CITADEL | Securities

July 2, 2020

Ms. Vanessa A. Countryman
Secretary
Securities and Exchange Commission
100 F Street NE
Washington, DC 20549–1090

**Re: IEX D-Limit Proposal (File No. SR-IEX-2019-15)**

Dear Ms. Countryman:

Citadel Securities appreciates the opportunity to provide comments to the Securities and Exchange Commission (the "Commission") on the proposal by the Investors Exchange LLC ("IEX") to introduce a new "Discretionary Limit" ("D-Limit") order type (the "Proposal").[1]

It is undisputed that the Proposal would provide liquidity providers on IEX with a new material benefit, as D-Limit orders (including displayed orders) will be automatically adjusted by IEX to a price that is less aggressive than the NBB (or NBO) if IEX's "crumbling quote indicator" ("CQI") determines that the NBBO is likely to change in a manner that is adverse to the liquidity provider. This means that very few (if any) D-Limit orders will execute when the CQI signal is ON and market prices are moving against the liquidity provider.

The key question being debated in the comment file is what types of liquidity taking orders will be adversely impacted by the Proposal. IEX asserts that the Proposal is "narrowly-tailored" to protect liquidity providers from purported "latency arbitrage" activities by sophisticated trading firms.[2] We, and several other commenters, have argued that the negative impacts of the Proposal will be much broader, affecting all types of liquidity takers (including retail investors) and impeding a wide range of ordinary trading activities, including the execution of larger orders that must be routed to multiple exchanges in order to access the requisite liquidity. Resolving this debate is critical to determining whether the Proposal is consistent with the Securities Exchange Act of 1934 ("Exchange Act").

Importantly, this debate can be resolved by analyzing the trading activity that is occurring on IEX today when the CQI is ON. This is because, if the Proposal were to be approved, orders executed today when the CQI is ON would be unable to access D-Limit orders going forward, leading to quote fading and a decline in fill rates.[3] Fortunately, IEX already includes an identifier

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[1] 84 FR 71997 (Dec. 30, 2019), available at: https://www.govinfo.gov/content/pkg/FR-2019-12-30/pdf/2019-28024.pdf (the "Proposal").

[2] *See, e.g.*, Letter from John Ramsay, Chief Market Policy Officer, IEX (May 10, 2020) at page 3 available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-7169827-216633.pdf ("IEX Second Response Letter").

[3] Experience with IEX's non-displayed D-Peg and P-Peg order types demonstrates how successful IEX is in preventing quote accessibility when the CQI signal is ON, with only .17% of D-Peg and P-Peg volume executed

indicating whether the CQI was ON when a particular order was executed, enabling a comprehensive analysis of current trading activity.

However, despite possessing this information, IEX has thus far neglected to perform a comprehensive analysis of trading activity occurring today when the CQI is ON. Instead, IEX has simply grouped its members into three categories in an attempt to show that "proprietary trading firms" account for the vast majority of trading activity when the CQI is ON.[4] As we detailed in our first comment letter,[5] this analysis suffers from a number of flaws, including imprecise firm classifications that render the conclusions inaccurate (for example, all orders routed to IEX by Citadel Securities were classified as "proprietary trading firm" orders even though retail orders account for over 50% of our trading activity on IEX). IEX has made no attempt to specifically analyze the actual orders that are being executed when the CQI is ON in order to determine, for example, how many are retail orders or portions of larger orders that are being routed to multiple exchanges simultaneously.

As a result, in order to better inform the Commission's consideration of the Proposal, we performed an analysis of the retail orders and proprietary orders routed to IEX by Citadel Securities during the month of May 2020. We present the results below.

## I. Citadel Securities Data Analysis

### *A. Retail Orders*

In our first comment letter, we noted that retail orders account for over 50% of our trading activity on IEX. These are orders received from retail broker-dealers that Citadel Securities has, in whole or in part, determined to route to one or more external venues for execution.[6] When routing retail orders to external venues for execution, consistent with standard market practice, we typically enter into back-to-back transactions (one on the external venue and one with the retail broker-dealer). Noting the proportion of total Citadel Securities trading activity on IEX that retail orders represent, we thought that it was important for IEX to more carefully analyze the potential impact of the Proposal on retail investors.

