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[redacted]

August 30, 2017

By Electronic Mail

Mr. Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-1090

Re: Self-Regulatory Organizations: Investors Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Related to Transaction Fees Pursuant to Rule 15.110; File No. SR-IEX-2017-27, Release No 34-81484

Dear Mr. Fields,

ViableMkts appreciates the opportunity to comment on the above-referenced rule filing, in which IEX proposes to modify its fee schedule so that the maximum fee allowed under Regulation NMS will be charged to liquidity removers if its proprietary CQ methodology detects that a "crumbling quote" exists over a defined threshold of shares for a defined percentage during a calendar month[1].

ViableMkts is a capital markets and financial technology consultancy, with broad expertise in market structure innovation. As the Head of Equities for ViableMkts, I have been directly involved in the design and construction of trading and analytical systems for the equity market for over 3 decades, primarily for market makers and most recently as head of quantitative equity products for IHS Markit. I believe that my experience in dealing with U.S. equity market structure over the past couple of decades for different industry participants provides a unique perspective in understanding the competitive landscape and the needs of a broad range of market participants.

Recommendation:

ViableMkts believes that the SEC should reject the IEX fee proposal because, from the perspective of market participants charged with ensuring best execution of client orders, the CQ logic will apply the higher fees in an arbitrary and opaque manner, such that it will be impossible for investors to predictably estimate what their fees will be when sending orders to IEX. The proposal also directly contradicts IEX's public marketing that describes it as a "fair, simple and transparent" exchange.[2] As a result, it calls directly into question IEX's marketing practices. Lastly, this filing proves that IEX has been aware that displayed orders posted on their exchange are not "protected from predatory HFT," but have continued to publicly insist the opposite by claiming that their "speed bump" slows down the market. In approving IEX as an Exchange, the Commission granted it an exemption from Reg NMS specifically for this purpose, but IEX now acknowledges the fact it was probably

[1] See https://www.sec.gov/rules/sro/iex/2017/34-81484.pdf (Release No. 34-81484; File No. SR-IEX-2017-27)

[2] See https://www.iextrading.com/

unnecessary. Given this remarkable turn of events, perhaps the Commission should consider abrogating that exemption, particularly as part of future rulemaking.

Rationale for the Recommendations:

The proposed "Crumbling Quote" based pricing is arbitrary and opaque

According to the filing, IEX's methodology predicts that "*resting liquidity providing orders that trade when the CQI is on experience negative price markouts one second after the trade 75.6% of the time, compared to 23.9% of the time when CQI is off."* Unfortunately, this same data means that just under 1/4 of the time, liquidity-taking orders will be charged a higher fee, but will not gain the advantage that IEX's formula predicts that they will. In addition, roughly 1/4 of liquidity-taking orders will gain the immediate advantage that IEX is trying to protect their resting liquidity providers' orders against, but will not have to pay the increased fee. These are consistent with IEX's published research on the CQ methodology, which described the accuracy of the prediction as follows:

> On the target day in question, the prediction "*would have produced about 2 million true positives and 2.1 million false positives. So we are correctly predicting roughly twice as many ticks, without compromising too far on the accuracy (our false positives still are not too much greater than our true positives)."*[3]

This is very important, since it proves that, roughly half of the time, IEX's characterization of the market as "adverse" for their liquidity providers is wrong. Therefore, it is possible that *investors will be charged the higher fee, when they would expect to be paying no access fee* under IEX's current fee schedule.

In addition to the statistical false positives, the IEX formula for charging the fee based on monthly aggregates means that investors need to be aware of the other trading strategies used by their broker of choice. Algorithms that use aggressive smart order routers that routinely sweep most, or all, of a price level will likely trigger the CQ, but other strategies at the same broker might not. Thus, investors who are less aggressive could end up paying higher costs if they use a broker that predominantly trades very aggressively. While IEX would likely argue that other exchanges set rebate levels based on monthly calculations of volume tiers, this proposal is different in magnitude and in application. The magnitude of a 30 mil difference IEX is proposing is much larger than the difference in rebates between volume tiers at other exchanges. The application is also different as providing liquidity on exchange, quite often involves a choice of which exchange to place the order on. Taking liquidity, particularly when all quotes are being accessed at a price level (which is one activity that triggers IEX's CQ), is involuntary. Rule 611, forces routing firms to access these quotes, so the impact of this pricing change is harder to manage.

Together, these concerns make it almost impossible for routing brokers to have cost certainty. This means the proposal will likely make daily post trade disclosures of costs paid by brokers much more difficult while also significantly complicating daily and monthly fee reconciliation processes. In addition to interpreting the IEX Fee Code indicator of "Q" to know of the existence of the CQ condition for every trade, it will force brokers to implement new system logic to track the percentage of the time that orders sent by each MPID were sent during the CQ condition for the month to determine if they are subject to the fee. This will be quite expensive to implement, yet brokers do not have the ability to ignore IEX's protected quotation under Regulation NMS.

[3] See The Evolution of the Crumbling Quote Signal, Allison Bishop, P 28
https://www.iextrading.com/docs/The%20Evolution%20of%20the%20Crumbling%20Quote%20Signal.pdf

Lastly, the arbitrary nature of the monthly thresholds means that brokers whose liquidity removing trades are close to IEX thresholds may have serious conflicts of interest. This is due to the fact that such brokers, despite their best execution obligations, may opt to take liquidity less aggressively towards the end of the month, in order to avoid a large cost penalty which would be incurred if they go over the threshold. As a result, we would argue that the SEC should insist that this calculation be undertaken daily, in order to ensure that each day's trades could be processed with cost certainty.

