CITADEL

February 23, 2016

Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-0609

Re: Release No. 34-75925; File No. 10-222; Investors' Exchange, LLC; Notice of Filing of Application, as Amended, for Registration as a National Securities Exchange under Section 6 of the Securities Exchange Act of 1934

Dear Mr. Fields:

Citadel LLC ("Citadel")[1] appreciates this opportunity to further comment on the Investors' Exchange, LLC ("IEX" or the "Exchange") application for registration as a national securities exchange.[2] IEX seeks Commission approval to operate a national securities exchange with unprecedented privileges, based in large part on claims by IEX that its platform is uniquely good for investors. Indeed, IEX today claims that it is "dedicated to investor protection," and is "a market that works for investors."[3] Ever since it launched, IEX has brazenly sought to appeal directly to retail investors. Following the publication of "*Flash Boys*," a lengthy advertisement that sought to popularize IEX's owners as "heroes" in the minds of the investing public, IEX started directly appealing to retail investors and urging them to instruct their brokers to route their orders to IEX.[4]

IEX's marketing campaign is unconscionable and based on a demonstrably false premise. Published statistics on execution quality clearly show that when compared to the market makers that execute most retail orders, IEX does a terrible job handling the basic type of order placed most often by retail investors.[5] The statistics show that IEX executes market orders at dramatically worse prices, fails to execute a dramatically high

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[1] Established in 1990, Citadel is a leading global alternative asset manager and market maker. With over 1,500 employees, Citadel serves a diversified client base through its offices in the world's major financial centers, including Chicago, New York, London, Hong Kong, San Francisco, Dallas and Boston. On an average day, Citadel accounts for over 14 percent of U.S. listed equity volume, over 20 percent of U.S. listed equity option volume, and comparable market share in many of the world's leading financial markets.

[2] *Available at* https://www.sec.gov/rules/other/2015/investors-exchange-form-1.htm.

[3] *See* www.iextrading.com.

[4] *Id*.

[5] All of the execution quality statistics cited in this letter, unless otherwise noted, are Rule 605 covered order statistics published by Markit, the leading provider of retail execution quality statistics.

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percentage of those orders, and charges significantly higher fees for its inferior results. One simply cannot reconcile IEX's investor protection claims, much less its aggressive direct-to-retail marketing efforts, with the actual performance of IEX.

First, the published numbers clearly show that IEX offered significantly worse prices than those offered by wholesale market makers when executing market orders, which are the most common type of order placed by retail investors. During the fourth quarter of 2015, for example, published execution quality statistics show that IEX executed market orders at a price that was more than two times wider (i.e., worse) than leading wholesale market makers.[6] More specifically, IEX delivered a volume-weighted market-order effective-to-quoted spread ratio of 135.70%. In stark contrast, the seven largest wholesale market makers by volume, including Citadel Securities, delivered a superior volume-weighted average market-order effective-to-quoted spread ratio of 59.27%.[7]

Applying these statistics to a single trade illustrates what is at stake for each and every retail investor order. Assume that the best quoted price for a stock is $40.00 x $40.02. A retail investor market order to buy 1,000 shares sent directly to IEX during Q4 2015 would have had an expected execution price of $40.0236 (i.e., an effective-to-quoted spread ratio of 135.70%). The same order sent to a leading wholesale market maker would have had an expected execution price of $40.0159 (i.e., an effective-to-quoted spread ratio of 59.27%).[8] The retail investor would thus be expected to pay approximately $7.70 more to execute this trade at IEX rather than at a wholesale market maker.[9]

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[6] A standard technique for measuring the quality of execution prices of retail market orders is to compare the execution price to the mid-point of the best quoted bid price and the best quoted offer price in the market. This comparison is called the effective spread, and when we refer to the width of the price, we are referring to the effective spread of that price. Under Rule 605 of Regulation NMS, market centers like IEX are required to publish monthly reports of uniform statistical measures of execution quality including effective spread. 17 CFR 242.605.