In response, IEX:

during these periods. *See* https://medium.com/boxes-and-lines/leveling-the-playing-field-for-lit-trading-682dc723cef1.

[4] *See* Proposal at 72002 ("Within the two millisecond periods following CQI determinations, proprietary trading firms submit 6.8 times as many marketable-to-mid shares (i.e., shares priced at least as aggressively as the midpoint and eligible to trade) compared to full-service and agency firms").

[5] *See* Letter from Stephen Berger, Managing Director, Global Head of Government and Regulatory Policy, Citadel Securities (April 23, 2020), available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-7110555-215933.pdf.

[6] Citadel Securities is the leading destination for retail orders, executing approximately 40% of all U.S.-listed retail volume.

- First, dismissed our observation that retail orders were being misclassified as "proprietary trading firm" orders in their data analysis. Instead of addressing this concern, IEX decided to simply re-run the exact same data analysis but exclude all of the orders that Citadel Securities routes to IEX.[7] As a result, there was no attempt to assess the impact of the Proposal on retail orders routed to IEX.

- Second, asserted that concerns about negative impacts on retail investors were "meritless" and that "[t]he more credible comment on D-limit and retail orders came from AJO, which stated: 'To suggest that retail orders would be adversely impacted by this proposal is unfair and misleading.'"[8] We note that AJO does not appear to have any experience handling retail orders,[9] makes inaccurate statements regarding how retail orders are executed,[10] and does not provide any data to support its position that retail orders will not be adversely impacted by the Proposal. Unfortunately, this response by IEX is not atypical – instead of engaging with commenters in good faith, IEX is quick to dismiss any concern as "meritless" and to rely heavily on unsubstantiated assertions made in sympathetic comment letters for support.

As a result of IEX's unwillingness to more closely analyze the impact of the Proposal on retail investors, we performed our own analysis of the retail orders routed to IEX by Citadel Securities that removed displayed liquidity during the month of May 2020. We found that the CQI was ON for approximately 15% of these retail orders, clearly indicating that IEX was incorrect to assert that concerns about retail investors were "meritless."

There was also a clear explanation as to why the CQI was ON for these retail orders. Many of the retail orders that we route to external venues for execution are larger orders that must be routed to multiple exchanges in order to access the requisite liquidity.[11] To provide a sense of scale, we executed over 2.5 million retail orders during the month of May 2020 that required more size than was available at the NBBO across all exchanges at the time of routing.

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[7] IEX Second Response Letter at page 13.

[8] IEX Second Response Letter at page 14.

[9] *See* http://www.ajopartners.com/clients-by-size/.

[10] For example, AJO incorrectly asserts: "For starters, retail orders do not trade in the manner suggested. Unlike institutional orders, large retail orders are not broken up by a smart order router and strategically routed to multiple venues." Letter from Sean Paylor, AJO (Feb. 10, 2020) at page 4, available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-6791509-208328.pdf.

[11] Prior to routing a marketable held client order to the far touch (i.e. the displayed NBB or NBO), our smart order router will typically search for midpoint liquidity and other inside-the-quote liquidity across external venues (both on and off-exchange). However, in many cases there is insufficient liquidity at prices better than the far touch to fill the entire order and our smart order router will proceed to access liquidity at the far touch. In many cases, the client order is sufficiently large such that the smart order router must access all displayed liquidity priced at the far touch across all exchanges.