The proposal directly contradicts IEX's own stated "mission" of being "fair, simple and transparent"

IEX, on their website, both on the front page and in the "About IEX footnote" claims to be a "fair, simple and transparent" exchange. This is also in their standard disclaimer on all blog posts they use for content marketing[4]. The common definition of "fair in the capital markets is "just and equitable." Considering that their own data shows that their CQ has over 50% false positives it means that many investors won't necessarily deserve the higher fee, which is not just or equitable. I recognize that IEX has set their monthly thresholds at a very high percentage of the time, which does mitigate this concern. The problem is that such thresholds could be lowered in the future, if the basic methodology is approved. If the Commission does approve this proposal, it should also mandate that any future changes to any parameters such as monthly thresholds be submitted for approval as well.

"Simple" is commonly defined as uncomplicated. This pricing formula, however, is so complex that it required a lengthy paper[5] to explain it, and, even then, has additional complexity in the rule. Brokers will be forced to track each MPID they use to determine their percentage of liquidity demanding trades that are in the CQ state by IEXs definition each month. In addition to requiring new system development to accommodate this proposal, it will make the costs harder to understand by individual clients.

"Transparent" is commonly defined as easy to perceive. The implementation of this formula is so opaque that routers will not know what it will cost to route aggressive orders to IEX ahead of time, except, perhaps, toward the end of the month, if they are far away or far above the rules thresholds. Since most market participants seem to agree that a "cost plus" model of pricing institutional agency orders is the most transparent, and this model makes that virtually impossible on trade date, it fails to pass this test as well.

It is a sad indication of the current state of market structure that we should have to define plain language terms like "simple" and "transparent," but IEX is currently marketing their exchange to corporate issuers, who have limited experience in understanding market structure issues, but do react to core principles such as these. IEX, as a registered stock exchange, is an SRO within the current legal structure, meaning they have regulatory responsibilities. This, in turn, means that their marketing should be held to a higher standard than most corporate entities, and this rule filing renders their marketing message even more misleading than I have previously explained it to be[6].

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[4] See https://medium.com/boxes-and-lines/about

[5] See The Evolution of the Crumbling Quote Signal, Allison Bishop https://www.iextrading.com/docs/The%20Evolution%20of%20the%20Crumbling%20Quote%20Signal.pdf

[6] See https://exquamblog.wordpress.com/2017/07/28/iex-marketing-sinks-to-a-new-low/ and https://exquamblog.wordpress.com/2017/06/14/the-emperors-new-clothes/

The Commission should closely examine the marketing and disclosure practices of SROs to ensure they are not misinforming or intentionally deceiving investors in their race to attract listings and order flow."

The proposal proves that IEX is aware that their consistent marketing of exchange protection of investors displayed orders from predatory HFT is false.

There are many examples of press statements about IEX, including this one from Forbes summarizing an interview with the CEO by saying "Katsuyama's IEX Group invented technology that creates a brief delay in trading that neutralizes the speed edge needed to game the market the same way speed bumps and humps kill the advantage a Ferrari has over a Ford.[7]" This type of rhetoric is commonplace in IEX's own videos[8] as well. While I have argued that IEX's "speed bump," with regard to displayed orders, does nothing for slower investors *vis a vis* HFT firms[9], they have never admitted it, and have in fact disputed it at conferences and on social media[10] in addition to their marketing

The subject proposal is based on IEX's own analysis showing that 30.4% of marketable orders are received in the 2 milliseconds that their CQ signal is "on"[11]. That is almost identical to previous market-wide analysis from KCG proving that roughly 30% of traded volume occurs around price changes[12]. It is, therefore, simple to conclude that IEX has known for some time, that their "speed bump" did nothing to protect investors posting displayed orders on their exchange, since their own analysis confirmed the similarities of the statistical outcomes between their exchange and others for liquidity providing displayed orders. As stated above, IEX, as an SRO, should be held to a high standard with respect to marketing and public statements, and this shows otherwise.

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I would like to thank the Commission for the opportunity to submit these comments. If the Commission has any questions or would like additional information, please do not hesitate to contact me.

Respectfully submitted,

David M. Weisberger
Head of Equities, ViableMkts
[redacted]

Cc:

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[7] https://www.forbes.com/sites/stevenbertoni/2017/01/27/iex-boss-brad-katsuyama-on-how-he-built-a-new-exchange-and-how-hell-fix-wall-street/#2a89af6a5e14

[8] https://www.youtube.com/watch?v=meDZ5wU8Pls

[9] See https://exquamblog.wordpress.com/2017/06/14/the-emperors-new-clothes/

[10] IEX has blocked me on Twitter, so it is impossible for me to cite specific examples here.

[11] https://www.sec.gov/rules/sro/iex/2017/34-81484.pdf, page 5

[12] The Need for Speed V: How Important is 1 ms?, Phil Mackintosh & Ka Wo Chen, May 17, 2016 https://www.virtu.com/news-perspectives/article/the-need-for-speed-v-how-important-is-ms

The Honorable Jay Clayton, Chairman
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The Honorable Kara M. Stein, Commissioner
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