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October 2, 2017

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

Re: Release No. 34-81484: File No. SR-IEX-2017-27

Dear Mr. Fields:

Investors Exchange LLC ("IEX") is responding to comments[1] received on an amendment to IEX's fee schedule to assess a fee under certain circumstances for orders taking liquidity when the IEX System, using a "crumbling quote indicator" ("CQI"), determines that a "crumbling quote" exists with respect to the market for the security existing at the time the orders are received (the "CQI Fee").[2] The Fee Filing was effective on filing pursuant to Section 19(b)(3)(A)(ii) of the Securities Exchange Act of 1934 (the "Act"). We address the various points raised in the individual letters below.

Arguments Alleging Unfair Discrimination

HRT alleges that the CQI Fee is designed specifically to discriminate against certain firms. All three comments generally allege in various ways as described below that the fee operates to unfairly discriminate against some members in favor of others.

The CQI Fee is a narrowly tailored means designed to provide a safer market for IEX market participants by reducing the incentives for trading behaviors that undermine market quality. Other exchanges use rebates to encourage the posting of displayed quotes. IEX believes that rebates create and exacerbate conflicts of interest and market complexity. IEX must use other incentives to draw providers of liquidity. Superior execution quality is one important way, but it

[1] Letter from David M. Weisberger, Head of Equities, Viable Mkts ("VM"), to Brent J. Fields, Secretary, SEC (August 30, 2017); Letter from Joanna Mallers, Secretary, FIA Principal Traders Group ("FIA"), to Brent J. Fields, Secretary, SEC (September 21, 2017; Letter from Adam Nunes, Head of Business Development, Hudson River Trading LLC ("HRT"), to Brent J. Fields, Secretary, SEC (September 22, 2017).
[2] See Securities Exchange Act Release No. 81484 (August 25, 2017), 82 FR 41446 (August 31, 2017) (the "Fee Filing").

can be undercut by trading strategies that target resting orders during periods of quote instability. If an exchange is prohibited from imposing a fee of this type in the case of trading strategies that demonstrably reduce incentives for participants to provide liquidity, then all exchanges would be substantially impeded in adopting any fee model that is not based on the payment of rebates. We do not believe the Act can be reasonably read to require that result.

As described in the Fee Filing, IEX has determined, based on careful analysis, that resting orders are substantially and negatively impacted by trading strategies that routinely seek to take liquidity during narrow time windows in which the national best bid and offer ("NBBO") is unstable and prices are likely to move against those orders. IEX uses the CQI as an indicator for these "crumbling quote" instances.[3] In order to ensure that the fee is fairly applied and narrowly tailored to these trading strategies, the fee is paid only on liquidity taking trades that take place while the CQI is "on" over a defined threshold of monthly trading activity. In particular, the CQI Fee applies only past the point at which orders removing liquidity when the CQI is "on" constitute at least 5% of a member's volume executed on IEX and at least 1,000,000 shares, on a monthly basis, measured on a per market participant identifier ("MPID") basis.

IEX's analysis indicates that, across all symbols available for trading on IEX, the CQI is on only 1.24 seconds per symbol per day on average, or .005% of the time (.03% of the time on a volume weighted basis) during regular market hours.[4] Our analysis of data from June 2017 indicates that only 13 members each using a unique MPID (out of 125 total members trading through 158 MPIDs) would have paid any fee, and that the order entry profile of these members was substantially different from other members based on the percentage of orders marketable to the midpoint of the national best bid and offer NBBO (63.1% of such orders for those member MPIDs compared to 13.4% for those below the threshold). In addition, because the CQI Fee applies only to trades over the threshold, five of these members would have paid less than $1,500 in such fees.[5]

Further, the CQI Fee has been designed to allow members to determine whether their trading activity might become subject to the fee and to adjust their trading strategies to avoid paying it if they so choose. In particular, IEX will provide a new fee code indicator on execution reports,

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[3] 82 FR at 41447.
[4] 82 FR at 41447, fn. 12 and accompanying text.
[5] 82 FR at 41449.

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beginning at least one month before implementation of the CQI Fee, so that members can assess the potential impact and make any adjustments they deem appropriate. Moreover, because the fee is paid based on total monthly activity, a member that is over the threshold at one point during the month will pay no fee if its subsequent trading activity causes it to fall below the threshold by the end of the month.

