CITADEL | Securities

April 23, 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 Investors Exchange LLC ("IEX") to introduce a new "Discretionary Limit" ("D-Limit") order type (the "Proposal").[1]

According to the Proposal, D-Limit orders will be initially ranked in the order book at their limit price, but 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. This means that very few (if any) D-Limit orders will execute when the CQI signal is ON. IEX will bypass its existing speed bump when re-pricing D-Limit orders, transforming IEX's existing speed bump into a new asymmetric speed bump specifically for D-Limit orders.[2]

This novel trade avoidance mechanism has profound implications for U.S. equity market structure, creating unfair advantages for both IEX and the trading firms utilizing the D-Limit order type and undermining the integrity of the NBBO. IEX claims the Proposal will "protect liquidity providers from potential adverse selection by latency arbitrage trading strategies,"[3] but fails to distinguish purported "latency arbitrage" from a wide range of ordinary trading activities that can trigger the CQI, including sweep orders and bona fide hedging. Thus, as detailed below, the Proposal will broadly and indiscriminately affect myriad liquidity takers, including retail and institutional investors as well as market makers in equities and related asset classes, such as ETFs, options, and futures.

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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] While incoming orders are delayed by the IEX speed bump, D-Limit orders (including displayed orders) will be immediately repriced by IEX based on real-time market data. As a result, rather than being truly predictive, IEX's CQI model is able to benefit from hindsight, as it can observe trading activity occurring on other venues and use that information to determine whether or not to reprice a resting D-Limit order while incoming orders on IEX are delayed.

[3] Proposal at 71997.

We note that the Commission recently disapproved a similar proposal by Cboe EDGA Exchange, Inc. ("EDGA") to implement an asymmetric speed bump for displayed orders.[4] As detailed below, the IEX Proposal contains many of the same flaws as the EDGA proposal, and should also be disapproved by the Commission.

Although the IEX Proposal has garnered some support from market participants,[5] analysis of this support reveals that it cites frequently to, and is heavily reliant on, the data provided by IEX regarding the expected impact of the Proposal. Unfortunately, the data provided by IEX is insufficient and misleading.

Below, we detail:

I. Our unique perspective in assessing the impact of the Proposal;

II. Why the IEX data is insufficient and misleading; and

III. The key questions IEX and supporting letters have failed to answer that impact the Commission's analysis of whether the Proposal is consistent with the Securities Exchange Act of 1934 ("Exchange Act").

I. Citadel Securities' Unique Perspective

In assessing the impact of the IEX Proposal, we are uniquely situated in our ability to incorporate the following diverse perspectives:

- We are a top 5 market maker on IEX (and therefore a key member of the constituency this Proposal is designed to benefit);
- We are one of the top 3 takers of liquidity on IEX when the CQI signal is ON (and therefore have carefully considered the types of liquidity taking orders that will be negatively impacted by the Proposal);
- We are the leading destination for retail order flow and over 50% of our trading activity on IEX is on behalf of retail investors (and therefore we can readily appreciate the negative impact this Proposal will have on retail and institutional investors);
- We are a leading market maker in both equities and related asset classes, such as ETFs, options, and futures (and therefore can assess the impact of the Proposal on bona fide hedging activities by market makers, which often includes liquidity taking activity designed to support the provision of liquidity to market participants); and

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

[5] *See* https://www.sec.gov/comments/sr-iex-2019-15/sriex201915.htm.

- We are the largest NYSE Designated Market Maker ("DMM") by number of listings and care deeply about overall liquidity dynamics in the U.S. equities market (and therefore are well-positioned to assess the broader market impacts of the Proposal).

II. IEX's Data is Insufficient and Misleading

A. The IEX Data

IEX asserts the Proposal is "designed to protect liquidity providers from potential adverse selection by latency arbitrage trading strategies."[6] IEX relies heavily on markout data[7] to show the existence and associated impact of this purported "latency arbitrage," comparing markouts when the CQI signal is ON to other executions and concluding that "liquidity-providing orders that are executed while the CQI is on are subject to significant differences in short term markouts."[8]

IEX supplements the markout data with (a) data showing that the CQI signal will only be ON for seconds per symbol per trading data on average,[9] and (b) a limited analysis of the trading activity currently executed when the CQI signal is ON purporting to show that "proprietary trading firms" account for the vast majority of trading during these periods.[10] Both of these data points purport to show that other types of market participants will be minimally impacted by the Proposal.

