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February 16, 2016

By Electronic Mail

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

Re: *Investor's Exchange LLC Form 1 Application*; Release No. 34-75925; File No. 10-222

Dear Mr. Fields,

Markit appreciates the opportunity to provide the U.S. Securities and Exchange Commission ("Commission") additional views on the Investors' Exchange LLC ("IEX") Form 1 application for registration as a national securities exchange ("Application").

Markit¹ is a leading global provider of financial information services.² Founded in 2003, we employ over 4,000 people in 11 countries, including over 1,600 in the US, and our shares are listed on Nasdaq (ticker: MRKT). Markit has been actively and constructively engaged in the debate about regulatory reform in financial markets, including topics such as the implementation of G20 commitments for OTC derivatives and the design of a regulatory regime for benchmarks. Over the past years, we have submitted more than 130 comment letters to regulatory authorities around the world and have participated in numerous roundtables.

Markit's Information Services division includes RegOne Solutions by Markit,³ a leading provider of compliance, analysis, and reporting of best execution and related execution quality data for broker-dealers, Alternative Trading Systems, and stock exchanges. We believe our expertise in U.S. equity market structure and our experience in collecting, analysing and publishing execution statistics for retail and institutional market participants gives us a unique perspective on equity order routing and retail execution quality, which are the issues we wish to address in this letter.

1. Executive Summary

Our purpose in writing this letter is to highlight additional information in support of [our previous comment letter](#).⁴ In particular:

¹ See www.Markit.com for more details.

² We provide products and services that enhance transparency, reduce risk and improve operational efficiency of financial market activities. Our customers include banks, hedge funds, asset managers, central banks, regulators, auditors, fund administrators and insurance companies. By setting common standards and facilitating market participants' compliance with various regulatory requirements, many of our services help level the playing field between small and large firms and foster a competitive marketplace.

³ See <http://regonesolutions.com/regone/web/me.get?web.home#products> for more details.

⁴ See Letter to Brent J. Fields, Secretary, Commission, from David M. Weisberger, Managing Director, RegOne Solutions by Markit (December 23, 2015).

- a. **Recent information released by IEX itself highlights the significance of the potential advantage that IEX would obtain should its router not be subject to the same “speed bump” as unaffiliated routers and, at the same time, bolsters IEX’s claim that their speed bump, coupled with their innovative order handling, could serve a useful purpose in the U.S. equity market structure**
- b. **We believe that IEX, as it is currently conceived, is not an appropriate venue for retail traders to send their market orders**

2. Discussion

- a. **Recent information released by IEX itself highlights the significance of the potential advantage that IEX would obtain should its router not be subject to the same “speed bump” as unaffiliated routers and, at the same time, bolsters IEX’s claim that their speed bump, coupled with their innovative order handling, could serve a useful purpose in the U.S. equity market structure**

IEX’s open letter to the public describing the NYSE’s two different gateways (binary and FIX), where the older and bulkier (and slower) FIX gateway is essentially an avoidable speed bump, provides excellent insight into IEX.⁵ It demonstrates that IEX is both a force for productive change, and, at the same time, is using the unique marketing advantage created by Michael Lewis’s book, “Flashboys,” to lobby for legal advantages.

Before we discuss our concerns with the analysis in IEX’s letter, we would like to commend IEX for publishing research on routing fill rates. To our knowledge, no existing exchange has ever published these types of statistics on routing efficiency, and this is a small, but important step in improving transparency. We also agree with IEX that the NYSE having two different connection methods, despite this dual access offering being well known, longstanding, and open to member choice, raises important questions regarding investor protection and market integrity. Its impact on a “level playing field” is an appropriate matter for the Commission to evaluate and determine whether it should be allowed to persist. However, we have the following concerns about IEX’s analysis:

First, it points out how important it is for investors and traders to measure routing efficiency. From the perspective of best execution, without measuring routing, investors cannot truly understand the relative trading costs achieved by their brokers. As we have previously written, IEX’s router is well designed for aggressive routing, but many participants in the market have well designed routers.⁶ We understand many commercial routers have used the binary protocol at the NYSE for some time. Of course, the only way for clients to actually understand whether their broker is using the best technology and the appropriate routing strategy is to request detailed metrics. Statistics such as those IEX provided in their letter would be a good start and IEX

⁵ See Don Bollerman, Co-founder and Head of Markets & Sales, IEX, “A NYSE Speed Bump You Weren’t Aware Of” (January 26, 2016) available at <https://www.iextrading.com/about/press/op-ed/>.