In summary, the fee has been carefully and narrowly designed to apply to certain trading behavior that demonstrably and negatively impacts market quality, not to individual firms or types of firms, and to ensure that the fee will not apply inadvertently and that members will be able to effectively choose whether and to what extent they pay it. It is therefore no more discriminatory than the many other exchange pricing schedules that incentivize certain types of trading behavior to the exclusion of others, including "maker-taker" and tiered pricing systems that seek to incentivize displayed quoting through the payment of rebates while charging the maximum permitted access fee for orders taking liquidity. There is also exchange precedent for imposing "excess order fees" on practices by members based on order-to-trade ratios for the purpose of improving the quality of displayed liquidity for the benefit of all market participants.[6] Accordingly, IEX believes that there is no basis in policy or precedent to conclude that the fee is unfairly discriminatory within the meaning of the Act.

Access to Protected Quotations

FIA seeks to contrast IEX's "speed bump", as a nondiscriminatory mechanism, from the CQI Fee, which will apply only at certain times to participants pursuing certain strategies. FIA suggests the fee will hinder participants from accessing protected quotes for one full second in order to enable liquidity providers to cancel and replace quotes.

Take fees of up to .0030 per share ("30 mils") are contemplated and permitted by Rule 610 of Regulation NMS, and the CQI Fee is no more designed to penalize participants from accessing quotes than exchange pricing schedules that routinely charge 30 mils for all orders to take liquidity. In fact, given all the limitations that IEX has created on when and how it may be applied, we believe that it creates much less of a disincentive to access protected quotes than those fee structures. As discussed further below, IEX has used a one second standard to evaluate mark-outs for purposes of evaluating the efficacy of the CQI, but this has nothing to do with

[6] *See* Nasdaq Rule 7018(a)(3)(m); 82 FR at 41450.

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accessibility of protected quotations on IEX or the *de minimis* standard the Commission has adopted in describing permissible delays in accessing protected quotations.[7]

Relationship Between the CQI Fee and Price Mark-Outs

In general, the comments either misunderstand or mischaracterize the relationship between the imposition of the CQI Fee and the use of one second price mark-outs to evaluate the potential for profits or adverse selection while the CQI is on.

FIA characterizes the fee as imposing a penalty on orders taking liquidity prior to a one second price move and says IEX has not provided a basis for doing so. It also states that basing a fee on the future profitability of a trade is unprecedented and would lead to a large number of complex pricing strategies with unknown consequences.

The CQI Fee is not designed to be charged based on a determination of whether individual trades are profitable, but instead whether trading firms are routinely (above the threshold) using specific trading strategies that involve removing resting liquidity during very narrow time windows when those firms perceive the NBBO to be unstable. IEX has used a one second time window solely to evaluate the effects on both liquidity providers and removers that occur during the small time increments that occur when the CQI is on, and to evaluate the effectiveness of the CQI Fee in reducing incentives to use trading strategies that target resting orders during the same time periods. IEX is not imposing the fee on trades based on their profitability or after-the-fact price movements.

VM cites to an analysis in the Fee Filing indicating that in June 2017, there were negative price mark-outs for liquidity providing orders one second after the trade 75.6% of the time when the CQI is on, but only 23.9% of the time when the CQI is off. It suggests that this means that one-fourth of the time, liquidity-taking orders will be charged a higher fee, but won't gain an advantage, and one-fourth of taking orders will gain an advantage but not pay a fee. Similarly, FIA interprets this data to mean that 24% of the time, participants will pay a fee for accessing protected quotes even though the price did not move in their favor.

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[7] *See* Securities Exchange Act Release No. 78102 (June 17, 2016), 81 FR 40785 (June 23, 2017).

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The statistic cited is solely concerned with the impact on liquidity providers when the CQI is on or off, it does not predict when the CQI Fee will be charged. As described above, the fee is paid only on liquidity taking trades over a high threshold of monthly trading activity. Whether a member is charged the fee at all, or the amount of the fee, will be in *its* control, not based on an assessment of its trading results.

HRT misinterprets the data in yet another way by reading it to say that the quotes of liquidity providers are profitable 75% of the time when the CQI is off, and it suggests the data would justify imposing a "punitive fee" on liquidity providers during the times when the CQI is off as much as it justifies a fee on liquidity removers when the CQI is on. More generally, HRT suggests that the CQI Fee unfairly favors liquidity providers over liquidity takers.