When routing a large retail order simultaneously to multiple exchanges, including IEX, the IEX CQI will observe the executions occurring on other exchanges while the portion of the order sent to IEX is delayed by virtue of the IEX speedbump. As a result, by the time the portion of the order sent to IEX exits the speedbump, the CQI will be ON (and the displayed D-Limit quotes will be repriced to be less aggressive than the NBB (or NBO)) simply as a result of IEX observing our smart order router executing the retail order across multiple venues. This explanation is supported by the following additional statistic: of the retail orders identified above as being executed on IEX when the CQI was ON, 98.3% of those orders (accounting for 99.9% of the total volume) were routed to multiple exchanges. If the Proposal were to be approved, the portions of those retail orders sent to IEX would be unable to access displayed D-Limit quotes, leading to a decline in fill rates. Any unfilled portion would then need to be re-routed to other exchanges to secure the necessary liquidity, with prices likely worsening as other market participants react to the fact that the rest of the large order has already been executed and publicly reported. This sequence of events will negatively impact execution quality for retail investors.

To further illustrate this sequence of events, we provide below an example of an actual retail order that removed displayed liquidity on IEX during the month of May 2020:

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| **Order**: Marketable buy order that was larger than the amount of displayed liquidity at the NBO |
| **Available Market Liquidity**: 2000 shares displayed across six exchanges (including 100 shares at IEX) |
| **Order Routing**: Route to all six exchanges to execute all available shares |
| **Execution timeline**: |
| 1) 300 shares traded at CboeBZX |
| 2) 400 shares traded at CboeEDGX |
| 3) 100 shares added and traded at CboeEDGX |
| 4) 500 shares traded at NASDAQ |
| 5) 100 shares added and traded at NASDAQ |
| 6) 300 shares traded at NYSE |
| 7) 200 shares traded at NYSEAMER |
| 8) 100 shares traded at IEX **and the CQI is ON** (596 microseconds after the execution on CboeBZX)[12] |

In the above example, the first six executions all occurred more than 350 microseconds before notification of the IEX execution. As a result, we expect the IEX CQI would have observed all of these six executions prior to the occurrence of the execution on IEX. Thus, by the time the portion

[12] We note that IEX's position in the execution timeline is due to the IEX speedbump, which imposes a roundtrip delay of 700 microseconds (350 inbound and 350 outbound). In this example, we routed near-simultaneously to all six exchanges.

of the order sent to IEX exited the speedbump, the CQI was ON presumably as a result of observing the other executions relating to this single large retail order. If the Proposal were to be approved, the portion of the retail order sent to IEX above would have been unable to access the 100 shares that were displayed if those shares were posted using the D-Limit order type.

The example above clearly shows that it is inaccurate and misleading for IEX to claim that "a broker that is routing today in such a way as to maximize its ability to obtain all available liquidity will not thereby trigger the CQI by doing so."[13] Instead, the approval of the Proposal would leave broker-dealers that route retail orders in an untenable position. Given that IEX is requesting that D-Limit orders be considered protected quotations, the broker-dealer could not elect to simply ignore displayed liquidity at IEX (and even if D-Limit orders were not considered protected quotations, best execution obligations could lead to a similar dilemma for routing retail orders absent additional guidance from the Commission). In practice, there would be two options:

- <u>Option 1</u>: Continue with current routing practices which means, for larger retail orders routed to multiple external venues, the portion of the order sent to IEX is highly unlikely to be filled. Any unfilled portion would then need to be re-routed to other exchanges to secure the necessary liquidity, with prices likely worsening as other market participants react to the fact that the rest of the large order has already been executed and publicly reported.

- <u>Option 2</u>: (1) Route first to IEX, (2) wait for 350 microseconds (the length of the IEX speedbump), and (3) then route to other external venues. This would avoid triggering the CQI but, as detailed in our first comment letter, this option would change the quoting behavior of market makers on other exchanges and would compel market participants to preference IEX despite other considerations, such as transaction fees. In addition, this approach may not be compliant with current Commission and FINRA regulations applicable to the routing of retail orders. Several questions would need to be addressed, including:

    - whether broker-dealers intentionally delaying the routing of marketable orders is consistent with best execution and other regulatory requirements;

    - whether broker-dealers should be comfortable delaying the routing of marketable orders given the risk of the market moving in the interim (particularly if greater size was displayed on other venues or if execution fees are lower on other venues);

    - what are the implementation costs associated with market participants updating their routing methodologies in this manner, taking into account the likely proliferation of similar mechanisms on other exchanges;

[13] IEX Second Response Letter at page 20.

