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May 30, 2018

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

Re: Transaction Fee Pilot; Securities Exchange Act Release No. 82873; File No. S7-05-18

Dear Mr. Fields:

Investors Exchange LLC ("IEX") is pleased to submit this comment to the Securities and Exchange Commission ("SEC" or "Commission") on the Commission's proposed Rule 610T (the "Rule") for a Transaction Fee Pilot for NMS Stocks (the "Pilot").[1] We strongly endorse the Pilot and hope the Commission will proceed to adopt and implement it promptly. The "maker-taker" pricing system has been a source of controversy inside and outside the securities industry since its adoption by all the major markets. Publicly-available data provides clear evidence that maker-taker exchanges have longer queues of orders to buy or sell stock despite inferior execution quality.[2] The Pilot is a well-crafted, tailored means to further examine the effect of exchange price incentives on broker routing behavior and execution quality and to inform broader reforms to promote competition, reduce conflicts, and improve market quality. We commend the Commission for drawing on the recommendations and range of views expressed by its Equity Market Structure Advisory Committee, as supplemented by numerous other commenters, in designing the Pilot.

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[1] Securities Exchange Act Release No. 82873 (March 14, 2018), 83 FR 13009 (March 26, 2018) ("Proposing Release").

[2] *See*, e.g., Elaine Wah, Stan Feldman, Francis Chung, Allison Bishop, & Daniel Aisen, "A Comparison of Execution Quality across U.S. Stock Exchanges," (April 19, 2017), avail. at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2955297. A summary of relevant findings in this paper is attached as an addendum to this letter.

General Comments

Purpose and Metrics

Various commenters have stated that the Commission has not sufficiently identified the purpose for the Pilot or the specific measures by which data obtained from the Pilot will be evaluated. In general, we believe that the Commission has clearly identified the need to examine the effects of transaction fees and rebates on market competition, market quality, and broker order routing and execution as the overarching purpose of the Pilot. Without limiting the metrics the Commission may wish to consider in analyzing data that results from the Pilot, we believe that, in addition to measures suggested by others, resting time (for liquidity-providing orders), the time to first fill, time to complete fill or cancel, and measures of adverse selection are among the metrics that would be appropriate to consider. With regard to adverse selection, we believe that it would be consistent with industry and academic practice to examine mark-outs (sometimes referred to as realized spreads) at a range of time intervals following a trade (e.g., 1 ms, 10 ms, 100 ms, 1 second, 5 seconds, 1 minute). Times should be measured by reference to a common source, to enable useful comparison across markets.

In general, we anticipate that the Commission's Department of Economic and Risk Analysis ("DERA") will play a key role in analyzing data resulting from the Pilot and contributing to one or more reports to the Commission and public. We think it may be helpful for the Commission to clarify the role that it would expect DERA to play and the anticipated timeline for issuance of a report or reports drawing on Pilot data.

Price Competition and the Cost of Liquidity

We believe the Pilot is critical to understanding how the dominant maker-taker fee structure affects the cost of accessing exchanges and how the cost of liquidity could be better determined by market competition. Presently, based on existing published fee schedules, the five largest exchanges charge a standard take fee of precisely $.003 per share. The fact that this is the standard cost to access displayed quotes at all the largest exchanges results from the historical anomaly that this was the prevailing rate charged by electronic venue competitors at the time Regulation NMS was adopted in 2005, which resulted in a fee cap at that level set by Rule 610.[3]

Technological efficiencies since 2005 have reduced many costs in equities trading, but the markets have not seen a decrease in the cost to access displayed quotes. Instead, the "cap" established by Rule 610 has become a standard rate that is used in effect to subsidize the payment of rebates. This results in a substantial penalty on investors and other participants who, by the nature of their business, have a need for immediate liquidity and are willing to "cross the spread" and buy at the best offered price or sell at the best bid. Excessive take fees, in turn, have been criticized as leading to the migration of some order flow to less-regulated non-exchange venues in search of reduced transaction costs, resulting in increased market fragmentation and market complexity.[4]

IEX believes that a major benefit of the Pilot will be to provide a basis for further action to significantly reduce this excessive cost to access exchange liquidity and allow market (including exchange) competition to determine the right level for access fees based on trading fundamentals that exist today, not those that were relevant in 2005, and unencumbered by the need for those fees to subsidize the payment of rebates.