B. Identified Flaws

Based on the data above, 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.[11]

IEX's reliance on markout data to show the existence of "latency arbitrage" is very similar to the EDGA asymmetric speed bump proposal, where the Commission found that markout data was

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[6] Proposal at 71997.

[7] The term markouts refers to changes in the midpoint of the NBBO measured from the perspective of either the liquidity providing resting order or liquidity removing taking order over a specified period of time following the time of execution. Proposal at 71999, FN 23.

[8] Proposal at 71999.

[9] *See* Proposal at 72001, FN 56.

[10] *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").

[11] *See* Release No. 34-88501 (March 27, 2020) at page 8, available at: https://www.sec.gov/rules/sro/iex/2020/34-88501.pdf.

insufficient to support an affirmative finding.[12] This is because both the IEX and EDGA markout data simply show that short-term price changes are likely to result from trading activities that can trigger the CQI, such as sweep orders taking out a price level across the market and bona fide hedging activities by market makers. Any markout analysis comparing transactions that are part of a sweep order taking out a price level across the market with transactions that execute against only a portion of posted market-wide liquidity will of course show significant differences in short-term markouts.

IEX's analysis of trading activity currently executed when the CQI signal is ON therefore becomes critical in assessing whether IEX has met its burden under the Exchange Act. Although the CQI is only ON for a limited duration, IEX has acknowledged that 33.7% of marketable orders are received and 24% of displayed volume is executed during these periods.[13] Therefore, a very significant portion of total trading activity will be negatively impacted by the Proposal, and it is critical to understand exactly what comprises this trading activity. Unfortunately, IEX only performs a cursory analysis purporting to show that "proprietary trading firms" account for the vast majority of trading during these periods.[14] As detailed below, this analysis suffers from a number of flaws and is insufficient to substantiate IEX's broad assertion that "aggressive taking orders while the CQI is on are strongly correlated to latency arbitrage strategies."[15]

First, IEX's classification of member firms is imprecise, rendering its conclusions inaccurate regarding the types of firms trading when the CQI is ON.[16] For example, for purposes of its analysis, IEX classified Citadel Securities as a "proprietary trading firm" even though over 50% of our trading activity on IEX is on behalf of retail investors. IEX has made no attempt to separate out, or otherwise distinguish, this trading activity. Therefore, any negative impact from the Proposal on our retail orders is simply being characterized by IEX as a negative impact on a "proprietary trading firm." In this regard, it is important to note that over 80% of the retail orders we route to IEX are liquidity taking orders, and therefore risk being adversely impacted by the proposed trade avoidance mechanism.

Second, IEX fails to conduct a thorough analysis of the liquidity taking orders executed when the CQI is ON. Relevant questions include:

- How many orders/executions are from retail or institutional investors?

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[12] *See* EDGA Disapproval Order at pages 25-26. We note that IEX has also failed to adequately explain the apparent inconsistency between (1) claims regarding the extent to which purported "latency arbitrage" activity is negatively impacting displayed liquidity on IEX throughout the trading day and (2) the limited duration that the CQI is ON during the trading day.

[13] Proposal at 71999 and 72001.

[14] *See* Proposal at 72002. *See also* "A Deliberate Strategy" (Dec. 17, 2019), available at: https://medium.com/boxes-and-lines/a-deliberate-strategy-bb8b0cff074b.

[15] Letter from John Ramsay, Chief Market Policy Officer, IEX (Feb. 13, 2020) at page 14, available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-6808882-208490.pdf ("IEX Response Letter").

[16] *See* Proposal at 72002, FN 58.

- How many orders/executions are part of a sweep order taking out a price level across the market which triggers the CQI?

- How many orders/executions are related to bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures?

- Is a similar percentage of overall trading volume executed on other exchanges when the CQI is ON (meaning that trading activity generally clusters around times when price levels are changing and is not evidence of purported "latency arbitrage" activity on IEX)?

