November 6, 2015

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 the opportunity to comment on the Investors’ Exchange, LLC (“IEX” or the “Exchange”) application for registration as a National Securities Exchange (the “Application”).\(^2\) This letter focuses on certain unique proposed features of IEX. First, IEX proposes to give protected status to IEX quotations despite IEX use of an intentional device that imposes a one-way 350 microsecond and round-trip 700 microsecond delay on accessing IEX quotations (the “IEX Access Delay”). Second, IEX wants to allow certain order types and IEX’s affiliated broker-dealer to circumvent the IEX Access Delay.

The proposed IEX Access Delay and IEX protected quotation status would degrade market efficiency and unnecessarily interfere with trading and quoting on other venues. This damage to market quality would be further magnified by the “fast pass” that IEX proposes to give its affiliated routing broker-dealer (the “IEX Router”) and its pegged order types. It is ironic that IEX—a company supposedly founded to protect investors from various types of latency arbitrage—now proposes to offer pegged orders and IEX Router services that can and will be used by sophisticated trading firms to arbitrage the latency that IEX itself would create.

To make matters worse, although IEX markets itself as a bastion of transparency and fairness, IEX has chosen to remain opaque with respect to critical information about

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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.

how it will operate. The Application does not explicitly and clearly describe either of these important and selective speed advantages, and other important aspects of IEX’s planned operation.

Approval of IEX’s proposed structure would be an important precedent. Approval would start a race to the bottom as other exchanges would have strong incentives to implement these types of unhealthy mechanisms and could do so very quickly. In addition, the potential uses of selectively applied access delays, like those proposed by IEX, are extensive, and Commission approval would make it difficult for the Commission to disapprove the many new exchange mechanisms that exchanges would be sure to propose using IEX as precedent. Commission approval would also bring into question numerous securities market rules that require market participants to take certain actions promptly and without intentional delay.  

The Commission should deny the Application in its present form because: (1) IEX quotations do not qualify as Regulation NMS “protected quotations”; (2) overall market quality and efficiency would suffer if the Commission were to deem IEX quotations to be protected; (3) IEX proposes to unfairly allow the IEX Router and certain order types to circumvent the IEX Access Delay; and (4) the Application does not adequately and clearly describe many important aspects of the Exchange’s planned manner of operation.

I. Quotations Subject to the IEX Access Delay Do Not Qualify As Regulation NMS “Protected” Quotations

IEX will require participants to connect to IEX through an IEX “Point of Presence” (“IEX POP”) that would impose a 350 microsecond delay on member communications sent to the IEX trading system. The IEX POP would also impose an additional 350 microsecond delay on communications from the IEX trading system back to members, resulting in a total round trip access delay of 700 microseconds. Indeed, IEX has extensively promoted this functionality and made it the cornerstone of its marketing strategy. Despite the planned intentional use of the IEX Access Delay, proposed IEX rules

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3 For example, Regulation NMS Rule 604 (the “Display Rule”) requires “immediate” display of customer limit orders, and the Commission and FINRA have stated that “any systematic delay in the handling of the orders, regardless of how long, would constitute a violation of the Display Rule.” See NASD Notice to Members 99-99. In addition, trade reporting rules require FINRA members to report trades “as soon as practicable” and prohibit “purposely withhold[ing] trade reports, e.g., by programming their systems to delay reporting until the last permissible second.” See FINRA Trade Reporting FAQ Q 102.5. We would hope that FINRA and the Commission would find it unacceptable for broker-dealers to use IEX POP style mechanisms to intentionally delay limit order display or trade reporting.

4 17 CFR 242.600(b)(58).

would deem IEX quotations to be “protected” for purposes of Rules 600, 610, and 611 of Regulation NMS.

Rule 600 of Regulation NMS provides that to be protected, a quotation must be “immediately and automatically” accessible. In the adopting release for Regulation NMS, the Commission explained that “[t]he term ‘immediate’ precludes any coding of automated systems or other type of intentional device that would delay the action taken with respect to a quotation.”

The IEX Access Delay is undeniably an “intentional device that would delay the action taken with respect to a quotation.” Therefore, absent an amendment to Regulation NMS, IEX quotations cannot be deemed immediately and automatically accessible as required by the Regulation NMS Rule 600 definition of protected quotations.

IEX will presumably argue that the IEX Access Delay is no different than the latency that already exists on some exchanges with protected quotations. While it is true that any form of communication has some latency, any such inherent latency is not intentionally created for the express purpose of delaying access to quotations and applies equally to all order types and any exchange affiliated routing broker. In contrast, IEX plans to use a device specifically designed to add a deliberate latency of 350 microseconds in addition to any systemic latency that already exists, and to selectively apply that latency. That is precisely what Regulation NMS Rules 600, 610 and 611 prohibit.