⁶ See Letter to Brent J. Fields, Secretary, Commission, from David M. Weisberger, Managing Director, RegOne Solutions by Markit (December 23, 2015).

deserves praise for their publication of routing statistics. From the perspective of best execution, we would argue that measuring routing efficiency is one of the keys to understanding costs, but that would require much more than the statistics IEX provided. Metrics should also be based on the aggregate execution quality of the orders submitted to the router, which requires analysis of both market conditions and the specific instructions on each order.

Second, IEX's analysis directly points out the magnitude of the competitive advantage that they are asking for, by allowing their router to have a head start by not being subject to the speed bump. In their description of the NYSE FIX gateway, IEX demonstrates that, if they are allowed to have the only router that can proceed to sweep the other displayed quotes, they will have a major advantage. If IEX had market share similar to the NYSE, then their router would have a head start worth as much as 10% on fill rates based on their own data. To be clear, this is not an issue of IEX versus HFT firms, it is an issue of IEX's broker versus all other brokers that act as agents for their clients.

There are two other points in the IEX letter that deserve comment. In their letter, IEX asserts that one of the primary purposes of the speed bump is that:

"It protects client orders on IEX from being scalped at stale prices by certain high-speed traders who have purchased faster access to information from other exchanges, and know the prices to be stale."

This is a critical point that deserves some expansion. While it is unclear how much adverse selection accrues to posted orders because of latency arbitrage, their point is accurate. The speed bump allows IEX to manage pegged orders for their clients and to cancel or re-price orders at stale prices. This is because IEX does not subject its pegged order or price validation processes to the speed bump. While other commenters have criticized this feature, we believe that this innovation deserves to be available in the exchange market. While market participants can debate the pros and cons of this feature, and IEX's CEO believes other exchanges are unlikely to institute such a speed bump on a "banner market," we believe it is best for the market to decide.⁷

IEX makes another assertion about their speed bump that deserves analysis, however:

"Second, it protects clients who use IEX's router from being beaten to other exchanges by high-speed traders who are looking to react to the client's orders by removing liquidity on those exchanges before the orders can be executed."

While correct, this assertion seems irrelevant to IEX's claim that giving their router an advantage is necessary. If the IEX router subscribed to IEX's own market data and was subject to the speed bump like everyone else, it could still accomplish this objective. RBC's "Thor" router, for example,

⁷ See Jeremy C. Owens, "Flash Boys' star IEX's New Battle Plan Against High-Frequency Trading," Market Watch (January 21, 2016) available at <http://www.marketwatch.com/story/flash-boys-star-iex-no-compromise-on-exchange-application-2016-01-20> (edited interview with Brad Katsuyama, CEO, IEX, and Ronan Ryan, Chief Strategy Officer, IEX).

delivers parallel orders at the same time to all venues, making it impossible for speed traders to get in front of the Thor orders. IEX is requesting to be allowed to have the ability to send orders to their own market in excess of the liquidity displayed there, and still be able to sweep all other markets. Essentially, IEX asks for the ability for their router to send oversized orders to their own dark pool without paying the time penalty that all other routers would experience. This will achieve the same effect as letting their router “know” what liquidity is available as hidden or dark orders in their exchange. When taking into account the large percentage of orders that IEX would likely route as an exchange (see our analysis below), this advantage is significant.

b. IEX, as it is currently conceived, is not an appropriate venue for retail traders to send their market orders

In the debate over the IEX Application, the “retail is being hurt” mantra comes up repeatedly. Comment letters from retail investors and articles in the press position IEX as an innovation that helps individual investors.⁸ In addition, there was a form letter (see appendix) on the IEX website in 2014 available to retail investors so they could instruct their broker to route ALL orders to IEX. That letter, which was subsequently removed, is attached as an endnote to this letter.

To document the potential cost to retail investors of routing their market orders to IEX, we analysed the Rule 605 public data for October and November 2015. The data demonstrates that, if retail market orders were sent only to IEX instead of to the top wholesalers (including Citadel, KCG, UBS, SIG, Citi and Two Sigma), those orders would have lost over \$150 million dollars in execution quality; an annual rate of \$900 million. A detailed description of our analysis follows.

The data for the analysis period contains over 132,000 market orders routed to IEX, which we deem to be statistically significant. For the period, the effective spread relative to the quoted spread (EQ) delivered by IEX was more than double that of the wholesale market makers (133 vs 60 EQ). During this period, IEX executed 21 million shares of market orders, while the wholesalers executed 17 billion shares. It is worth noting that the average order size sent to IEX was actually smaller than that sent to the wholesalers (464 vs 765 shares). Consequently, since there is a positive correlation between order size and higher execution costs, it logically follows that our estimate is more likely to underestimate the potential cost to retail.