It is irresponsible for IEX to assert that liquidity taking orders executed when the CQI is ON are "strongly correlated to latency arbitrage strategies"[17] without undertaking this type of analysis. Furthermore, for IEX to be correct, it would mean that approximately 33.7% of marketable orders and 24% of displayed volume executed on IEX related to "latency arbitrage," even though IEX's CQI does not incorporate cross-asset signals, and therefore cannot be considered to even capture the full extent of purported "latency arbitrage" activities.[18] Based on our trading activity, we know that a variety of trading strategies and market participants take liquidity when the CQI is ON and therefore will be negatively impacted by the Proposal. However, instead of conducting this analysis, IEX has clearly made a decision to focus on the length of time the CQI is ON (rather than the trading volume that is affected) in order to seek approval of its ill-advised Proposal.[19]

C. Unanswered Questions

Without more robust data, the Commission lacks sufficient basis to make an affirmative finding that the Proposal is consistent with the Exchange Act. The data provided by IEX does not demonstrate the existence, or associated impact, of purported "latency arbitrage" on IEX, or that the Proposal is appropriately tailored to address any such problem.[20] In addition, as detailed above, the provided data does not allow the Commission to accurately assess the impact on (a) retail and institutional investors (given the imprecise entity classifications),[21] (b) sweep orders taking out a price level across the market,[22] or (c) bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures (including the higher spreads that will be

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[17] *Supra* note 15.

[18] We note that one supporter of the Proposal identified the lack of cross-asset signals as a "limitation in the likely effectiveness of IEX's proposed D-Limit order." Letter from Eric Swanson, CEO, XTX Markets LLC (Americas) (Jan. 17, 2020) at page 4, available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-6671703-203990.pdf.

[19] *See*, for example, the additional data provided in the IEX Response Letter at page 16.

[20] *See* EDGA Disapproval Order at page 24.

[21] *See id.* at page 36.

[22] *See id.* at page 37.

borne by retail and institutional investors where hedging is disrupted).[23] These are almost identical shortcomings to those identified by the Commission when considering the EDGA asymmetric speed bump proposal.

In addition, as with the EDGA asymmetric speed bump proposal, IEX has not provided any data to substantiate the claimed benefits of the Proposal.[24] As noted by commenters, the D-Limit order type appears to lose much of its value if IEX is alone at the NBBO and therefore routed to first, as the CQI signal will not provide added protection in this situation. As a result, liquidity providers on IEX should not generally be expected to narrow prevailing market-wide spreads if the Proposal is adopted; instead, we would expect IEX liquidity providers to often post prices equal to the NBBO set by liquidity providers on other exchanges. Indeed, this is exactly what happened with an asymmetric speed bump implemented in Canada that provides liquidity providers with a similar advantage. Academic research found that liquidity providers on TSX Alpha were almost never alone at the NBBO,[25] a conclusion confirmed by our own analysis of recent market data.[26] While the asymmetric speed bump reduced adverse selection for TSX Alpha liquidity providers, this financial advantage accrued to the liquidity providers in the form of increased profitability and not to the broader market in the form of narrower bid-ask spreads.[27] It is clear that liquidity providers would prefer to opt-out of providing liquidity when advantageous to do so, such as when a sweep order is taking out a price level across the market, but there is no evidence to suggest that IEX's Proposal to provide liquidity providers with such a trade avoidance mechanism will benefit other market participants.

Each of the data-related omissions detailed above prevent the Commission from being able to perform the necessary analysis under the Exchange Act and should lead to the disapproval of the Proposal.

III. Inconsistencies with the Exchange Act

The insufficient and misleading data provided by IEX has also directly impacted the comment file. While some commenters have raised a number of detailed concerns regarding the proposal,[28] many commenters have simply relied on the data provided by IEX to form a view. Given the material issues identified above, the IEX data (and related letters) fail to adequately address the concerns raised.

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[23] *See id.* at page 36.

[24] *See id.* at page 22.

[25] Haoming Chen et al., "The value of a Millisecond: Harnessing Information in Fast, Fragmented Markets" (Nov. 18, 2017) at pages 15 and 65 (Figure 4), available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2860359.

[26] *See* Letter from Citadel Securities dated Oct. 21, 2019 on the EDGA asymmetric speed bump proposal at page 16, available at: https://www.sec.gov/comments/sr-cboeedga-2019-012/srcboeedga2019012-6321413-194388.pdf.

[27] *Supra* note 25 at pages 4-5.

[28] *See* https://www.sec.gov/comments/sr-iex-2019-15/sriex201915.htm.

Below, we detail the Proposal's key inconsistencies with the Exchange Act: (a) unfairly discriminating against liquidity takers, (b) inappropriately burdening market competition, and (c) impairing fair and efficient access to displayed quotations.