Indeed, IEX has heavily marketed the fact that the Exchange created the IEX Access Delay because IEX has made a qualitative judgment about certain types of market participants and IEX expressly intends to hamper those market participants with the IEX

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6 Regulation NMS defines a protected bid or protected offer as, among other things, an “automated quotation.” 17 CFR 242.600(b)(57). An “automated quotation” generally requires that a quotation “immediately and automatically” execute, cancel, transmit a response to the sender, or display updated information regarding the quotation. 17 CFR 242.600(b)(3).


8 Simply approving the Application in its current form, which contradicts the plain language of Regulation NMS and the Regulation NMS Adopting Release, would be a clear violation of the Administrative Procedures Act, absent a request for an exemption from IEX from the relevant provisions of Regulation NMS and issuance of an exemption by the Commission supported by the required findings.

9 See Themis Trading LLC, “IEX Exchange – Someone Come Speak For Me,” (Sept. 17, 2015) (noting that “IEX’s intentional slowdown (350 microseconds) makes it still faster than some other exchanges’ old creaky systems”). See also Levine, Matt, “The ‘Flash Boys’ Exchange Is Growing Up,” Bloomberg View (Sept. 16, 2015) (noting that “Every exchange has some delay in processing orders; nothing happens instantaneously, and its hard to synchronize anything to the microsecond. If IEX is faster at other operations than other exchanges are, then its quotes may be more current than theirs. Its intentional delay might be shorter than their accidental delay”).
Access Delay. For example, the IEX CEO has said that the IEX Access Delay is intended to “referee trade between fast traders and slow traders by slowing down the fastest traders.”

A few other exchanges, both in the United States and in Canada, have proposed intentional access delays of varying time periods. None of these exchanges, however, considered their quotations to be protected. Although other exchange proposals may have included longer delays than the IEX Access Delay, the length of the delay is irrelevant. As discussed above, the focus of Regulation NMS is the imposition of an intentional delay, not the duration of the delay. Therefore, by definition, IEX quotations may not be deemed “protected” for purposes of Rules 600, 610, and 611 of Regulation NMS.

II. Market Quality Would Deteriorate if IEX Quotations Were Considered “Protected”

The IEX Access Delay is not just an experiment that would impact only those who voluntarily choose to trade on IEX. On the contrary, if the Commission were to approve the IEX Application in its current form, and thereby deem IEX quotations to be protected, all market participants would often be forced to trade on IEX, and the IEX Access Delay would frequently constrain trading and quoting on all market centers.

As a result of Rule 611, market participants would not be able to opt out of sending their orders to IEX when IEX is displaying the national best bid or offer (“NBBO”). When IEX is displaying a stale NBBO quotation due to the IEX Access Delay, IEX would often prevent executions on other venues at newly established prices. If a market participant seeks to remedy this by routing an order to IEX, the order would be subject to the IEX Access Delay and in the time it takes for the order to make its way through the IEX Access Delay, the NBBO may have changed. The market participant would then need to re-route its order, which may be executed at an inferior price as a result of the delay.

Similarly, in many cases, due to the ban on locked and crossed markets in Regulation NMS Rule 610, it would often be the case that none of the other exchanges

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12 17 CFR 242.610(d).
would be able to move their prices if IEX was displaying a stale NBBO. Specifically, a stale IEX NBBO quote would not move during the minimum 700 microsecond IEX Access Delay, preventing the display of new quotes that would lock or cross a stale IEX quote. The use of an intermarket sweep order to counteract this problem is not a complete solution because market participants would be exposed to trading more shares than they may need if they immediately trade on other venues because they do not want to wait for IEX’s slow and uncertain response.

These issues would be compounded when an investor seeks to sweep through multiple price levels displayed in the market. Every time a market participant sweeps an NBBO price level that includes an IEX quotation, the published NBBO would be incorrect for at least 700 microseconds until IEX receives and processes the orders and updates its published quotations. That means that in fast moving and volatile markets when the NBBO is frequently changing, this important benchmark would be stale for large parts of the day due to IEX’s display of a stale NBBO. This could lead to market instability, particularly on volatile days like August 24, 2015.