- what would be the economic and regulatory implications for market participants that do not update their routing methodologies in this manner;

- what are the risks of unnecessarily increasing the complexity of order routing systems, especially during periods of heightened market volatility; and

- what would happen if other exchanges implemented asymmetric speed bumps, perhaps with differing durations.

Finally, we note that approval of the Proposal will only increase the magnitude of the issues identified above for retail orders. Given the materiality of the benefit being provided to liquidity providers, we would expect displayed liquidity on IEX to increase and displayed liquidity on other exchanges to decrease. As a result, we would be more likely to route portions of oversized retail orders to IEX compared to today. Consequently, more retail orders would be at risk of attempting to trade when the CQI is ON, and therefore experience quote fading and declining fill rates. As noted above, we executed over 2.5 million retail orders during the month of May 2020 that required more size than was available at the NBBO across all exchanges at the time of routing. To the extent IEX had displayed liquidity, virtually all of these orders would be routed to IEX when the CQI is ON and would likely experience quote fading (since our smart order router would also be routing to other exchanges to fill the customer's order). In our view, this does not represent a "meritless" concern and IEX should be required to assess the impact of the Proposal taking into account the expectation that displayed liquidity on IEX will increase.

*B. Proprietary Orders*

We performed a similar analysis of proprietary orders routed to IEX by Citadel Securities that removed displayed liquidity during the month of May 2020 to better understand why many of these orders were also executed when the CQI was ON. We found a similar explanation – proprietary executions occurring when the CQI is ON are typically part of larger orders that are sent to multiple exchanges simultaneously.

Specifically, we found that in more than 90% of the instances where proprietary orders execute against displayed liquidity on IEX when the CQI is ON, we are also routing to multiple other exchanges at the same time. This means that, similar to the retail analysis above, our own trading activity can trigger the CQI simply as a result of IEX observing executions on other exchanges that relate to a single large proprietary order while the portion of the order sent to IEX is delayed by the speedbump. By the time the portion of the order sent to IEX exits the speedbump, the CQI will be ON as a result of observing the other executions relating to this single proprietary order. If the Proposal were to be approved, the portion of the order sent to IEX would be unable to access D-Limit orders, leading to a decline in fill rates. As with the retail example above, any unfilled portion of the order would then need to be re-routed to other exchanges to secure the necessary liquidity, with prices likely worsening as other market participants react to the fact that the rest of the large order has already been executed and publicly reported. This sequence of events would disrupt a variety of ordinary trading activities, including bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures, and would likely lead to wider spreads being borne by retail and institutional investors as a result.

We note that several commenters have raised concerns around the impact of the Proposal on larger orders that are sent simultaneously to more than one venue for execution, including intermarket sweep orders.[14] In response, IEX has asserted that "there is nothing about D-Limit that should change the way that brokers use intermarket sweep orders to access quotes on multiple exchanges"[15] and "a broker that is not executing a latency arbitrage strategy would not need to prioritize IEX over other venues to obtain all available liquidity."[16]

The analysis of our own trading activity clearly shows that IEX's assertions are inaccurate. Taking into account that IEX is requesting that D-Limit orders be considered protected quotations, brokers routing larger orders would face the same two options discussed in the retail analysis above: (1) continue with current routing practices which means, for larger orders routed to multiple external venues, that the portion of the order sent to IEX is unlikely to be filled, or (2) prioritize routing to IEX over other external venues to avoid triggering the CQI.[17] When considered in the context of the above, instead of protecting liquidity providers against purported "latency arbitrage," the Proposal simply provides a mechanism for liquidity providers on IEX to avoid a market-wide sweep that is executing against all of the displayed liquidity at a given price level and, therefore, moving market prices against the liquidity provider on a short-term basis.

