February 5, 2020

Filed Electronically

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


Dear Ms. Countryman:

T. Rowe Price appreciates the opportunity to comment on the above-referenced proposal (the "IEX Proposal") by Investors Exchange LLC ("IEX"). As proposed, the purpose of the rule change is to introduce a new order type, a Discretionary Limit or "D-Limit" order, that is designed to protect liquidity providers from latency arbitrage trading strategies. IEX describes D-Limit as an order type that behaves like a regular displayed limit order for nearly all of the trading day. It differs from a regular limit order by leveraging the IEX Crumbling Quote Indicator ("CQI"), which identifies brief moments in time when the quote is about to change, and resting orders are vulnerable to adverse selection. To address this vulnerability, D-Limit orders would be automatically re-priced when the CQI is "on."

As we have written in prior comments on a range of market structure issues, we continue to support innovation and enhancements to benefit the marketplace, specifically those - like the IEX Proposal - which promote liquidity provision. Adverse selection risk disincentives liquidity provision, which ultimately reduces price discovery. The disincentive to all market participants to provide displayed quotes in fear of getting "picked off" when the price of a security is in transition to a new price level continues to plague displayed markets. We commend and support IEX for taking steps to address the speed and information asymmetry advantages that are utilized by a small subset of market participants to the disadvantage of asset managers and other institutional investors. Accordingly, we encourage the SEC to approve the IEX Proposal.

We have not supported earlier speed bump proposals from other exchanges that also appeared to address latency arbitrage as we felt they would: (a) produce harmful effects and undesirable complexity; and (b) fail to generate offsetting benefits to market participants broadly. We address below the key differences between the IEX Proposal and other "liquidity protection" proposals and explain why we are supportive of IEX's D-limit order type.

---

1 T. Rowe Price Associates, Inc. and its advisory affiliates provide investment management services to numerous individuals, institutions, and investment funds, including the T. Rowe Price family of mutual funds. T. Rowe Price Associates, Inc. and its affiliates managed approximately $1.21 trillion in assets as of December 31, 2019.

2 IEX's December 17, 2019 article titled "Leveling the Playing Field for Lit Trading" (available at: https://medium.com/boxes-and-lines/leveling-the-playing-field-for-lit-trading-682dc723cecf1).
We believe there are four key points that differentiate the proposed D-Limit order from other "speed bumps":

- **Non-discriminatory**
  - D-Limit orders are non-discriminatory.
  - The operation of IEX's CQI and the repricing of D-Limit orders are deterministic and transparent.
  - Institutional liquidity takers will still be able to access a displayed quote on IEX.
  - D-Limit addresses the root issue of latency arbitrage, without adding confusion to best-execution/pegged pricing processes.

**Non-discriminatory**
We wrote in our EDGA LP2 comment letter that: "...[we] believe the proposed delay mechanism is intended to help a very specific class of market participants, specifically, highly sophisticated market makers." 3 IEX's D-Limit order type is designed to equally benefit long-term investors, their brokers, and market makers alike. Any market participant can use D-Limit, regardless of their sophistication or technological capability, and any speed or information advantage they may or may not have. Institutional investors and their brokers don't have to invest in very expensive low-latency technology and market data products to try and avoid being adversely selected when using the D-Limit order type. In contrast, EDGA's LP2 proposal requires technological investment that is generally outside the reach for most institutional investors and their brokers.

**Deterministic and Transparent**
D-Limit is deterministic and applied consistently because it reprices orders every time the CQI is "on." As a result, brokers and market makers don't have discretion over repricing their D-Limit orders. And since the CQI is based on a publicly disclosed formula, the mechanics of the order type is fully transparent. This is different than EDGA's LP2 proposal as liquidity providers on EDGA would have the choice to cancel their quote for any reason at any time for up to 4 milliseconds.