The IEX Access Delay would also cause the execution of trades and re-pricing of pegged orders on other venues at prices that price match stale IEX prices when IEX is at the NBBO. For example, when IEX is one of several markets quoting at the NBBO, sophisticated market participants can take advantage of the IEX Access Delay. They can do so, for example, by simultaneously sending orders to sweep all NBBO quotes and then execute as many shares as possible on other venues that match the NBBO, knowing that the NBBO will appear to remain constant for at least 700 microseconds due to the IEX Access Delay.

At the time the Commission adopted Regulation NMS in 2005, the Commission set an outer time limit for protected quotation access. While this outer time limit does not excuse the intentional devices to delay quotation access, IEX may argue that it serves as a basis for assessing the materiality of the duration of IEX’s proposed access delay. In particular, IEX may cite the Commission’s 2005 statement that “[g]iven current industry conditions, the Commission believes that repeatedly failing to respond within one second after receipt of an order would constitute a material delay.”

A decade ago, one second may very well have been an appropriate time frame for a quotation to be considered automated. However, in today’s markets, with the rapid advances in the speed of trading since the adoption of Regulation NMS, 350 microseconds is an exceedingly long period of time. The Commission cannot reasonably consider 350

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13 Although not clear to us from the Application, IEX explained on a recent industry call that IEX updates disseminated through the IEX proprietary data feed would have to go through the IEX Access Delay.

14 Regulation NMS Adopting Release, supra note 7, 70 FR 37519.
microseconds to be *de minimis* in today’s markets based solely on the fact that 350 microseconds is a small fraction of the one second standard adopted 10 years ago. Indeed, the Commission is well aware of the importance of even a single microsecond in today’s markets and the Commission has published data showing that a substantial percentage of orders today are executed or cancelled within a few hundred microseconds.\(^{15}\)

To permit IEX to intentionally delay the ability of a market participant to cancel or update its quotation by 700 microseconds and retain protected quotation status would significantly hinder market participants’ ability to accomplish their trading objectives. Immediate access to place and modify orders and quotations is not just necessary for liquidity provision by the high-frequency trading firms that IEX derides, but also for “large order execution algorithms often used by or on behalf of institutional investors.”\(^{16}\)

### III. IEX Gives an Unfair Advantage to its Affiliated Broker-Dealer and Certain Order Types

Although IEX intends to subject market participants to the IEX Access Delay, it has proposed to offer at least two ways to circumvent this delay—through the IEX Router and through IEX’s pegged order types.

While it is not explicit in the Application, IEX has explained informally that the IEX Router would not be required to go through the IEX Access Delay to access the IEX trading system or when routing orders from the IEX trading system to other market centers. This speed advantage would be insurmountable and give the IEX Router an unfair competitive advantage over other routing brokers and IEX participants. If the Exchange imposes the IEX Access Delay on broker-dealer participants seeking to access the IEX trading system or react to events on IEX by sending orders to other market centers, IEX should be required to impose the same IEX Access Delay on its affiliated broker-dealer.

In 2013, the Commission rejected a NASDAQ Stock Exchange proposal to add a new order type due, in part, to concerns raised by commenters that “the proposal could


create regulatory disparities that would give NASDAQ an inappropriate advantage over broker-dealers providing the same services.”\(^\text{18}\) The result should be no different here.

Further, in the context of an exchange’s affiliation with one of its members (i.e., an affiliated routing broker-dealer) the Commission has expressed concerns about “potential unfair competition and conflicts of interest between an exchange’s self-regulatory obligations and its commercial interests . . . .”\(^\text{19}\) To allow the IEX Router to have a speed advantage over any other broker-dealer for both inbound and outbound routing would provide the IEX Router with a distinct and material advantage over the broker-dealer members that IEX is charged with regulating as a self-regulatory organization (“SRO”). Market participants would naturally elect to use the IEX Router over other broker-dealers who lack such an advantage. This speed advantage would place IEX’s commercial interests ahead of its self-regulatory obligations, resulting in precisely the undesirable consequences that the Commission identified when permitting an exchange’s affiliation with one of its members for outbound routing.\(^\text{20}\)

At the very least, IEX must explain why providing such a competitive advantage to the IEX Router is consistent with Section 6(b)(8) of the Exchange Act, which requires that the rules of an exchange “not impose any burden on competition not necessary or appropriate in furtherance of the purposes of [the Act].”\(^\text{21}\) The Commission must also consider the potential impact of permitting an exchange affiliated broker-dealer to have a speed advantage if other exchanges were to mirror IEX. If other exchanges or all exchanges were to permit their affiliated routing broker-dealers to have a speed advantage over other broker-dealers, exchange-affiliated routers would have a \textit{de facto} monopoly on routing from their respective exchanges for trade through compliance and certain other routing activity.\(^\text{22}\)

Similarly, IEX has proposed to offer certain pegged order types that circumvent the IEX Access Delay. The Application seems to indicate that these pegged orders use direct feeds to re-price orders without being subject to the IEX Access Delay. Furthermore, discretionary peg orders are pegged to the primary quote of the NBBO, with discretion to


\(^{20}\) Notably, IEX’s justifies the use of its Access Delay to ensure that market participants accessing IEX are on an equal footing, while at the same time designing its system to give its affiliated routing broker-dealer a systematic speed advantage over its own members.