## II. Conclusion

In our view, the above analysis of our own trading activity occurring today on IEX when the CQI is ON establishes that the Proposal will unfairly discriminate against a wide range of liquidity taking activity, including tens of millions of orders submitted by retail investors annually and larger orders that must be routed to multiple exchanges in order to access the requisite liquidity. These concrete examples demonstrate that IEX has failed to identify and distinguish purported "latency arbitrage" from a wide range of ordinary trading activities that can trigger the CQI.

At a minimum, this analysis clearly demonstrates the inadequacy of the data analysis performed by IEX thus far. Given that IEX has acknowledged that 33.7% of marketable orders are received and 24% of displayed volume is executed when the CQI is ON,[18] it is undisputed that a significant percentage of total liquidity taking activity will be negatively impacted by the Proposal. The key question is what types of liquidity taking orders will be negatively impacted, and IEX has been unable to put forward data showing that ordinary trading activities will not be

[14] *See, e.g.,* Letters from ACS Execution Services, Clearpool, DLA Piper, FIA PTG, IMC, NASDAQ, and SIFMA,

[15] IEX Second Response Letter at page 19.

[16] IEX Second Response Letter at page 20.

[17] There are also questions resulting from this option that would need to be addressed by the Commission, such as whether an order can be labeled as an "ISO" if routing is intentionally delayed to account for the IEX speedbump.

[18] Proposal at 71999 and 72001.

subject to unfair discrimination, including orders from retail investors or larger orders that must be routed to multiple exchanges simultaneously (indeed, the IEX data analysis misclassified all of the retail orders we route to IEX as "proprietary trading firm" orders).

Instead, as detailed above, IEX has elected to rely on unsubstantiated assertions regarding the impact of the Proposal, including from sympathetic comment letters, that prove to be inaccurate when analyzed against actual examples of liquidity taking orders executed today on IEX when the CQI is ON. These concrete examples show that IEX is incorrect to assert that the Proposal is narrowly-tailored to address purported "latency arbitrage." Instead, the Proposal simply provides a mechanism for liquidity providers on IEX to avoid larger orders or market-wide sweeps that could move market prices against the liquidity provider on a short-term basis, constituting a new material benefit for IEX liquidity providers without any corresponding obligation. In light of the insufficient data analysis and the inaccurate statements regarding the impacts of the Proposal, IEX has failed to satisfy its burden under the Exchange Act to provide the Commission with sufficient basis to make an affirmative finding that the Proposal is consistent with the Exchange Act.[19]

We generally support initiatives designed to increase displayed liquidity in the U.S. equities market. However, it must be noted that IEX's current structure (including the speedbump and the D-Peg and P-Peg order types) is explicitly designed to promote non-displayed liquidity, which typically accounts for over 85% of all trading activity on IEX.[20] Rather than seeking to increase displayed liquidity through a Proposal that would enable IEX liquidity providers (and IEX) to unfairly discriminate against liquidity taking orders, we encourage consideration of proposals that would establish a more level playing field for displayed liquidity on IEX.

The Proposal would adversely impact all types of liquidity takers, including tens of millions of orders submitted by retail investors annually. Our analysis above demonstrates that retail investors would experience quote fading, declining fill rates, and worse execution quality. We therefore urge the Commission to disapprove this Proposal.

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Please feel free to call the undersigned at [redacted] with any questions regarding these comments.

Respectfully,

/s/ Stephen John Berger

Managing Director

Global Head of Government & Regulatory Policy

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[19] *See* Release No. 34-88261 (Feb. 21, 2020), available at: https://www.sec.gov/rules/sro/cboeedga/2020/34-88261.pdf (the "EDGA Disapproval Order").

[20] *See* https://iextrading.com/stats/#historical-daily.