iex/2019/34-87814.pdf
[2] Securities Exchange Act Release No. 78102 (June 17, 2016). https://www.sec.gov/rules/interp/2016/34-78102.pdf

participants. Orders to buy and sell are typically entered with an explicit limit price, but some orders are benchmarked or "pegged" to concrete variable values such as the best bid or offer. In its exchange application, the Commission approved IEX's D-peg order type, a non-displayed order that makes use of a price prediction calculation that can result in a price change to the order. The use of a price prediction calculation was at the time controversial and the expansion of this feature to displayed orders requires scrutiny. The use of price prediction by an exchange shifts the exchange's role from a platform designed to facilitate price discovery into an active participant in the price discovery function.[3] In doing so, the exchange has become engaged in a competitive endeavor with its members and other investors by attempting to incorporate information to forecast securities prices more accurately than its members. The proposed increased application of price prediction is significant in that displayed limit orders contribute significantly to price discovery.[4]

There are many potential applications of price prediction or other investment decisions that an exchange could implement and while IEX is proposing one such application, the Commission should be mindful of other potential applications of price prediction-based order types. For example, exchanges could create features based on price prediction or other drivers of investment decisions such as orders designed to narrow the bid-ask spread, signal-based cancels of all orders on one or both sides of the market in a security or all securities, and orders that cross the spread and trade with existing contra-side liquidity, among others. To the extent that an exchange's price predictions are competitive with other market participants, the exchange would have a competitive advantage as, without significant changes to exchange infrastructure, it will have inherently superior access to the matching engine (in fact, the price prediction or other investment decisions could reside in the matching engine software).

Exchanges should not have the ability to make investment pricing decisions such as pricing orders using price predictions. Permitting exchanges to make investment decisions puts them in direct competition with their members. This competition will not be on fair terms as exchanges have inherently better access to the matching engine as well as regulatory authority over the members with whom they will be competing. Exchanges should similarly not be permitted to make use of artificial delay mechanisms in combination with investment decisions. If exchanges are permitted to make investment decisions, it is critical that any access to the exchange is on terms equal to that of members and that any conflicts are addressed.

IEX has already used its role as a self-regulatory organization in a manner aimed to reduce its members' use of similar "predictive strategies" on IEX by imposing the "Crumbling Quote Remove Fee". This fee charges certain executions that occur when IEX predicts a price change $0.003 per share, rather than its standard fee of $0.0009 per share. IEX justified this fee by claiming that reducing these "predictive strategies" would "incentivize additional resting liquidity, including displayed liquidity, on IEX."[5] However, IEX stated in the instant filing that

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[3] Price predictions are inherently different than pegged orders in that they represent speculation based on the information the prediction algorithm uses about what will happen in the future as opposed to an observed value such as the current bid or offer. As IEX puts it, "We have found experimentally that roughly 50% accuracy is a sweet spot." See https://www.iextrading.com/docs/The%20Evolution%20of%20the%20Crumbling%20Quote%20Signal.pdf

[4] *See* Brogaard, Jonathan, Hendershott, Terrence, and Riordan, Ryan, 2019, "Price discovery without trading: Evidence from Limit Orders" Journal of Finance. Vol LXXIV, No. 4. http://faculty.haas.berkeley.edu/hender/IIROC.pdf

[5] *See* SR-IEX-2017-27. https://www.sec.gov/rules/sro/iex/2017/34-81484.pdf

the fee was ineffective and it had observed only an "incremental reduction" in the trading it sought to discourage.[6] The Crumbling Quote Remove Fee failed to improve its market or achieve the goals IEX claimed it was designed to achieve. Instead, IEX has used its regulatory authority to charge a punitive fee that is more than 300% its standard fee to firms that utilize competing price prediction techniques. Since the Crumbling Quote Remove Fee was ineffective in deterring trading behavior that is competitive with IEX's price prediction, it acts as a punitive fee of which IEX is the beneficiary.[7] It is inappropriate for IEX to institute punitive fees for predictive strategies that compete with IEX's price prediction features.

Unfair Access to a Competitive Feature

If the Commission determines that the use of price prediction is consistent with the Exchange Act, it must further determine that employing such technology in combination with a feature that provides preferential access to the exchange matching engine is also consistent with the Exchange Act. As IEX stated, D-limit orders are designed to "work together" with the IEX speed bump. D-limit orders (and D-peg orders) are designed to take advantage of the fact that other market participants are subject to the IEX speed bump when updating prices, whereas D-limit orders are not subject to the speed bump. The ability of D-limit orders to bypass the speed bump creates an unnecessary and inappropriate burden on competition as IEX will have granted its pricing technique an advantage relative to members that display and update limit order prices. IEX fails to demonstrate that its use of price prediction combined with its preferential access to the IEX matching engine is consistent with just and equitable principles of trade, improves market quality, or represents fair competition.

D-limit Order Creates an Asymmetric Speed Bump

IEX intends for its D-limit orders to be considered Protected Quotes under Regulation NMS. As proposed, IEX will reprice D-limit order Protected Quotes to an inferior price based on IEX's price prediction without being subject to the IEX speed bump. However, a firm seeking to access the Protected Quote will be subject to the IEX speed bump. This creates an asymmetric speed bump where resting Protected Quotes are permitted to "fade" without being subject to the IEX speed bump whereas market participants seeking to access the Protected Quotes will be subject to an intentional delay. This aspect of the proposal raises many of the same issues present in Cboe EDGA's Liquidity Provider Protection proposal.[8]

Similar to the Cboe EDGA proposal, IEX's D-limit proposal is designed to 1) allow IEX and its D-limit order users to free-ride on price discovery on competing markets since IEX will bypass the speed bump to update prices; 2) create a distinct advantage for D-limit order users on IEX relative to firms that access liquidity on IEX; 3) harm market quality by enabling conditional Protected Quotations; 4) act as an opaque rebate to D-limit order users; and 5) circumvent Rule 602 (the Quote Rule) of Regulation NMS by designing D-limit orders to "fade" at certain times while incoming orders are being subjected to the speed bump.