We also analysed the marketable limit flow executed by both IEX and a group of wholesalers in order to understand the context of the market order data. We found that market orders are a much higher percentage of marketable order flow for retail than for IEX’s current clients. Specifically, the data from the top seven wholesale market makers by volume (Citadel, KCG, UBS, Two Sigma, Citi, SIG and BNY) show that retail executed 56% of their liquidity seeking orders via market orders. Market orders sent to IEX, during the same period, represented less than one-half of 1% of the liquidity seeking orders that they executed. Thus, it is statistically necessary to use IEX’s execution quality on market orders to evaluate the execution quality of retail orders on IEX. Analysis that utilizes IEX’s “all marketable” execution quality, due to the fact that such a small percentage of their flow was market orders, would be statistically invalid, since there is such a large differential in execution metrics between limit and market orders.

⁸ To date, we counted over 200 comment letters on IEX’s Application from individual investors.

We also studied the relative execution quality between IEX and the wholesalers for marketable limit orders, although we note that such comparison must be separately considered from the market orders analysed above.

Before describing the analysis, it is important to understand that retail orders are deemed “held,” which means that the broker handling that order is obligated to either route or execute that order as soon as it can. Brokers receiving these orders have no option to cancel them unless the trading day ends and the limit price was never reached. As a result of this, during the period studied, the average execution rate of marketable limit orders handled by the wholesaler group studied was over 55%. IEX, however, executed less than 8.5% of the marketable limit orders they reported.⁹ The data for the time period studied shows that IEX executed marketable limit orders with an EQ of roughly 85, compared with an average EQ of 97 for the seven top market makers. On the surface, this is a positive comparison for IEX, but it fails to take the execution rate into account. As noted, the wholesale market makers executed the retail marketable orders at a rate of roughly 6.5 times that of IEX, so we need to adjust the probable EQ that IEX would have delivered had they executed orders at a similar rate in order to produce a statistically valid comparison.

While estimating the EQ that would have been delivered by IEX had they been required to execute all orders that were executable instead of cancelling them, we believe that a reasonable estimate can be calculated. The opportunity cost of unexecuted limit orders is not easily quantifiable without having the specific order data to analyse, but most models assume one-half of the bid offer spread. If we put that into EQ terms, it would suggest an EQ of 200 for the 48% of the unexecuted orders which might reasonably have been expected to be executed if treated as “held.” As large as that number is, based on experience, the average EQ received when fully routing aggressive retail orders does approach that number. That said, a more conservative proxy would be to use IEX’s own EQ from their handling of market orders. If we used that number for the 48.5% of the orders that IEX did not execute to predict a blended average EQ that aggressive marketable limits would have received, their EQ would rise from 86 to 127. However, utilizing the more conservative assumption that one-half of all the cancelled shares would be executed against displayed markets, then the predicted EQ would rise to 114. Whichever set of assumptions we use, it is clear that IEX would deliver an aggregate EQ on retail marketable limit orders of higher than the 97% shown by the wholesaler group in the analysis period.

This analysis is likely a consequence of IEX’s own design, which specifically rejects the concept of segmentation of different client groups. While this design has many positive aspects for a market that is applying for exchange status, providing retail investors with superior execution quality is the core concept of the wholesale business.

Retail investors deserve superior execution quality for the same reason that Wal-Mart gets the lowest prices from its suppliers. In both cases, the party that it is more economical to trade with receives a pricing benefit. For Wal-Mart, the reason is economies of scale, which allows

⁹ It is likely that the majority of these orders were Immediate or Cancel (IOC) orders, which should not be compared to retail marketable orders as we have [previously explained](#) in a presentation to the SEC, available at http://regonesolutions.com/regone/web/localdata/WEB/DATA/WEBSECTIONSJMATTACHMENT/SITE_934/RegOne-for-SEC.pdf.

producers to sell more predictable volume at a lower marginal cost. Orders from retail investors carry less risk than similarly sized orders from institutional investors. The reason retail orders carry less risk, however, has nothing to do with the intelligence or investment acumen of retail investors (as many media pundits claim). The reason, simply put, is that retail orders are WYSIWYG (what you see is what you get).

To explain why WYSIWYG is less risky, consider the following: When a retail order to buy 2000 shares of IBM is sent to a market maker, most of the time that order completes the trading interest of that investor. Institutions, on the other hand, on average continue to buy or sell. That "follow-through" buying or selling tends to move the price in the direction of the orders. Thus, market makers who take the other side of the initial orders have more risk. The term used by quants for this phenomenon is "correlation," and retail orders are essentially un-correlated to future orders. Thus, it is not an accident that retail orders receive better treatment.