[7] The effective-to-quoted spread ratio is a measure of the execution price of an order relative to the quoted spread (which is the difference between national best bid and national best offer ("NBBO") at the time of order entry). The effective-to-quoted spread ratio is widely used by market participants, including retail brokerage firms, as a means of determining the roundtrip retail investor cost of the purchase and sale of a stock. When a buy order is executed at a price equal to the best offer price or a sell order is executed at a price equal to the best bid price, the effective-to-quoted ratio is 100%. A ratio lower than 100% reflects executions better than the best displayed price and greater cost savings (i.e., price improvement).

[8] For purposes of the calculations in this paragraph, we assume that the 1,000 share order would receive the volume weighted average effective-to-quoted spread ratio for orders of 100-9,999 shares for IEX and leading wholesale market makers, respectively.

[9] Specifically, an expected execution price of $40.0236 per share on IEX for this 1,000 share order would cost $40,023.60, and an expected execution price at a leading wholesale market maker of $40.0159 for 1,000 shares costs $40,015.90, which is $7.70 less than the expected execution price on IEX. Others have pointed out that wholesale market makers provide far better retail execution quality than other venues. *See*

Applying these statistics across all market orders for an entire quarter demonstrates the enormous stakes for retail investors on the whole. During the fourth quarter of 2015, leading wholesale market makers executed most retail investor market orders. If all of these retail investors' market orders had instead been routed to IEX and obtained IEX Q4 2015 execution quality rather than leading wholesale market maker Q4 2015 execution quality, it would have cost those investors a staggering $290 million in lost execution quality during the quarter.[10] Extending this figure over an entire year, IEX Q4 2015 market order execution quality would cost retail investors over $1 billion per year compared to leading wholesale market maker execution quality.

Second, putting aside that IEX gets worse pricing for the orders it fills, statistics show that most of the market orders sent to IEX weren't even filled at IEX, but had to be routed elsewhere to be completed. Leading wholesale market makers did a superior job compared to "investor-friendly" IEX by executing a far higher percentage of the market orders it received. During the fourth quarter of 2015, published execution quality statistics show that IEX had a volume weighted market order fill rate of 36%. In other words, IEX failed to fill nearly 2/3 of the market orders that it received.

Third, in addition to filling market orders at worse prices and executing only a small fraction of those orders, IEX charges higher fees to execute market orders. Wholesale market makers typically charge nothing to execute retail orders. In contrast, IEX charges very substantial fees to execute market orders. Based on public execution quality statistics, data published by IEX and its current fee schedule, we estimate that IEX would often collect as much as $2.42 to execute the 1,000 share retail order example discussed above.[11] In aggregate, this extra cost in fees for orders routed directly to IEX

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e.g., Bill Alpert, *Who Makes Money on Your Stock* Trades, Barron's (Feb. 28, 2015) *available at* http://www.barrons.com/articles/exclusive-who-makes-money-on-your-stock-trades-1425103695.

[10] Specifically, in Q4 2015 the seven leading wholesale market makers executed over 28 billion market order shares with a total quoted half-spread of nearly $380 million. The quoted half-spread is the difference between the NBBO and the mid-point. This half-spread amount multiplied by the effective-to-quoted ratio is equivalent to the executing price in dollars relative to NBBO. To compare the relative difference in execution price from sending all of these orders to IEX rather than wholesale market makers, we compare IEX's effective-to-quoted ratio of 135.7% versus 59.27% for the wholesale market makers. This difference in effective-to-quoted ratio of 76.44% can be multiplied by the quoted half-spread of $380 million to estimate a net cost of $290 million for obtaining IEX market order execution quality rather than wholesale market maker market order execution quality. A recent comment letter filed by Markit reached similar conclusions using a similar methodology. *See* Letter to Brent J. Fields, Secretary, Securities and Exchange Commission, from David M. Weisberger, Managing Director, Markit at 4-6 (Feb. 16, 2016), *available at* http://www.sec.gov/comments/10-222/10222-394.pdf. Please note that Markit used the same public execution quality data in its analysis, but Markit limited the scope of its analysis to October and November of 2015, while we used data from the entire fourth quarter of 2015.