\(^{22}\) Such a market structure could also raise more difficult questions down the road such as whether a routing broker for an exchange that is affiliated with other exchanges could bypass the access delay across affiliated exchanges.
execute up to the less aggressive of the order’s limit price or the midpoint of the NBBO. IEX will prevent the order from exercising this discretion (i.e., not execute and instead reprice to the now less aggressive primary quote of the NBBO as it changes) if IEX deems the NBBO to be “unstable” (i.e., moving against the discretionary peg order). IEX is able to reprice, without any delay, all of its pegged order types as the NBBO changes, and based on information that was not available at the time anyone submitted an order within the prior 350 microseconds.

If a participant submits a non-pegged order and wants to change the price, the participant would have to cancel the original order, wait 350 microseconds until the message travels through the IEX Access Delay, and submit a new order that would also be delayed an additional 350 microseconds before it hits the trading system. The IEX structure thus favors dark liquidity in the form of pegged orders over displayed orders because displayed orders cannot react to market changes without incurring a 350 microsecond delay, while pegged orders, which are non-displayed on IEX, are not subject to this limitation.

By promoting the use of hidden orders and dark liquidity on a lit venue over displayed orders, IEX’s contribution to the critical price discovery role that exchanges play will be significantly limited. IEX’s structure suggests that IEX’s real aim is to create a dark pool on a lit venue to provide itself with regulatory immunity and other benefits afforded to national securities exchanges. Nowhere is this more evident than in IEX’s initial plans to provide broker priority if and when it was approved as an exchange.23 Broker priority on an exchange would essentially allow broker-dealers to trade with client orders using dark pool like functionality, but superficially white-wash these trades by having them occur on the “Investors’” exchange. In other words, broker priority would allow a broker-dealer to market to its customers that it does not trade with customer orders on a dark pool, even though the broker-dealer would obtain an equivalent result trading on IEX. The Exchange’s favoring of dark liquidity, attempt to incorporate broker priority onto a lit venue, and intention to give pegged orders and the IEX Router opaque speed advantages all indicate that IEX would detract from today’s market structure.

Moreover, given the Commission’s recent scrutiny of, and demand for review by SROs of, “the large number of complex order types offered by exchanges,” it would be inconsistent for the Commission to approve IEX’s proposed structure, which would actively encourage more dark liquidity and add an additional level of complexity to exchange order types.24 Indeed, as Chair White noted, complexity in the markets “can be


difficult for even the most sophisticated investors, given the number of trading venues and order types available to brokers.” This impact will be far worse because the IEX Application fails to adequately describe the speed advantage it intends to afford its affiliated routing broker and its pegged orders. If the Application is approved in its current form, the Exchange’s structure will favor sophisticated market participants that learn to master IEX’s pegged orders and use the IEX Access Delay to their advantage, and to the ultimate disadvantage of less sophisticated market participants.

In many ways, IEX pegged orders would have a speed advantage that is reminiscent of the heavily criticized “last look” functionality used in foreign currency markets. When anyone sends an order to IEX, some IEX pegged orders would use their speed advantages to move out of the way when the market is moving against those orders, and stay right where they are when the market is favorable to those orders. While using delays between order entry and execution to capture so-called “asymmetric slippage” may be permitted to some extent in lightly regulated foreign currency markets, it does not belong on a national securities exchange.

Furthermore, discretionary peg orders may not execute if IEX determines that there is “quote instability.” By independently determining, under certain circumstances, when a discretionary peg order may execute at a price above the primary quote (up to the midpoint, limit price permitting), IEX is effectively handling the order in a manner similar to a broker-dealer exercising discretion over a client’s order. While customers of broker-dealers have ample remedies when broker-dealers mishandle their orders, participants may not have recourse against IEX for any inevitable errors that IEX will make when determining quote instability and preventing an order from executing at a permissible price by the order’s terms. If challenged by a participant who, for example, did not have its order execute when it otherwise should have because IEX erroneously determined that the