Inferences from Changes in Routing Behavior

We understand that some participants have expressed a concern that any change in their routing behavior in one or more test groups during the Pilot may create a negative inference that their prior routing behavior was not in accordance with best execution requirements or could create some other regulatory exposure. Although we do not believe that such an inference would be justified, we think it would be appropriate for the Commission to clarify this point in an adopting release. In particular, we think that, in light of the facts that exchange pricing schedules constitute one factor among many that may affect routing decisions, and that these decisions during the Pilot may themselves be

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[3] *See* "Maker-Taker Fees on Equities Exchanges", SEC Staff Memorandum to the SEC Market Structure Advisory Committee, dated October 20, 2015, at 2-3, avail. at https://www.sec.gov/spotlight/emsac/memo-maker-taker-fees-on-equities-exchanges.pdf.
[4] Id.

affected by the behavior of other market participants in response to the Pilot, a change in routing behavior should not by itself create an inference that the broker's previous routing decisions did not meet best execution responsibilities.

Structure and Scope of the Pilot

Duration of the Pilot and Pre-Pilot Periods
We favor the proposal to run the Pilot for one year, with the option of the Commission to extend it for no more than another year. Because the Pilot is designed to apply to a broad cross-section of securities and to all exchanges, we believe that one year should provide sufficient time for the Pilot to generate data to inform market participants and policy decisions by the SEC, but agree that the Commission should maintain flexibility to extend the duration if circumstances warrant. In this regard, the Commission should retain the discretion to extend the Pilot with respect to less than all the test groups if it determines that doing so would best meet the Pilot's objectives.

As proposed, the pre-Pilot and post-Pilot data collection periods, at six months each, together could equal the length of the Pilot itself. We believe that three months rather than six months should be sufficient to collect a set of baseline data prior to the start of the Pilot. Further, if the Commission determines that information covering a longer period is useful or necessary to develop a baseline, it could reserve the right to obtain from the self-regulatory organizations ("SROs") order routing and transaction fee data, which is required to be retained by the SROs today, for an additional three-month look-back period prior to the start of the pre-Pilot period.

Relationship to Tick Pilot
We agree that the Commission should structure the Pilot so that it does not overlap with the Plan to Implement a Tick Size Pilot Program ("Tick Pilot")[5], which is due to end in October, unless the Commission acts to extend it. Separately, we concur with what we

[5] *See* Securities Exchange Act Release No. 74892 (May 6, 2015), 80 FR 27514 (May 13, 2015).

perceive to be a nearly universal consensus that the Tick Pilot should end when scheduled. In that event, the potential for conflict with the Pilot will be moot.

The Financial Information Forum has proposed that the pre-Pilot data collection should not begin until at least one month after April 3, 2019, to avoid any overlap with the post-pilot data gathering required for the Tick Pilot, which requires data collection for Tick Pilot stocks to continue for six months after that Pilot ends.[6] We see no reason to delay commencement of data collection for the fee Pilot for a full seven months after the Tick Pilot concludes. Once the Tick Pilot ends, there is no possibility that restrictions imposed on Tick Pilot stocks will conflict or overlap with fee Pilot restrictions. In terms of data collection, SROs can easily handle any concurrent obligations that may arise, and we see no basis to conclude that markets require this length of time to readjust to a return to a minimum penny tick size in Tick Pilot stocks before the SROs may even begin to collect data relevant to fee Pilot stocks.

Universe of Pilot Securities

IEX strongly endorses the proposal to include within the Pilot a broad cross-section of securities (1,000 in each test group) with widely varying prices, capitalization levels, and trading characteristics. We believe it is essential to examine the impact of both access fees and rebates across a broad cross-section of stocks to generate data that will be useful for analysis.

No-Rebate Test Group

IEX strongly supports the inclusion of a no-rebate test group as proposed, which we believe is critical to a credible study of the maker-taker pricing system. The payment of rebates has been the most contentious and controversial aspect of that system. Concern about distortions caused by rebates has been voiced by various brokers, asset managers, and asset owners, as well as noted academics and economists, including former SEC

[6] Letter from William H. Hebert, Managing Director, Financial Information Forum, to Brent J. Fields, Secretary, SEC, dated May 24, 2018.