A. The Proposal Unfairly Discriminates Against Liquidity Takers, Including Retail and Institutional Investors

Several commenters raised concerns regarding the impact of the Proposal on liquidity takers, including retail and institutional investors. We agree with these concerns, particularly for orders that are sent to more than one venue for execution, such as intermarket sweep orders. Since IEX will use real-time market data to observe activity on other venues and then bypass its existing speed bump to reprice D-Limit orders while incoming liquidity taking orders are delayed, the Proposal transforms IEX's existing speed bump into a new asymmetric speed bump specifically for the benefit of D-Limit orders. Furthermore, since IEX will reprice D-Limit orders to be less aggressive than the NBBO, this mechanism will result in significant quote fading and a decline in fill rates, adversely impacting all types of liquidity takers seeking to fill larger orders.

It is important to note that, while most supporters of the Proposal did not specifically address concerns from the perspective of a liquidity taker, a majority of commenters who did address this topic acknowledged the legitimacy of concerns around liquidity taking orders that are sent to more than one venue for execution, such as intermarket sweep orders.[29] In response, IEX and certain supporters of the Proposal make two arguments:

- First, reference is made to IEX's data regarding the length of time the CQI signal is ON and the purported trading of "proprietary trading firms" during these periods in order to argue that other types of market participants will be generally unaffected by the Proposal.[30]

  However, as detailed in Section II above, despite the CQI signal being ON for a limited duration, a very significant portion of total trading activity will be affected, as 33.7% of marketable orders are received and 24% of displayed volume is executed during these periods. In addition, given IEX's imprecise entity classifications and insufficient analysis of the trading activity occurring during these periods, the data does not establish that liquidity taking orders sent to more than one venue for execution, such as intermarket sweep orders, will not be subject to unfair discrimination under the Proposal.

[29] We identified the following 12 comment letters addressing the topic: ACS Execution Services, AJO, Clearpool, DLA Piper, FIA PTG, Healthy Markets, IMC, NASDAQ, Proof Services, Raymond James, SIFMA, and T. Rowe Price. These include 6 in support of the Proposal, 5 against, and 1 neutral. Of the 7 letters either neutral or in support of the Proposal, 4 acknowledge the legitimacy of concerns around sweep orders (ACS Execution Services, AJO, Clearpool, and Healthy Markets).

[30] *See* IEX Response Letter at page 4 and T. Rowe Price letter.

- Second, IEX and certain supporters argue that market participants will be able mitigate quote fading concerns by staging the routing of larger orders so as to route to IEX first and thereby avoid the CQI signal turning ON before the IEX portion of the order is executed.[31] This line of argument tacitly acknowledges the legitimacy of the concerns raised, and requires retail and institutional investors to modify routing practices with respect to larger orders to route first to IEX before routing to other venues after accounting for the 350 microsecond IEX speed bump.

  In response, we find it interesting that IEX has argued that most market participants do not have access to the "sophisticated technology, connectivity, and market data"[32] necessary to utilize the proposed 4 millisecond EDGA asymmetric speed bump, yet believes all investors will be able to precisely stage sweep orders across the U.S. equities market in a manner that avoids the CQI turning ON. IEX has not provided any estimate of the costs for market participants to universally adopt this type of capability nor considered the associated operational risks.

  More importantly, even if all investors had the ability to stage the routing of larger orders in this manner, the Commission must still assess whether this constitutes unfair discrimination, as noted in the EDGA Disapproval Order.[33] A Proposal that effectively compels market participants to route orders to IEX first in order to successfully access displayed liquidity – potentially at a higher cost of execution – raises a number of serious concerns that must be addressed, including:

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

  (b) 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);

  (c) 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;

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

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

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[31] *See* IEX Response Letter at page 8 and Proof Services and Raymond James letters.

[32] Proposal at 72001.

[33] *See* EDGA Disapproval Order at page 37.