The data cited does not purport to indicate that trades by liquidity providers are profitable 75% of the time when the CQI is off, only that 75% of the time, the price *does not move adversely* from the perspective of the providers. Further, maker-taker fee structures regularly charge 30 mils to removers while giving rebates to providers, which appears to us to be much more discriminatory between liquidity providers and removers. In contrast, the vast majority of liquidity removers will never be even potentially affected by the CQI Fee, as reflected by our analysis of the small number of MPIDs that would surpass the threshold.

Relationship between the CQI Fee and "False Positives"

VM cites to published analysis by IEX concerning the incidence of "false positives", or circumstances when the CQI was on but the price did not change in the direction predicted within two milliseconds. The commenter suggests that this analysis means investors may be charged the CQI Fee in cases when they would be paying no fee under the current fee schedule. Similarly, HRT states that "CQI is targeted at approximately 50% accuracy", and concludes that imposing a fee based on the CQI prediction is arbitrary and unfairly discriminatory.

First, the CQI is not intended to be a perfect predictor of the direction and timing of price changes, nor does it need to be in order to achieve its purpose. The point is not to charge based on a determination of whether a particular trade was profitable, but to identify trading strategies that disincentive resting orders. Just as traders use probabilistic models to determine when to trade, we use the same type of model to identify when a quote is likely to be in transition. Further, the quoted statistic reflects how often a price change occurs in the direction indicated

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within two milliseconds of the time the CQI becomes active. It does not include cases in which the CQI accurately predicts the direction of price changes that take longer than two milliseconds to manifest. Based on further analysis of trading data from June 2017, the CQI would have accurately predicted the direction of the next price movement in 80.44% of all cases in which the CQI was triggered.

Further, for purposes of determining whether the CQI Fee is closely correlated with the strategies it seeks to deter, the more relevant statistic is that 30.4% of all marketable orders are received in the few seconds per day when the CQI is on.[8] This extraordinary concentration of orders to take liquidity in these small intervals clearly reflects the use of strategies to take liquidity in reaction to very low-latency price signals, and the mark-out data shows the effectiveness of those strategies. The volume threshold provides a sufficient "buffer" to ensure that the fee will be imposed only on members that are using such strategies. We believe these factors more than adequately show that the fee is neither unfairly discriminatory nor arbitrary.

Threshold for Applying the CQI Fee

HRT questions why, if trading during the CQI window harms market quality, IEX has not decided to charge all members 30 mils when removing liquidity while the CQI is on. HRT also questions why IEX chose a 5% volume threshold, rather than another percentage.

As described above, the CQI Fee is designed to apply to particular trading strategies, not to individual firms, and not to liquidity removers generally. Applying the fee to all liquidity removing orders while the CQI is on would not meet the objective. The thresholds were chosen based on careful analysis of trading data, demonstrating that that they are reasonably designed to capture deliberate trading strategies and not to capture orders that are incidentally sent while the CQI is on. In order to further protect against any unintended application of the fee, IEX will provide its members with data from at least one month's experience to help individual firms determine whether they might become subject to the fee under any circumstances. By imposing the fee only on trading above the volume threshold, IEX is also allowing firms to modify trading strategies if they choose to avoid paying the fee. IEX believes that we have fully demonstrated that the threshold used is fairly and equally applied to all members and is reasonably related to the purpose of the CQI Fee.

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[8] 82 FR at 41447.

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Impact on Broker Routing

VM claims that uncertainty around the CQI Fee will reduce cost certainty for routing brokers, and that it will be expensive for them to track their trading activity to determine whether they will be charged or not. VM also states that the existence of the thresholds means that brokers may take liquidity less aggressively later in the month, regardless of best execution obligations. Similarly, FIA argues that participants will not be able to replicate the logic used by IEX in their own systems and so will not know whether they will be subject to the fee when they route an order.