**Institutional Liquidity Taking on IEX is not Affected**
Our EDGA LP2 comment letter states: "...the 4-millisecond delay introduced by LP2 will create significant uncertainty of execution...." Quote fading from D-Limit is less of a concern as the CQI is "on" for only 0.02% of the trading day on a volume-weighted basis. More importantly, institutional order routing is even less impacted by D-Limit since institutional order "taking" strategies are driven by a fundamental demand for liquidity and are not intentionally seeking to trade while the CQI is "on." Said more plainly, institutional orders on IEX typically occur before IEX's systems predict a quote change is imminent—consequently, these orders will be able to access the liquidity they see before the CQI changes to "on." Rather, D-Limit seeks to limit reactive strategies used by a small subset of proprietary trading firms that invest in high speed infrastructure to predict price changes, leverage small latency advantages, and opportunistically trade against stale quotes.

In its "A Deliberate Strategy" article about D-Limit, IEX explains that the bars in the chart below (from October 2019) reflect the average daily shares sent to IEX that are marketable to the far side (e.g., sellers trying to hit the bid) with zero indicating the moment the CQI made its prediction that the price was likely to change. The article goes on to note the majority of orders received from full-service and agency broker-dealers occur before the prediction is made, while proprietary trading firms send orders primarily after the prediction (at a 16 times greater magnitude). 4

---

4 Article available at: [https://medium.com/boxes-and-lines/a-deliberate-strategy-bb8b0cf9074b](https://medium.com/boxes-and-lines/a-deliberate-strategy-bb8b0cf9074b)
Despite the fact that the periods when the CQI predicts that the price is about to change only amount to an average of 4 seconds per symbol per day on a volume-weighted basis, or 0.02% of the trading day, 24% of all IEX displayed trading happens when the CQI is “on.” IEX orders that are resting when the CQI is “on” are subject to significant risk of adverse selection. The firms responsible for the majority of all lit taking volume when the CQI is “on” greatly benefit from the ability to “pick off” those orders. Trade performance metrics highlight this phenomenon - resting orders that execute on IEX while the CQI is “on” underperform those when the CQI is “off” by $0.0077 per share just 1 millisecond after the trade.\(^5\)

While IEX has attempted to disincentivize “takers” when the CQI is “on” by charging them the maximum permissible take fees, the benefit to a liquidity taker of trading against a stale quote outweighs the fee incurred to access that same quote.

**Confusion around best-ex, pegged orders**

Another key aspect of the IEX Proposal that distinguishes it from EDGA’s LP2 is that O-Limit orders will be protected and part of the NBBO which eliminates the confusion that a “non-protected” solution would create. The additional complexity and confusion created by manual unprotected quotes that would still be disseminated by the Securities Information Processors was a major concern of ours in regard to EDGA’s LP2 proposal. Essentially every market maker quote on EDGA could be viewed as “inaccessible” and consequently could create ambiguities and other negative implications relative to best-execution decision-making and pegged pricing determinations.

**Conclusion**

If approved, the IEX Proposal would open the door for other exchanges and venues to attempt to compete based on the novelty of a speed bump. While we believe the benefits of IEX’s D-Limit outweigh any costs and it should be approved, we would encourage the Securities and Exchange Commission to evaluate each speed bump proposal on its own merits, require exchanges and venues to put forth data to support their proposed offering, and only approve those which represent innovations designed to level the playing field for investors at large.

We believe that D-Limit is designed to encourage greater use of displayed orders, broadening the set of firms who compete in displayed trading, thereby contributing to price discovery and overall market quality to the benefit of all market participants.

\(^5\) IEX “Leveling the Playing Field for Lit Trading” article.
Thank you again for the opportunity to comment on the IEX Proposal. Should you have any questions or wish to discuss our letter, please feel free to contact us.

Sincerely,

Mehmet Kinak
Vice President & Global Head of Systematic Trading & Market Structure

Jonathan D. Siegel
Vice President & Senior Legal Counsel - Legislative & Regulatory Affairs