October 13, 2016

Mr. Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street NE
Washington, DC 20549–1090

Re: Proposed CHX Liquidity Taking Access Delay (Release No. 34-78860; File No. SR-CHX-2016-16)

Dear Mr. Fields:

Citadel Securities ("Citadel")[1] appreciates the opportunity to comment on the proposal by the Chicago Stock Exchange, Inc. ("CHX") to create an asymmetric access delay that would apply only to liquidity taking orders and would give liquidity providers a "last look" enabling them to back away from their quotations (the "CHX Proposal").[2] Citadel strongly urges the Securities and Exchange Commission (the "Commission") to disapprove the CHX Proposal because it is not consistent with the requirements of the Securities Exchange Act of 1934 (the "Exchange Act") and the rules and regulations thereunder. We will briefly describe the flawed premise behind the CHX Proposal and then detail how the CHX Proposal violates the Exchange Act and the rules and regulations thereunder.

The CHX Proposal Is Based on a Flawed Premise

CHX has proposed a Liquidity Taking Access Delay[3] (the "Access Delay") that subjects any order that would immediately execute against one or more resting orders on the CHX order book to an intentional delay of at least 350 microseconds before being processed.[4] An order subject to such delay is only released for possible execution after the CHX matching system processes all other messages received during the delay, except for other "delayable messages."[5] According to CHX, the purpose of the Access Delay is to "respond to recent declines in CHX volume and

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[1] Citadel Securities is a leading global market maker across a broad array of fixed income and equity securities. In partnering with us, our clients, including asset managers, banks, broker-dealers, hedge funds, government agencies and public pension programs, are better positioned to meet their investment goals. On an average day, Citadel accounts for approximately 15 percent of U.S. listed equity volume, 19 percent of U.S. listed equity option volume, and more than 35 percent of all retail U.S. listed equity volume.

[2] Securities Exchange Act Release No. 78860, 81 FR 65442 (September 22, 2016) (SR-CHX-2016-16) (the "CHX Proposal").

[3] The CHX Proposal refers to the intentional access delay as the "LTAD".

[4] *See* proposed CHX Article 20, Rule 8(h).

[5] CHX Proposal at 65444. A delayable message also includes cancel and cancel/replace messages for orders that are subject to the Access Delay.

liquidity in the SPDR S&P 500 trust exchange-traded fund ("SPY")."[6] The Access Delay is specifically designed to give CHX liquidity providers a "small amount of additional time [. . .] to cancel or adjust resting orders on the CHX book to comport to the most recent market data."[7]

The CHX Proposal is based on the flawed premise that if a liquidity provider attempts to cancel a quotation, but is unable to do so prior to its execution, a market failure has occurred. This premise is not only wrong, it is fundamentally incompatible with the Exchange Act and current market structure. The ability of investors to access firm, displayed quotations is a cornerstone of open, fair, and transparent markets and is required by Commission regulations. As highlighted by the Commission previously, "[f]ailure to honor quotations deprives investors of the liquidity that market makers advertise they will provide and injures the credibility of the market as a whole."[8]

CHX's proposed remedy to the alleged flaw in current market structure is to impose an asymmetrical "last look" mechanism that enables liquidity providers to selectively choose whether to actually honor firm, displayed quotations. The CHX Proposal, designed specifically to enable liquidity providers to back away from their quotations, undermines the healthy functioning of the national market system and unfairly discriminates against, among others, retail investors submitting liquidity taking orders and liquidity providers on other exchanges. Quotations provided by CHX liquidity providers would no longer be reliably accessible by liquidity takers, such as retail investors, and would not be comparable to quotations provided by liquidity providers on other exchanges that are not afforded a "last look". This would have profound consequences not only for U.S. listed equities, but also for exchange traded funds ("ETFs"), given that the successful functioning of the ETF market depends on the ability of market makers to reliably access displayed quotations in the underlying securities for hedging purposes.