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

In addition to the above, and similar to the EDGA asymmetric speed bump proposal, IEX has also failed to explain why providing a benefit to sophisticated proprietary trading firms acting as liquidity providers without a corresponding obligation is consistent with the Exchange Act when the Proposal permits discrimination against liquidity takers.[34]

Contrary to assertions by IEX,[35] these are fundamentally new considerations for liquidity takers seeking to access displayed liquidity on IEX and there are many reasons why a market participant may not wish to route a portion of an order to one specific venue first (for example, there may be greater size displayed on other venues or lower venue fees). A Proposal that requires such a solution (which will soon be antiquated as other exchanges introduce their own trade avoidance mechanisms) in order to address legitimate concerns about quote fading and declining fill rates constitutes unfair discrimination against liquidity takers. These liquidity taking orders may include (i) orders from retail and institutional investors, (ii) sweep orders taking out a price level across the market, and (iii) bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures.

B. The Proposal Inappropriately Burdens Market Competition

Several commenters raised concerns regarding the impact of the Proposal on market competition. Below, we detail three inappropriate burdens on market competition that have not been adequately addressed by IEX or supporters of the Proposal in the comment file.

1. <u>Liquidity Takers</u>

The Proposal advantages liquidity providers over liquidity takers by giving liquidity providers an ability to avoid unfavorable executions. Academic research exploring the impact of an asymmetric speed bump implemented in Canada providing liquidity providers with a similar advantage found that liquidity provider profitability significantly increased as a result.[36] IEX asserts that liquidity providers will instead use this advantage to narrow market-wide spreads,[37] but has failed to provide any supporting data. As noted in the EDGA Disapproval Order,[38] IEX

[34] *See* EDGA Disapproval Order at pages 36-37.

[35] *See* IEX Response Letter at page 8 ("ISOs sent to IEX in the same manner in which they are sent today, accounting for IEX's existing 350 microsecond speed bump, will result in a comparable fill rate"). We note that to access a displayed order on IEX today, an incoming order must only reach the IEX POP before a message to cancel or amend that displayed order reaches the IEX POP. Under the Proposal, to access a displayed D-Limit order, an incoming order must also traverse the IEX speed bump before the CQI signal turns ON.

[36] *Supra* note 25 at pages 1 and 4.

[37] *See* IEX Response Letter at page 4.

[38] *See* EDGA Disapproval Order at page 22.

should provide data regarding (a) the anticipated impact on liquidity provider profitability, and (b) the amount (if any) liquidity providers will return to investors through narrower spreads.

2. Liquidity Providers on Other Venues

The Proposal advantages liquidity providers on IEX over liquidity providers on other venues, as IEX liquidity providers can free-ride on the pricing heuristics and risk taking capabilities of others by posting prices equal to the NBBO and relying on IEX to observe away executions and reprice D-Limit orders to frequently avoid unfavorable executions. Such free-riding discourages innovation and undermines the competitive dynamics that have dramatically reduced spreads and transaction costs for all market participants over the past decade. Contrary to assertions by IEX, the proposed D-Limit order type raises fundamentally different considerations than order types pegged to the NBBO.[39] To the extent D-Limit orders are repriced, they will repriced to be less aggressive than the NBBO, effectively shielding liquidity providers from unwanted executions.

This venue-specific advantage will significantly impact market competition, as there will be significant pressure for other exchanges to adopt a similar mechanism. We note that several commenters have raised concerns about the proliferation of such mechanisms advantaging liquidity providers,[40] and not a single commenter has agreed with IEX that "[i]f other markets adopted a very similar mechanism, IEX does not believe this would result in more inaccessible quotes."[41] In our view, IEX has failed to adequately consider the consequences of additional exchanges implementing asymmetric speed bumps. Among others, concerns around the reliability of the NBBO and the resiliency of liquidity, particularly during periods of market volatility, will be amplified to the extent that multiple exchanges adopt mechanisms supporting systematic quote fading.

3. IEX Member Firms

IEX offers a model that "forecasts when the price of a stock is likely about to change"[42] (i.e. the CQI) that will be in direct competition with the predictive models used by IEX member firms. IEX has stated that "[i]f others are leveraging short term prediction models to anticipate NBBO changes, than [sic] we can build such a model ourselves."[43] While we note that an exchange offering functionality that is similar to a service offered by a broker-dealer does not automatically

[39] *See* IEX Response Letter at page 4.

[40] We identified the following 7 comment letters addressing the topic: ACS Execution Services, The Bacidore Group, Clearpool, DLA Piper, FIA PTG, NASDAQ, and SIFMA. These include 5 against the Proposal, 1 in support, and 1 neutral.

[41] IEX Response Letter at page 17.