[11] IEX charges $.0009 per share executed internally, and $.0001 per share plus away market execution fees (which we estimate to have been approximately $.00246 per share during Q4 2015 according to statistics published by IEX and published exchange fee schedules) for shares that IEX executes by routing

would result in hundreds of millions of dollars in revenue for IEX – the very same people who urged retail investors to direct 100% of their orders to IEX.

IEX's adverse impact on retail investors does not stop with these statistics. The profoundly negative features that IEX trumpets as beneficial would actually have a uniquely bad and unprecedented impact on retail investors. IEX is designed to post prices that are stale as a result of IEX's intentional time-delay. These stale prices would harm retail investors because the wholesale market makers that execute retail orders would be compelled to pursue those stale prices. Ironically, these stale prices would have little impact on the trading of the "high speed" proprietary trading firms that IEX so aggressively smears because, as explained below, proprietary trading firms would be permitted to largely ignore stale IEX market prices. Broker-dealers executing or routing customer orders, on the other hand, cannot simply ignore IEX's prices if the displayed (and likely stale) price on IEX appears to be the best price.

For example, if the best offer for a particular stock ticks up on every exchange except IEX, a "high speed" proprietary trader can safely assume that the IEX price is almost certainly stale and proceed to execute its own proprietary buy orders without delay on other markets without waiting for IEX to update is published prices. Proprietary traders can do so by pairing any orders sent to other markets with an intermarket sweep order to exhaust the likely non-existent liquidity on IEX at the stale offer price. In contrast, a broker-dealer routing a customer buy order cannot simply assume that the price published by IEX is stale. Before routing that customer order with confidence that it can be filled at the new market price, that broker-dealer would have to route the customer order to IEX and await a likely rejection. During this delay, the customer order is at risk of missing the market and trading at worse prices if the market continues to rise further. This represents yet another way in which IEX's unprecedented effort to intentionally slow market information will harm retail investors.

IEX wants special treatment from the Commission based on claims that IEX is "innovative" and will protect investors. IEX behaves as though it is entitled to special treatment because its owners were lionized in a popular book by a celebrity writer. The data tell a completely different story. IEX's demonstrably poor performance, coupled with its efforts to recklessly market to retail investors, should expose the fact that IEX has presented a false face to the public through a carefully crafted marketing campaign. IEX's

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to other markets. During the fourth quarter of 2015, IEX internally executed a volume weighted average of only 8.72% of Rule 605 covered market order shares. To estimate potential IEX execution fees for this 1,000 share order example, we add the fees IEX charges for shares executed internally (8.72% of 1,000 multiplied by $.0009) to the fees for shares executed externally (91.28% x 1,000 multiplied by $.0025630), which equals $2.42.

demands for unprecedented relief are fundamentally baseless, and it seeks to pressure the Commission to rush through its exchange application in spite of significant issues.

Statistics show that compared to leading wholesale market makers, market orders routed directly to IEX receive worse prices, incur higher fees, and often aren't even filled by IEX. On top of that, IEX's "unique" features will operate directly to the detriment of retail investors. For these reasons, and the reasons we have outlined in previous comment letters, we urge the Commission to reject the proposed IEX application. Ultimately, IEX's claim that it is "a market that works for investors" is just not true. IEX's exchange application makes for great marketing, but it is not great for markets.

Sincerely,

John Nagel

John C. Nagel, Esq.
Managing Director and
Sr. Deputy General Counsel
Citadel LLC

cc: Mary Jo White, Chair
Kara M. Stein, Commissioner
Michael S. Piwowar, Commissioner
Stephen Luparello, Director, Division of Trading & Markets