The CHX Proposal attempts to justify the implementation of this unprecedented intentional delay by suggesting that there is a fundamental flaw in current market structure, evidenced by its own declining market share in *one* security.[9] Not only is the declining market share of a single exchange in a single security insufficient to justify a change of this magnitude, it should be noted that CHX's market share in overall SPY trading volume prior to an apparent recent decline was only 5.73%.[10] Furthermore, an analysis of market-wide trading activity in the SPY over the last five years shows that baseline daily trading volumes appear relatively constant and that there is not an obvious recent trend that appears materially different from other similar periods (*see* Appendix, Figure 3). The lack of data evidencing any market-wide problem further highlights that the overriding purpose of the CHX Proposal is to provide CHX liquidity providers with an ingrained structural advantage in order to increase CHX market share.

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[6] CHX Proposal at 65443. CHX selectively focuses its analysis on the 6 months before and after January 2016.

[7] *Id.*

[8] Report Pursuant to Section 21(a) of the Securities Exchange Act of 1934 Regarding the NASD, the Nasdaq Market, and Nasdaq Market Makers, Exchange Act Release No. 37542, at 32 (August 8, 1996) ("Sec. 21(a) Report").

[9] *See* CHX Proposal at 65443.

[10] *Id*. at 65443, FN 11.

The CHX Proposal Violates the Exchange Act and Regulation NMS

The implementation of intentional access delays by exchanges results in a more complicated and less efficient market structure.[11] The Access Delay proposed by CHX would have a particularly detrimental impact on the transparency and fairness of our equity markets by applying only to liquidity takers and by allowing liquidity providers to decide on a quotation-by-quotation basis whether to cancel or adjust a resting quote prior to the expiration of the delay. This asymmetric application raises significant and fundamental concerns that the Commission has previously identified as problematic under the Exchange Act.[12]

We urge the Commission to disapprove the CHX Proposal because it is not consistent with, at a minimum, the following requirements of the Exchange Act and the rules and regulations thereunder:

- **Rule 602 of Regulation NMS (the "Firm Quote Rule"): Enables Liquidity Providers to Back Away from Quotations**.[13] By enabling liquidity providers on CHX to back away from their displayed quotations during the delay, the CHX Proposal violates the Firm Quote Rule. As investors are denied reliable access to publicly displayed quotations, their confidence in the accuracy and transparency of market prices will be undermined.

- **Section 6(b)(5) of the Exchange Act: Unfairly Discriminates against Liquidity Takers and Liquidity Providers on Other Exchanges**. By applying the intentional delay in an asymmetrical manner, the CHX Proposal unfairly discriminates against market participants that are primarily liquidity takers, such as retail investors, as well as liquidity providers on other exchanges in violation of Section 6(b)(5) of the Exchange Act.

- **Section 6(b)(5) of the Exchange Act: Does Not Protect Investors or the Public Interest and Does Not Prevent Fraudulent and Manipulative Acts and Practices.** The CHX Proposal fails to protect retail investors in particular, given that retail investors disproportionally send liquidity taking market orders that will be subject to the Access Delay and rely on the efficient functioning of the ETF market. When evaluated in conjunction with the current CHX market data revenue sharing program, whereby liquidity providers earn credit for displaying a competitive quote whether or not the quote

[11] *See* Letter to Brent J. Fields, Secretary, Commission, from John C. Nagel, Managing Director and Sr. Deputy General Counsel, Citadel LLC (April 14, 2016) (noting, among others, that "[i]f the Commission issues the [interpretive guidance related to automated quotations], exchanges would begin to implement intentional delays of varying lengths and designs, leading to a far more complicated and less efficient market structure").

[12] *See* Securities Exchange Act Release No. 78102, 81 FR 40785, FN 75 (June 23, 2016) ("Generally, the Commission would be concerned about access delays that were imposed only on certain market participants or intentional access delays that were relieved based upon payment of certain fees."). In this regard, the CHX Proposal raises market structure concerns that are even more fundamental than those raised by the intentional delay implemented by the Investors' Exchange, LLC ("IEX") given that the IEX access delay, at least, applies equally to all market participants and is centrally managed by the exchange.

[13] 17 CFR 242.602.

results in an execution,[14] the CHX Proposal will almost certainly result in harm to overall market transparency, quality, and efficiency, to the detriment of investors and the public interest. Notably, CHX already evidences much higher cancel-to-trade and trade-to-order ratios than other exchanges (*see* Appendix, Figures 1 and 2). The CHX Proposal is also susceptible to market manipulation by providing liquidity providers with a mechanism to set a new national best bid or offer ("NBBO") with a quotation that they do not intend to honor.