[42] "What is the IEX Signal?" available at: https://iextrading.com/trading/signal/.

[43] "The Evolution of the Crumbling Quote Signal," Allison Bishop, IEX White Paper (2017) at page 3, available at: https://iextrading.com/docs/The%20Evolution%20of%20the%20Crumbling%20Quote%20Signal.pdf.

render such functionality an inappropriate burden on competition,[44] in this case, the Proposal provides the IEX model with unfair competitive advantages over its member firms.

First, IEX will bypass its speed bump to reprice D-Limit orders whereas IEX member firms remain subject to the speed bump when attempting to reprice their own resting displayed orders. This means that resting displayed orders not using the D-Limit order type will be at a material disadvantage, as only the IEX model will be able to observe activity occurring on other venues in order to determine whether or not to reprice a resting order while incoming orders on IEX are delayed. As a result, resting displayed orders not using the D-Limit order type can be expected to experience increased adverse selection and worse execution quality. These negative impacts will affect a range of market participants, including (a) those who submit "held" orders, such as retail investors, which will not be able to utilize the D-Limit order type given the nature of the discretion involved, and (b) liquidity providers who prefer to utilize their own predictive models instead of the IEX CQI model. In turn, the unlevel playing field created by the Proposal provides IEX with an opportunity to commercially profit by charging member firms for the benefit of bypassing the IEX speed bump.[45]

Second, IEX has certain regulatory advantages when employing its CQI model compared to IEX member firms, including broad regulatory immunity and no best execution requirements. We are not aware of other regulatory requirements specific to IEX as an exchange that would address this particular imbalance.

IEX argues that there is precedent for its proposed use of the CQI model, both with the existing IEX D-Peg and P-Peg non-displayed order types, and with displayed order types on other venues that are pegged to the NBBO.[46]

In response, we note that while it is true that the IEX D-Peg and P-Peg order types leverage the CQI model, these order types cannot be used for displayed orders. In approving the D-Peg order type, the Commission expressly noted that it was limited to non-displayed orders and therefore did not raise the unique considerations specific to displayed orders.[47] In addition, IEX has acknowledged that "D-Peg is also a fundamentally different order type [compared to D-Limit]."[48] In light of the unique regulatory considerations specific to displayed orders, and their importance in promoting price discovery, the mere existence of the D-Peg and P-Peg order types

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[44] *See* 85 FR 4726 (Jan. 27, 2020) at 4735, available at: https://www.govinfo.gov/content/pkg/FR-2020-01-27/pdf/2020-01253.pdf.

[45] *See, e.g.*, Letter from Hudson River Trading, available at: https://www.sec.gov/comments/sr-iex-2019-15/sriex201915-6678383-204977.pdf ("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").

[46] *See* IEX Response Letter at pages 6-7.

[47] 81 FR 41142 (June 23, 2016) at 41156, FN 215 and 216, available at: https://www.govinfo.gov/content/pkg/FR-2016-06-23/pdf/2016-14875.pdf ("IEX Approval Order").

[48] IEX Response Letter at page 8, FN 20.

does not provide the Commission with a sufficient basis to approve the use of the IEX CQI model for displayed orders.

Displayed order types pegged to the NBBO also do not provide IEX with helpful precedent. These order types do not rely on a model that is in direct competition with the predictive models used by member firms; instead displayed orders are repriced based on an objective fact (i.e. whether the NBBO has changed). This important distinction has been alluded to by IEX[49] and is reflected in statistics showing that the CQI model is often inaccurate. Based on data provided by IEX, it appears that IEX's CQI model is accurate only approximately 50% of the time the CQI signal turns ON.[50] This is fundamentally different than pegged order types that accurately reflect the NBBO.