(Note - it is to the credit of the large retail brokers that so much of this benefit is now being passed directly to their clients. They do this by a commitment to analysing execution quality and using that to select and oversee their market makers. As we have previously written, the price improvement provided to market orders amounts to over \$600 million per year).¹⁰

In conclusion, we believe that the SEC should approve the IEX Application with conditions. While we agree that approving IEX's Application will allow the market to determine the value of their speed bump and pricing model, it is equally important to ensure that no regulatory advantage is provided to IEX or exchanges as a group. To accomplish this, we recommend that the SEC make the approval conditional upon IEX's affiliated routing broker being subjected to the same delays as all other routing brokers. We further suggest that IEX be required to clearly disclose their execution quality statistics for individual client segments and types of orders as part of marketing materials. We believe that such an approval order would accomplish the goal of supporting innovation, while mitigating the risks that approving IEX's current model would create.

Markit thanks 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 us.

Respectfully submitted,

David M. Weisberger
Managing Director, Trading and Quantitative Services

¹⁰ See David M. Weisberger, Managing Director, RegOne Solutions by Markit, "Dear Michael Lewis" (March 19, 2015) available at http://regonesolutions.com/regone/web/me.get?WEB.websections.show&SITE_931 (referring to analysis by Bill Alpert featured in Barron's on February 28, 2015 and available at <http://www.barrons.com/articles/exclusive-who-makes-money-on-your-stock-trades-1425103695?tesla=y>).

Markit

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Cc:

The Honorable Mary Jo White, Chair

The Honorable Kara M. Stein, Commissioner

The Honorable Michael S. Piwowar, Commissioner

Stephen Luparello, Director, Division of Trading and Markets

Gary Goldsholle, Deputy Director, Division of Trading and Markets

David S. Shillman, Associate Director, Division of Trading and Markets

Richard Holley III, Associate Director, Division of Trading and Markets

Daniel M. Gray, Senior Special Counsel, Division of Trading and Markets

Appendix: IEX form letter made available on iextrading.com in 2014

Retail Investor Name
Retail Investor Mailing Address Line 1
Retail Investor Mailing Address Line 2 (Optional)
Retail Investor City, State, Zip

Retail Brokerage Name
Attention: Compliance Department
Retail Brokerage Mailing Address Line 1
Retail Brokerage Mailing Address Line 2 (Optional)
Retail Brokerage City, State, Zip

RE: Order Routing Instructions

To Whom It May Concern:

In accordance with the definition of a directed order under [Regulation NMS 242.600](#) and pursuant to [FINRA Rule 5310 Supplementary Material .08: Customer Instructions Regarding the Routing of Orders](#), please direct all of my orders for any purchase or sale of National Market System equity securities during normal market hours (*i.e.*, 9:30AM ET to 4:00 PM ET) to IEX Services LLC (MPID IEXG), ***except to the extent*** that I have otherwise directed you to route any of my orders elsewhere, and ***provided that*** there is no known technical issue preventing IEX Services LLC from receiving or processing my orders. These standing order routing instructions apply to the following account(s) held at your firm:

- Retail Account Number 1
- Retail Account Number 2

I hereby acknowledge that, pursuant to FINRA Rule 5310, by routing my order(s) to IEX Services LLC, your firm is not required to make a best execution determination beyond this specific instruction, although you remain obligated to process my order(s) promptly and in accordance with the terms of the order(s). I further acknowledge that IEX Services LLC is required to meet best execution requirements with respect to handling my order(s), including possibly routing such order(s) to other market centers. As such, any of my orders sent to IEX Services LLC as a result of this instruction should be marked "Routable," which would enable my orders to be further routed via IEX Services LLC according to their routing methodology to other nationally protected market centers. "Routable" ensures that if IEX cannot satisfy the full quantity of your order, IEX will seek to complete the remainder of your order up or down to your specified buy/sell limit price on other market centers.

I understand that IEX Services LLC charges a fee of \$0.0009 per share for orders executed on IEX Services LLC's platform, or \$0.0001 per share for orders routed by IEX Services LLC to another market center for execution (plus any fees charged by any such market center).

Please be sure to contact me if you have any questions regarding this request. Likewise, please notify me if you are unable to honor this request, including when you will be able to honor the request, and whether I will be charged any additional fees specific to this request. I can be reached via the contact information below.

Sincerely,

Your name and signature
Contact Information (telephone and/or email)