Chief Economists.[7] One of the major concerns with the existing market structure is that rebates affect the length of the order queue of passive limit orders on the major maker-taker exchanges, while high take fees on these markets make them less attractive for marketable orders that cross the spread. The net result of this perverse pricing dynamic is a lower likelihood of execution and a higher likelihood of adverse selection for orders in the maker-taker queues, especially those relegated to the end of the queues – typically, orders representing asset managers and asset owners.[8] Dozens of large and small asset managers, pension plans, and other institutional investors, representing millions of individual beneficiaries, have voiced their concerns about exchange rebates, and their support for a no-rebate test group is broadly reflected in comment letters already submitted to the Commission in response to the proposed Pilot.[9]

We believe that the concerns of these commenters are well-founded. In light of these concerns and publicly available data indicating that rebates influence order handling, as the Commission said in the Proposing Release, "only a complete prohibition on rebates will allow the Commission to study directly these conflicts and their effects by observing what would happen in the absence of rebates."[10]

SEC Authority

Two exchange groups have suggested that the Commission lacks the authority to implement the Pilot, or that testing a rebate ban or alternative access fee caps would constitute an impermissible form of price control. We believe these arguments are meritless. The Securities Exchange Act of 1934 ("Exchange Act") provides very broad authority for the Commission to regulate all aspects of exchange operation, including fee schedules, which is why every aspect of exchange operation must be filed with and approved by the SEC. The fact that the SEC has not previously chosen to use its

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[7] *See*, e.g., Angel, Harris, and Spatt, "Equity Trading in the 21st Century", *Quarterly Journal of Finance* 1-53 (2011); C. Spatt, "Is Equity Market Structure Anti-Competitive?" (draft May 24, 2018); Battalio, Corwin, and Jennings, "Can Brokers Have It All? On the Relationship between Make-Take Fees and Limit Order Execution Quality," *Journal of Finance* 71, 2193-2238 (2016).
[8] Wah, *et. al, supra* note 2.
[9] *See* https://www.sec.gov/comments/s7-05-18/s70518.*htm*.
[10] Proposing Release, 83 FR at 13022.

authority to prohibit rebates, or test their elimination through a pilot, does not mean it lacks authority. Further, as described above, we believe that the existing $.003 per share access fee cap is a "price control" that has acted effectively as a standard rate that causes an unnecessary tax on accessing liquidity. The exchange criticisms are contradicted by their acceptance of this existing price regulation, which may better serve their interests than the alternative caps and rebate prohibition included in the Pilot.

Prohibition on Linked Pricing and Application to Non-displayed and Depth of Book Orders

We support the proposal to include within the rebate prohibition in Test Group 3 a prohibition on "linked pricing" incentives (for example, a discount on fees to access liquidity in exchange for reaching certain levels of volume based on liquidity-providing orders) for the reason described in the Proposing Release – in this test group, the Pilot should test, to the extent reasonably practical, the ability of the market to set equilibrium fees when "taker" fees are not used as a means to support "maker" volume (or *vice versa*) similar to the way rebates are used.[11] For the same reason, we support the proposal to apply the rebate prohibition in Test Group 3 to non-displayed and "depth of book" quotes. Again, if the Pilot is intended to test how the market functions in the absence of rebate payments, it should not permit exchanges to simply shift rebates in the no-rebate test group to trades other than those that result from displayed "top of book" quotes.[12]

We suggest two modifications to this part of the Rule. First, we suggest that the linked pricing prohibition should extend to auction fees or any other transaction fees charged by the exchange. Closing auction fees, especially, are a significant source of listing market revenue, and we believe discounts on these fees could likewise lead to the distortions described by the Commission (or even to increases in auction fees to other participants to fund the targeted discounts). Second, we propose amending this part of the Rule to provide that a discount on making or taking fees in one test group cannot be conditioned on making or taking volume in *another* test group (for example, providing a discount on

[11] Proposing Release, 83 FR at 13023-13024.
[12] Id.

fees to display liquidity in Test Group 2 based on the level of displayed volume in Test Group 3). Because the proposed Rule literally prohibits only linking incentives related to taking liquidity in exchange for making liquidity or *vice versa*, without this clarification, it might allow incentives provided on the same side of the market across test groups, and potentially undermine the rebate prohibition in Test Group 3.