- **Section 6(b)(8) of the Exchange Act: Unduly Burdens Competition**. The CHX Proposal unduly, unfairly, and unnecessarily burdens competition among liquidity takers, other liquidity providers, and other exchanges. Competition among liquidity takers and liquidity providers is an important component of current market structure, and the CHX Proposal would inappropriately tip the scales in favor of those providing liquidity on CHX by giving them a "last look" prior to allowing a liquidity taker to execute against a quotation. As a result, quotations on CHX would not be comparable to quotations provided by liquidity providers on other exchanges that are not afforded such a "last look". Approval of the CHX Proposal would also place an undue competitive burden on other exchanges to implement similar asymmetric access delays in order to attract liquidity providers.

Each of the above grounds justifies disapproval of the CHX Proposal. Were the Commission to nonetheless find the CHX Proposal to be consistent with Exchange Act requirements applicable to CHX, we also detail below why the Access Delay is inconsistent with the Commission's Interpretation Regarding Automated Quotations Under Regulation NMS (the "Automated Quotations Interpretive Guidance").[15] As a result, CHX quotations subject to the Access Delay should not be afforded protected quotation status under Regulation NMS, because, in denying fair and efficient access to CHX's quotations,[16] the Access Delay cannot be considered a *de minimis* delay.

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I. The CHX Proposal Violates the Firm Quote Rule

The Firm Quote Rule is designed to "ensure that investors receive best execution and that the market receives reliable quotation information."[17] This rule requires a broker-dealer to execute any order to buy or sell a security that it receives at a price at least as favorable as its published bid or offer in any amount up to its published size, subject to certain exceptions.[18]

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[14] *See* CHX Fee Schedule, *available at* http://www.chx.com/regulatory-operations/rules/ and CHX, "How CHX SHARE[SM] Works," *available at* http://www.chx.com/chxshare/how-chx-share-works.html (describing the "CHX Share Program").

[15] Securities Exchange Act Release No. 78102, 81 FR 40785 (June 23, 2016).

[16] 17 CFR 242.611.

[17] Exchange Act Release No. 40260, 63 FR 40748, 40754 (July 30, 1998).

[18] 17 CFR 242.602.

The CHX Proposal would undermine the Firm Quote Rule by allowing a liquidity provider to back away from its displayed quotation before a liquidity taking order could execute against that quotation. The following example illustrates how this would occur:

> Assume three exchanges, one of which is CHX, are each displaying a bid for 100 shares at the NBB of $10.00, and a retail investor enters an order to sell 300 shares. The retail investor's broker-dealer routes one-third of the total order to each exchange. Part of the retail investor's order gets executed on the other two exchanges for a total of 200 shares, but 100 shares fails to execute on CHX since the portion routed to CHX is subject to the Access Delay and the CHX liquidity provider has canceled its displayed quote based on the most recent market data even though this part of the investor order has already arrived for execution at CHX. As a result, one-third of the retail investor's total order fails to execute at $10.00 and would likely be subsequently executed at a lower price, harming the liquidity taking retail investor.

Solely because of the Access Delay, the CHX market maker is effectively able to utilize a "last look"[19] and cancel or modify the price of its displayed quotation before the earlier arriving liquidity taking order could execute. This structural advantage provided to liquidity providers would fundamentally alter current market dynamics, where market makers are expected to be "ready to buy and sell a particular stock on a regular and continuous basis at a publicly quoted price."[20] Rather than all quotations being firm as required by the Firm Quote Rule, only quotations that a CHX liquidity provider determined were in its interest to execute would actually be firm.

The implementation of the CHX Proposal would also undermine the design of the NBBO and significantly damage market efficiency and transparency. At any given time, the NBB or NBO would no longer genuinely represent the best available bid or offer for a security. Instead, the NBB or NBO would be an aspirational price that potentially could be obtained, subject to the liquidity provider's decision that it is still willing to trade at that price. Inevitably as a result of this discriminatory intentional delay, investor confidence in the accuracy and transparency of available prices across the market, and overall market quality, would be significantly undermined.