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[6] *See* supra 1.

[7] Hudson River Trading noted "It is unclear what impact the fee will have in practice. IEX will keep the punitive remove fee so IEX will be the primary beneficiary." *See* Letter from Adam Nunes, Hudson River Trading LLC, to Brent J. Fields, Secretary, Securities and Exchange Commission, dated September 22, 2017.

[8] *See* SR-CboeEDGA-2019-012. https://www.sec.gov/rules/sro/cboeedga/2019/34-86168.pdf

D-limit Order Fails to Meet Protected Quote Status

The proposal raises additional issues related to Rule 611 in that it would introduce an asymmetric speed bump with respect to access to a Protected Quote. In the Protected Quote Interpretation, the Commission stated that "a proposed access delay that is only imposed on certain market participants or certain types of orders would be scrutinized to determine whether or not the discriminatory application of that delay is unfair."[9] The D-limit order creates the dynamic where Intermarket Sweep Orders attempting to access protected D-limit orders will be subject to the delay whereas IEX can bypass the speed bump to update the D-limit order price. D-limit orders would materially alter the application of IEX's speed bump and would thus require reexamination.

The Commission further states "…the interpretation is best focused on whether an intentional delay is so short as to not frustrate the purposes of Rule 611 by impairing fair and efficient access to an exchange's quotations. As it makes findings as to whether particular access delays are *de minimis* in the context of individual exchange proposals..."[10] Currently, the ability to update or cancel a Protected Quote on IEX is subject to the speed bump on the same terms as a firm's ability to access the Protected Quote. However, IEX states that "… D-Limit orders may not be accessible to other market participants…"[11] This statement makes clear that D-limit orders are specifically designed to frustrate the purposes of Rule 611 by impairing fair and efficient access to its Protected quotations. As such, the Commission should not permit Protected Quote status for D-limit orders.

IEX uses Regulatory Status to Extract Economic Rents

In December 2019, 15% of IEX's executed volume resulted from the execution of displayed orders[12] and IEX states that 55% of its passive volume is the result of two order types (DPeg and PPeg) that are non-displayed pegged orders that make use of the IEX price prediction signal.[13] This means that between 55% and 85% of IEX's executed volume is the result of order types that bypass the IEX speed bump to update prices. IEX currently does not charge for displayed orders that add liquidity as these orders do not benefit from the speed bump,[14] whereas non-displayed pegged orders that bypass the IEX speed bump when updating the order price are charged $0.0009 per share. The Commission stated that it "… would be concerned about access delays … that were relieved based upon payment of certain fees."[15] IEX currently charges for relief from its speed bump based upon the payment of significantly higher fees for orders that update prices while bypassing the speed bump and is seeking another opportunity to do so, now for access to Protected Quotes. Given the Commission's concern about the interaction of fees and intentional delays like the IEX speed bump, we urge the Commission to require IEX transaction fee filings to be subject to the 19(b)2 notice and comment and Commission approval

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[9] *See* supra 2.
[10] *See* Ibid.
[11] *See* supra 1.
[12] *See* https://iextrading.com/stats/#historical-daily
[13] *See* supra 1.
[14] Updates and cancels of displayed orders are subject to the IEX speed bump in a similar manner to incoming immediate-or-cancel orders and therefore have no advantage.
[15] *See* supra 2.

requirements, as such fees may affect the relative pricing of features that have the ability to bypass the speed bump and those that do not and, as such, may represent policy changes in addition to fee changes.

IEX will not take principal risk associated with D-limit orders, rather the market participants that use the D-limit order will. However, IEX has a clear economic interest in creating order types and other features that compete with its members while taking advantage IEX's preferential access to its matching engine and of its ability to bypass the speed bump because it can charge higher fees for those features. In fact, IEX's business model is largely based on having created a speed bump, then charging its members for the ability to bypass it. This proposal will allow D-limit orders to bypass the speed bump in order to "fade," creating unfair market access relative to market participants that manage displayed limit order prices themselves. This unfair advantage will provide IEX with the ability to charge users for the D-limit order's ability to bypass its speed bump. Despite IEX's rhetoric, these features do not improve market quality. Rather, they create inefficiency and then provide IEX the opportunity to profit by charging for access to a back door to bypass the inefficiency.

Conclusion

The proposed D-limit order is designed to use a price prediction signal in order to "fade" displayed limit orders by repricing D-limit orders to an inferior price while bypassing IEX's speed bump. The D-limit order is designed to unfairly compete with broker systems that attempt to price securities due to IEX's inherently preferential access to its exchange. The D-limit order further takes advantage of IEX's ability to bypass the its speed bump in order to update the price of such orders. Not only does IEX fail to demonstrate that its use of price prediction for displayed, D-limit orders is consistent with the Exchange Act, but going further, as IEX proposes, and employing such technology in combination with preferential access to the exchange matching is clearly not consistent with the Exchange Act. The D-limit order represents an asymmetric speed bump that IEX states is designed to make D-limit orders "inaccessible" at certain times in a manner that violates Rule 611 and is inconsistent with the Protected Quote Interpretation. Finally, the D-limit order would create another opportunity for IEX to charge for the ability to bypass its speed bump. We urge the Commission to disapprove this Proposal.

Please contact me if you have any questions or would like to discuss this letter.

Sincerely,

/s/ Adam Nunes

Adam Nunes
Head of Business Development