Incentives other than Linked Pricing
Some commenters have expressed concern that exchanges could offer other, non-transaction fee incentives for other types of products or services that won't be captured by the prohibition in a way that could undermine the rebate prohibition in Test Group 3. For example, exchanges could seek to provide a discount on charges for market data, or for access and connectivity charges, in place of the rebates.

While we agree the Commission should prevent the use of fee discounts that could subvert the rebate prohibition, as discussed above, we also believe that under the Exchange Act, exchanges will be prohibited from using discriminatory pricing for other products and services. Exchanges are required to provide levels of access and market data on terms that are non-discriminatory. In the regulatory filings seeking approval of these charges, exchanges typically base their conclusion that they are non-discriminatory on the basis that users seeking the same level of access or data pay the same cost.[13] For example, we believe that, if an exchange sought to change its rules to allow certain users to pay less for connectivity or market data based on their volumes of posted liquidity, the exchange would be unable to show that the change meets the Exchange Act requirements that fees be charged in an equitable and non-discriminatory way. If an exchange was permitted to offer a financial incentive for a different type of product or service in a way that was determined to meet Exchange Act standards, the Commission could require that

[13] *See,* e.g., Securities Exchange Act Release No. 78713 (August 29, 2016), 81 FR 60768 (September 2, 2016) (change to fees for third party connectivity provided by Nasdaq); Securities Exchange Act Release No. 78556 (August 11, 2016), 81 FR 54877 (August 17, 2016) (increase to NYSE co-location and connectivity fees); Securities Exchange Act Release No. 82475 (January 9, 2018), 83 FR 2237 (January 16, 2018) (adding non-display use fees for Cboe depth of book market data product).

those incentives be clearly disclosed as part of the exchange fee disclosures required by the Rule.

Registered Market Maker Exception
We support the proposal to allow registered market makers to receive non-rebate transaction fee discounts or incentives in exchange for meeting market liquidity metrics under rules approved by the Commission for that purpose. Market makers play a vital role in supporting liquidity and continuity of trading, and this aspect of the Rule is consistent with longstanding regulatory policy to allow incentives to market makers that agree to meet specific obligations that improve market quality.

Disclosures

Exchange Transaction Fees
IEX strongly endorses the proposal to require public disclosure, through the duration of the Pilot and the pre-Pilot and post-Pilot periods, of data on exchange transaction fees, by test group, participant type, and type of trading interest. Most exchanges maintain multi-tier fee schedules that are extremely complicated and difficult even for experienced market professionals to parse through. Apart from its value in informing participants and the public as to how exchange fee structures may change in response to the Pilot, we believe this type of disclosure will have substantial value in providing more transparency as to exchange transaction fees generally.

IEX believes that the value of enhanced transparency would be further served if the Commission also required disclosure, for each category where the base fee/rebate and top tier fee/rebate are disclosed, of the number of firms qualifying in each case for the base level or for the top tier. One of the key controversies involving our current market structure concerns the extent to which particular fee incentives are directed to a few firms or a single firm, while base rates fall heavily on a much larger number of firms. Disclosing the number of firms that qualify for the base level versus the most favorable rates will be useful in understanding this question, and evaluating how this dynamic may change over time in response to the Pilot.

Order Routing Disclosure
IEX also generally supports the order routing disclosure contained in paragraph (d) of the Rule. We do, however, agree with other commenters that publicly disclosing each of the required data sets by individual firm, even if the broker-dealer identity is masked, runs the risk that individual firm identity could be discerned in at least some cases. On balance, we believe that this risk outweighs the value of public disclosure at the individual firm level. We believe that the SEC should receive data at the participant level to best inform its own analysis, but that public disclosure of routing data could be aggregated in an appropriate way by type of firm. This will serve what we see to be the most important purpose of disclosing routing data, that is, to allow market participants and regulators to evaluate changes in routing behavior for various types of symbols among the test groups, without potential unintended effects of revealing individual firm positions or trading strategies.