25 Id.


27 For example, assume that the NBBO is $10.00 x $10.05 and that IEX is not at the NBBO. A market participant seeking to sell a large order at $10.00 sends child orders out to several trading centers, including IEX. Because of the IEX Access Delay, the market participant’s orders would execute on the venue displaying the NBBO (causing the national best bid to tick down and primary peg orders on IEX to reprice) before the child order sent to IEX could interact with any primary peg orders on IEX. In contrast, a primary peg order on another exchange would not necessarily be able to reprice before the market participant’s child order reached it. Due to the IEX Access Delay, it is all but certain that primary peg orders on IEX would be able to reprice with a change to the NBBO before an order could interact with them at $10.00.
quote was unstable when it was not, IEX would potentially be shielded by the doctrine of regulatory immunity.

IEX is likely to defend its use of pegged orders that circumvent the IEX Access Delay as necessary and helpful to prevent these orders from being disadvantaged by high frequency traders who act faster than other market participants. Regardless of the merits of this argument (or in our view lack thereof), the simple truth is that IEX’s use of pegged orders that circumvent the IEX Access Delay would disadvantage less sophisticated investors to the benefit of more sophisticated investors and broker-dealers. This disadvantaged class would include the least automated and very slowest moving retail and institutional investors. IEX is proposing to systematically favor dark passive orders, and systematically disfavor traditional market and marketable limit orders, as well as displayed limit orders, which are all common order types used by almost all retail investors and a substantial portion of institutional investors.

IV. The Application Lacks Clarity on Key Components of the Proposed Exchange

The Application fails to adequately explain key aspects of the IEX Access Delay. This is surprising coming from a company that has trumpeted its transparency.

At a minimum, IEX should be required to re-file its Form 1 application to remedy the lack of clarity and explanation of some of its most important features, and add this new information to the proposed IEX rules, and not other exhibits that may potentially be amended without Commission approval. The public and the Commission should not have to speculate about material aspects of IEX’s market model. For example, answers to the following important questions are obfuscated, addressed with ambiguous language, or not addressed at all in the Application:

1. Will IEX use any intentional device to slow down its publication of market data via its proprietary data feed or to the SIP? If so, how will this work, and what are the expected latencies? In other words, is IEX’s dissemination of market data, either on its proprietary data feed or to the SIP, subject to the Access Delay? Or is it that only inbound messages (e.g., orders) and outbound messages (e.g., trade confirmations) are subject to the Access Delay?

2. What speed and other advantages will the IEX Router have over other participants, and how will these speed advantages impact trading on IEX and IEX Router trading on other market centers?

3. Will the IEX Router have to go through the IEX Access Delay when accessing other market centers (i.e., outbound routing)? If so, what is the justification for the IEX Router to have a speed advantage over the broker-dealer members that IEX will regulate?
4. Will the IEX Router have to go through the IEX Access Delay when interacting with the IEX order book (e.g., an order routes out of IEX, is not filled, and returns to post on IEX) or reporting executions to participants?

5. Will the Exchange’s reporting of executions and other order events back to participants have to go through the IEX Access delay?

6. Will the Exchange have any real-time communications with participants or non-participants about Exchange trading or the Exchange order book that do not have to go through the IEX POP?

7. Are there any other exchange systems, components, or functions that do not have to go through the IEX Access Delay when communicating with the Exchange matching engine?

8. What are the Exchange’s proposed fees? Would IEX ever charge more to execute pegged orders or routed orders that have an inherent time advantage over other order types?

V. Conclusion

The proposed IEX rules that deem IEX quotations to be protected would violate Regulation NMS Rules 600, 610 and 611. For good reasons, Regulation NMS prohibits the use of intentional devices to delay access to protected quotations. If markets are to be linked by trade through and locked and crossed market rules, market participants must be able to quickly access quotations displayed on each market.

In addition, IEX’s proposed creation of access delays and selective application of those access delays would harm market quality. These mechanisms would ultimately be used by sophisticated market participants to the detriment of retail and other less sophisticated investors.

By our estimates, Citadel handles more U.S. retail stock order flow than any other firm. We also trade a very substantial volume of institutional sized orders on behalf of the funds that we manage. We are deeply concerned about the negative impact that the proposed IEX structure would have on retail and institutional execution quality, and overall market quality.

For these reasons, unless IEX makes significant changes to IEX’s rulebook and structure, the Commission should (1) deem IEX’s quotations to be “manual” quotations rather than “protected” quotations and (2) require IEX to provide the same access to its system for all participants by eliminating the speed advantage currently proposed for pegged orders and the IEX Router.
Please do not hesitate to contact me with any questions.

Sincerely,

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

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