As described above, the CQI Fee is designed to be charged only to those pursuing deliberate trading strategies. Based on the extremely small proportion of the trading day when the CQI is on and the large proportion of marketable orders that are received in those intervals, the trading thresholds that would trigger the fee, and the small number of firms that would have paid based on past trading, we believe that market participants pursuing those strategies already know whether their orders are being sent during periods of quote instability. Brokers are accustomed to paying a take fee of 30 mils on other markets. Further, brokers operating in U.S. markets already are required to track hundreds of pricing tiers that are often triggered by trading thresholds. Finally, even if a customer-facing broker somehow ends up inadvertently exceeding the threshold, the fee would be charged only in rare, incidental cases. As noted above, even after the threshold has been reached, when subsequent trading causes the proportion of trading that occurs during the CQI window to fall under the 5% threshold for the month, no CQI Fee will be charged for any trades during the month.

VM suggests that, as a result of the CQI Fee, investors will need to be more aware of trading strategies used by their brokers and that algorithms that routinely "sweep" all or most liquidity at a price level "will likely trigger the CQ".

For the reasons described above and in the Fee Filing, the fee is narrowly tailored and designed to apply only to deliberate trading strategies that we do not believe are commonly employed by brokers representing client orders. Firms using these strategies, by the nature of their activities, already have and use the technological means that will allow them to easily monitor whether, or when, the CQI Fee may be charged. Further, all participants will have ample opportunity to monitor trading to avoid inadvertently being charged the fee or to adjust their strategies to avoid paying it.

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HRT suggests that whether a routing firm is charged a CQI Fee could differ depending on whether it routes in a serial fashion first to IEX, or instead routes serially to other exchanges first, and then to IEX.

We believe that firms do not generally route serially in the way described if their objective is to capture all liquidity at a price level. For firms that choose to route in this way, we believe that they already consider exchange pricing as a factor in determining their routing strategies.

Market Impact

HRT argues that any fee based on mark-outs would result in the exchange picking winners and losers based on decisions about its preferred mark-out characteristics. It suggests this will "alter the competitive dynamic", open the door to discrimination, and allow exchanges to "appropriate some or all of a firms [sic] trading revenue."

As discussed above, the CQI fee is not assessed based on the post-trade mark-outs, but rather whether the order was received during narrow windows of time when the market is in flux. This evaluation is being made based on IEX's observations of crumbling quotes across exchanges. As such, it is independent of whether the price changes occur on a per trade basis.

Far from "picking winners and losers", the fee is intended and designed to be fairly and equally applied to all members in a way that creates greater incentive to post quotes on IEX and thereby improve the overall quality of the market for participants. IEX believes that a fee like the CQI Fee is less impactful in distinguishing providers and removers of liquidity than exchange pricing models that charge access fees to all takers while paying rebates to liquidity providers (or vice versa).

FIA refers to the IEX analysis showing that 30% of liquidity taking orders are sent to IEX while the CQI is on. FIA asserts that this shows that the fee will be applied to a much larger share of liquidity-taking orders than suggested by the fact the CQI is on less than two seconds per day. FIA also argues that the fee will harm price discovery on the assumption that firms will not know whether the fee will apply to them and so will avoid sending orders at any time.

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The fee will be applied only to trading strategies above the threshold, not to all liquidity taking orders, or all such orders that arrive while the CQI is on. Further, the thresholds are based on trading volume, not orders sent. As such, the CQI Fee is narrowly designed to achieve the goal of encouraging participants to place resting orders without the use of rebates. As discussed above, IEX will provide to members a new fee code indicator on execution reports to help them determine in advance whether they could be subject to the fee. Further, we believe that strategies that "pick off" orders at imminently stale prices are themselves a huge deterrent to efficient price discovery.

Comparison to Pricing Tiers on Other Markets

VM states that the amount of the CQI Fee is much larger than the differences in volume tiers charged by the maker-taker exchanges, that the CQI Fee is different from other pricing mechanisms because it applies to orders that take liquidity, and that the pricing change will be harder to manage since "Rule 611, [sic] forces routing firms to access these quotes."

The amount of the CQI Fee is the standard rate for taking liquidity charged on other markets and complies with Regulation NMS Rule 610(c). The fee is designed to disincentivize certain latency arbitrage strategies that take liquidity and thereby provide an incentive for market makers and others to provide liquidity. Exchanges have long used differential pricing to influence trading behavior and incentives to provide liquidity. The CQI Fee does so in a way that IEX believes will enhance market quality by encouraging participants to display quotes without the well-known negative impacts associated with rebates.

We also note that Rule 611 by its terms imposes trade-through obligations on trading centers, not the brokers that route to them.