We also believe the SROs should not have access to individual firm level data. Under the approach taken by the Commission, with which we agree, the exchanges are not managing the Pilot, and we see no value in providing them with firm-specific data that would outweigh the potential for its misuse.

Finally, we agree with other commenters that routing data should not be segmented by "held" v. "non-held" order categorizations. This type of categorization is not presently collected by exchanges, and we believe that requiring brokers to change their systems and processes to add this classification could impose costs that would outweigh the potential value of this additional item of data.

Conclusion

The maker-taker pricing system has been controversial for as long as it has been in existence because, in the words of three leading authorities, "[i]t has distorted order routing decisions, aggravated agency problems among brokers and their clients, unleveled the playing field among dealers and exchange trading systems, produced fraudulent trades, and produced quoted spreads that do not represent actual trading costs."[14] There is ample publicly available data showing that rebate incentives affect routing decisions to the detriment of certain market stakeholders. We believe that the Commission has proposed a carefully considered and intelligent Pilot to address these concerns, after extensive input from a broad range of stakeholders. For these reasons, we believe that expeditious approval and implementation of that proposal is the most important single act that the Commission can take to advance the interests of our country's equity investors.

Sincerely,

John Ramsay
Chief Market Policy Officer

cc: Hon. Jay Clayton, Chairman
Hon. Kara Stein, Commissioner
Hon. Michael Piwowar, Commissioner
Hon. Robert Jackson, Jr., Commissioner
Hon. Hester Peirce, Commissioner
Brett Redfearn, Director, Division of Trading and Markets

[14] Angel, Harris, and Spatt, *supra* note 6, at 42.

Addendum to IEX Comment Letter on Transaction Fee Pilot

Selected Findings from "A Comparison of Execution Quality across U.S. Stock Exchanges" by Wah, Feldman, Chung, Bishop, & Aisen

In this white paper, Wah et al. (2017) study market quality on U.S. equities exchanges using publicly available microsecond-level TAQ data on trades and quotes in the first quarter of 2017. They focus their analysis on the relationship between fee structure and performance. Their results demonstrate a phenomenon of venue stratification by fee structure across different dimensions of execution quality, including execution costs, adverse selection, liquidity, and market stability.

Adverse Selection

- Their main metric of execution costs and adverse selection are trade mark-outs – known in the academic literature as realized spread. Mark-outs measure the potential profitability of an execution under the assumption that it is closed out at some fixed time after the trade, and negative mark-outs reflect the presence of adverse selection.
- Wah et al.'s results demonstrate a dramatic difference in mark-outs across exchanges, with significantly greater adverse selection on exchanges that pay rebates to liquidity providers vs. the inverted/flat-fee venues. These results hold across a wide range of post-trade time intervals.
- Notably, even when top-tier fees and rebates are included, there is still a wide gap in performance between the best and worst performing venues – which exceeds the difference in cost of adding liquidity. In other words, rebates do not adequately compensate for inferior execution quality on high-fee venues.

Market Stability

- Another measure of execution quality in the white paper is market stability, which promotes efficient price discovery and reflects participants' ability to trade at accessible prices. The authors measure market stability by classifying trades based on whether they are executed in the 2 milliseconds immediately prior to a quote change.

- As with the mark-outs results, they find a strong relationship between fee structure and stability: maker-taker venues exhibit much less stability around quotes, as evidenced by a significantly higher percentage of volume executed immediately prior to a change in the NBBO.
- These findings reflect the incentives engendered by fees and rebates, in which participants are incentivized to remove liquidity at cheap-to-take (i.e., inverted) venues and tend to only access liquidity on expensive-to-take (i.e., maker-taker) exchanges when they need to interact with all displayed liquidity during a market-wide sweep.

Queue Size

- Probability of execution of an order depends in part on the length of the queue, or the aggregate quantity at a given price level. All things being equal, the longer the queue, the longer it will take an order joining the end of the queue to receive a fill. Wah et al. measure queue size as quoted depth, or the average of the quoted size available at the NBB and the NBO during the day.
- They observe longer average queue sizes at the largest maker-taker venues, which are the exchanges that offer the highest rebates for adding liquidity. This suggests that brokers may be prioritizing rebates over likelihood of execution when it comes to routing passive order flow.