C. Displayed D-Limit Orders Cannot Be Considered Protected Quotations

In no event can displayed D-Limit orders be considered protected quotations under Rule 611 of Regulation NMS, as the D-Limit order type utilizes an intentional delay to frustrate market participant access to resting quotations. The Proposal transforms IEX's existing speed bump into a new asymmetric speed bump specifically for the benefit of D-Limit orders – while incoming orders are delayed by the IEX speed bump, IEX will bypass the speed bump to immediately reprice D-Limit orders to be less aggressive than the NBBO. This asymmetric speed bump created by the D-Limit order type does not satisfy the *de minimis* standard under the Commission's Automated Quotations Interpretive Guidance, which requires any delay to be "so short as to not frustrate the purposes of Rule 611 by impairing fair and efficient access to an exchange's quotations."[51]

In response, IEX argues that the Commission has already determined that its speed bump satisfies the *de minimis* standard, and since the Proposal does not "create any additional delay" then it should continue to be considered *de minimis*.[52] This argument fails for a number of reasons:

- In determining that IEX's speed bump and related order types satisfied the *de minimis* standard, the Commission specifically noted that order types enabling IEX to bypass

[49] Proposal at 72004 ("While the D-Limit proposal is novel in that it would provide an exchange with flexibility to reprice a displayed order [. . .]").

[50] *Supra* note 43 at page 28.

[51] 81 Fed. Reg. 40785 (June 23, 2016) at 40786, available at: https://www.gpo.gov/fdsys/pkg/FR-2016-06-23/pdf/2016-14876.pdf ("Automated Quotations Interpretative Guidance").

We note that IEX has previously argued that asymmetric speed bumps may not satisfy Rule 611. *See* Letter from Sophia Lee, General Counsel, IEX (Nov. 13, 2015) at page 8, available at: https://www.sec.gov/comments/10-222/10222-20.pdf ("The PSX proposal (as with the Canadian exchanges) ***would have changed the accessibility of a protected quote by altering the relative speeds of quotation makers and takers*** [emphasis added].") and Letter from Sophia Lee, General Counsel, IEX (Nov. 23, 2015) at page 5, available at: https://www.sec.gov/comments/10-222/10222-26.pdf ("PSX's proposal was ***rightfully withdrawn because its 'speed bump' was applied only to a subset of orders and actually may have harmed the accessibility of its quotations*** [emphasis added].")

[52] IEX Response Letter at page 11.

the speed bump were limited to non-displayed orders and therefore did not require the Commission to assess consistency with Rule 611;[53]

- The Proposal significantly changes the analysis regarding whether market participants have fair and efficient access to IEX's displayed quotations. At the moment, 24% of displayed volume is executed on IEX when the CQI signal is ON.[54] The Proposal is designed to ensure that close to zero displayed D-Limit orders execute when the CQI signal is ON by repricing D-Limit orders to be less aggressive than the NBBO, meaning that displayed D-Limit orders will be inaccessible during these periods.

  Experience with IEX's non-displayed D-Peg and P-Peg order types demonstrate 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 during these periods.[55] IEX has also acknowledged the Proposal's impact on quote accessibility, stating that "D-Limit orders may not be accessible to other market participants" when the CQI signal is ON.[56]

- While the Proposal does not change the duration of the IEX speed bump, it fundamentally alters how it operates for displayed orders, as IEX will now be able to bypass the speed bump and immediately reprice displayed D-Limit orders in order to prevent quote accessibility when the CQI signal is ON.

  The Commission's Automated Quotations Interpretive Guidance is clear that the duration of a speed bump is not the only relevant consideration, and instead the *de minimis* standard requires a facts and circumstances analysis regarding whether an exchange has frustrated the purposes of Rule 611 by impairing fair and efficient access to its quotations.[57] In this case, that analysis must include the combined interaction of the existing IEX speed bump and the new proposed order type for displayed orders. Similarly, nothing in the current staff guidance on Automated Quotations under Regulation NMS[58] suggests that an exchange with an approved *de minimis* intentional

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[53] *See* IEX Approval Order at 41156, FN 216 ("The Commission notes that IEX will only reprice pegged orders, which are non-displayed. Non-displayed orders are not reflected in an exchange's quotations, and Rule 611 applies order protection to publicly displayed quotes only. Accordingly, an access delay that does not allow the repricing of displayed orders does not impact an exchange's displayed quotation, and cannot be said to lead to 'maybe' quotations.").

[54] Proposal at 71999.

[55] *See* "Leveling the Playing Field for Lit Trading" (Dec. 17, 2019), available at: https://medium.com/boxes-and-lines/leveling-the-playing-field-for-lit-trading-682dc723cef1.

[56] Proposal at 72003.

[57] *See* Automated Quotations Interpretative Guidance at 40792 ("The Commission believes that, in light of the evolving nature of technology and the markets, and the need to assess the impact of intentional access delays on the markets, establishing a bright line *de minimis* threshold is not appropriate at this time.").