Other Comments

FIA alleges that the CQI Fee represents an encroachment by a self-regulatory organization on broker-dealer functions, including order handling.

As described above, the CQI Fee is a narrowly tailored means to provide a safer market for IEX market participants by providing incentives to provide liquidity and reducing the incentives for trading behaviors that undermine market quality. There is ample precedent for using pricing

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incentives in this way, and doing so does not involve the adoption by exchanges of order handling or other broker-dealer functions.

HRT references IEX's Discretionary Peg order type ("DPEG") in comments that are non-germane to the Fee Filing but require response to correct the statements made. HRT states that DPEG orders opportunistically trade before displayed prices at the midpoint when the price is stable, and when the price is unstable, they opportunistically trade after displayed prices "at the full spread". HRT further argues that the CQI Fee is not consistently applied because IEX is not seeking to charge a higher fee to firms that "may opportunistically seek to buy on the bid or buy at the midpoint when CQI is active."

DPEG orders rest at the inside of the NBBO and can exercise discretion to the midpoint when the CQI is off. They exercise only enough discretion to meet contra-side orders at their limit prices and also rest behind lit orders at the same price level. Accordingly, they will never "opportunistically trade before displayed prices." Further, since displayed orders are entitled to priority in all market conditions, we do not believe that there is anything "opportunistic" about DPEG orders trading behind them. In addition, the fee will apply to all removers of liquidity who meet the threshold while the CQI is on, including all removers at the midpoint. As to those seeking to buy at the bid, it is not possible to opportunistically seek liquidity at the passive side of the NBBO on IEX.

FIA argues that IEX should be required to refile the Fee Filing other than on an immediately effective basis based on FIA's concern that it violates SEC guidance on *de minimis* delays and implicates questions of fair access to the exchange.

As discussed above, the CQI Fee has nothing to do with access to protected quotations under Rule 611 or any other issues of fair access, and as a fee filing it complies with the standard for immediate effectiveness. Further, FIA and other participants have been given a meaningful opportunity to comment.

VM alleges that the CQI Fee conflicts with IEX's goal of being a fair, simple, and transparent market and makes other statements about the impact of IEX's so-called "speed bump".

While these comments are not germane to the Fee Filing, IEX believes that the CQI Fee is fully consistent with our mission goal in all its aspects. It is fair because it is narrowly tailored and

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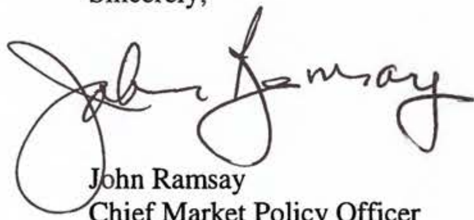
applied only to those participants who, by nature of their trading activities, can anticipate when a trading strategy they employ likely will be subject to the fee, and decide whether to pay the fee or adjust the strategy. It is transparent because all participants will be given the information necessary to determine whether it will be charged at all. And the CQI formula does not increase in any material way the complexity of trading for participants who, by pursuing trading strategies that could cause them to exceed the threshold that would trigger the fee, already manage highly complicated trading and data systems. For other participants, the CQI Fee should lessen the risk that their resting orders will be harmed by predatory trading and thereby increase protections for displayed and undisplayed orders, making the market safer for liquidity providers, and benefitting the market overall.

Conclusion

Exchanges have long been given wide flexibility to adjust their fee schedules to increase incentives for some types of trading activity while reducing incentives for other types. The CQI Fee reduces incentives to use strategies that target resting orders during small time windows when the price is likely to move against those orders, and it increases incentives for participants to contribute to liquidity by posting quotes. It is narrowly drawn to achieve its purpose without charging participants that do not choose to pay the fee. Finally, it provides an important means for IEX to innovate and compete without using rebates or tiered pricing, which we believe detract from market quality. For all those reasons, it exceeds the standards for approval under the Act.

Sincerely,



John Ramsay
Chief Market Policy Officer

cc: Hon. Jay Clayton, Chairman
Hon. Kara Stein, Commissioner
Hon. Michael Piwowar, Commissioner
Heather Seidel, Acting Director, Division of Trading and Markets
Gary Goldsholle, Deputy Director, Division of Trading and Markets
David Shillman, Associate Director, Division of Trading and Markets
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