[58] *See* Staff Guidance on Automated Quotations under Regulation NMS (June 17, 2016), available at: https://www.sec.gov/divisions/marketreg/automated-quotations-under-regulation-nms.htm.

delay can then introduce an order type designed to prevent quote accessibility during periods when 24% of total displayed volume is executed without being subject to a *de novo* review under Rule 611 that takes into account the combined interaction of the intentional delay and the new order type.[59] While the intentional delay, in isolation, is considered *de minimis* under the current guidance, the D-Limit order type is certainly not given that its express purpose is to frustrate access to resting quotes when the CQI is ON.

IEX and certain commenters also argue that, even though displayed D-Limit orders are not accessible when the CQI is ON, this only occurs for very limited durations and will only impact purported "latency arbitrage" activity, so therefore IEX displayed quotes should still be considered accessible under Rule 611.[60] These arguments also lack merit.

- First, although the CQI is only ON for a limited duration, IEX has acknowledged that 33.7% of marketable orders are received and 24% of displayed volume is executed during these periods.[61] Therefore, the Proposal will impair fair and efficient access to IEX's displayed quotations for a very significant portion of total trading activity.

- Second, as detailed above, IEX has failed to perform the necessary data analysis to substantiate claims that only purported "latency arbitrage" activities will be impacted. Specifically, IEX has failed to comprehensively analyze the trading activity occurring when the CQI is ON, including disclosing the portion of orders from (a) retail and institutional investors, (b) sweep orders taking out a price level across the market, and (c) bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures.

- Third, even if IEX were to show that 24% of its displayed volume related to purported "latency arbitrage" activity, Rule 611 does not provide that "'accessibility' is a relative term," as claimed by IEX.[62] The Commission must apply the regulatory framework in a fair and consistent manner and should not entertain suggestions that only certain types of market participants or trading strategies deserve to be afforded fair and efficient access to displayed quotations. Rule 611 does not permit an exchange to prevent quote accessibility during periods when 24% of its displayed volume is executed and yet maintain protected quotation status.

[59] We note that in due course Commission staff may consider updating its guidance to reflect subsequent market experience with intentional access delay proposals, including additional considerations that may be relevant in assessing whether an intentional access delay impairs fair and efficient access to displayed quotations, such as (a) whether the delay is symmetric or asymmetric, and (b) whether the delay is coupled with an order type that, in combination, may impact fair and efficient access to displayed quotes.

[60] *See* IEX Response Letter at pages 10-11 and Letters from Baird, Council of Institutional Investors, Goldman Sachs & Co. LLC, and Ontario Teachers' Pension Plan et al.

[61] Proposal at 71999 and 72001.

[62] IEX Response Letter at page 10.

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Ultimately, introducing an unprecedented asymmetric speed bump for displayed orders into the U.S. equities market should require a much more thorough analysis of the impact on investors, competition, market quality, and resiliency. Similar to the recent EDGA asymmetric speed bump proposal, IEX has provided insufficient data to support the Proposal. In particular, IEX has failed to demonstrate the existence, or associated impact, of purported "latency arbitrage" activity on IEX and has elected not to comprehensively analyze the trading activity currently occurring when the CQI is ON. Therefore, the data does not allow the Commission to accurately assess the adverse impact on (a) retail and institutional investors (given the imprecise entity classifications), (b) sweep orders taking out a price level across the market, or (c) bona fide hedging activities by market makers in equities or related asset classes, such as ETFs, options, and futures.

In addition, the Proposal (i) unfairly discriminates against liquidity takers, (ii) inappropriately burdens market competition, and (iii) impairs fair and efficient access to displayed quotations. IEX will bypass its speed bump to reprice D-Limit orders, enabling the IEX model to observe activity occurring on other venues in order to determine whether or not to reprice a resting order while incoming orders on IEX are delayed. This trade avoidance mechanism will provide IEX liquidity providers with a material advantage when using the D-Limit order type, resulting in significant quote fading and a decline in fill rates, adversely impacting all types of liquidity takers seeking to fill larger orders. It may also cause the relevant products to become more susceptible to manipulation (such as spoofing) to the extent liquidity providers are able to anticipate when posted quotations are likely to be repriced before being honored, and will heighten concerns around the resiliency of liquidity, particularly during periods of market volatility.

We urge the Commission to disapprove this Proposal.

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