The Firm Quote Rule was specifically designed to prevent market participants from only selectively honoring quotations. This behavior was prevalent in the 1990s, leading the

[19] The CHX Proposal effectively imports to the equities market a variant of the "last look" practice that has been the subject of regulatory scrutiny in other asset classes. *See* the UK Fair and Effective Markets Review (June 2015) at page 31, *available at* http://www.bankofengland.co.uk/markets/Documents/femrjun15.pdf ("However, the Review shares the concerns raised in several responses to the consultation that last look, in its current form, could also potentially be abused by market makers, either by asymmetrically accepting or rejecting orders based on market moves after the order is placed, or by using the order to inform other trading activity prior to acceptance"); and Press Release, U.S. Commodity Futures Trading Commission, *CFTC Orders FXDirectDealer, LLC to Pay $2.74 Million for Supervision Failures Relating to Trading Platform,* PR6697-13 (Sept. 18, 2013) (announcing an enforcement action for inappropriate capture of "asymmetrical slippage" using last look functionality when transacting with retail investors).

[20] *See* Commission, Investor Information, Fast Answers, "Market Maker," *available at* https://www.sec.gov/answers/mktmaker.htm.

Commission to take both enforcement and regulatory action to eliminate the practice of backing away from displayed quotations, stating that "[f]ailure to honor quotations deprives investors of the liquidity that market makers advertise they will provide and injures the credibility of the market as a whole."[21] Approval of the CHX Proposal would represent a significant step-back by enabling liquidity providers to once again selectively honor quotations, thereby eroding investor confidence in the accuracy and availability of displayed quotations. We therefore urge the Commission to find that the CHX Proposal violates the Firm Quote Rule of Regulation NMS.

II. The CHX Proposal Is Unfairly Discriminatory

Section 6(b)(5) of the Exchange Act requires that the rules of an exchange not be "designed to permit unfair discrimination between customers, issuers, brokers, or dealers."[22] The Commission recently stated that "[g]enerally, the Commission would be concerned about access delays that were imposed only on certain market participants [. . .]".[23] By asymmetrically imposing the Access Delay, the CHX Proposal unfairly structurally and systematically discriminates against market participants that are primarily liquidity takers, such as retail investors, as well as liquidity providers on other exchanges.

The Access Delay would apply to *all* liquidity taking orders sent to CHX irrespective of the purpose or strategy of the market participant sending the order, giving CHX liquidity providers a "last look" whereby they are able to back away from their displayed quotations.[24] As a result of this structural advantage, quotations provided by CHX liquidity providers may not be reliably accessed by liquidity takers, disproportionately and unfairly discriminating against such liquidity taking orders and the market participants that primarily act as liquidity takers, such as retail investors.

The following example of a stop-loss order, where a retail investor instructs its broker-dealer to immediately sell the security at market if it falls below a certain price, demonstrates the harmful impact of the CHX Proposal:

> Assume a retail investor purchased 1,000 shares of a security at $11.00 and has instructed its broker-dealer to sell the shares if the price drops to $10.00. Assume that several days later the national best bid and best offer ("NBBO") for the security is $10.01 x $10.03. The best bid on CHX is $10.00 and no other market currently has a bid of $10.00. Assume that the NBB of $10.01 is executed against, causing CHX to display the new NBB of $10.00. The retail investor's broker-dealer immediately routes a sell market order to execute against the CHX quotation of $10.00. The retail sell market order arrives at CHX, and before being released from the Access Delay, the CHX market maker modifies its quotation to $9.99.

[21] Sec. 21(a) Report at 32.

[22] 15 U.S.C. 78f(b)(5).

[23] Automated Quotations Interpretive Guidance at FN 75.

[24] CHX Proposal at 65443.

In this example, the broker-dealer is obligated to sell the retail investor's order as quickly as possible upon the price of the security dropping to $10.00, yet the order was denied an execution at that displayed price solely because of the Access Delay. Far from attempting to pick-off a "stale" quotation on CHX, the retail investor that is seeking to minimize losses would effectively be taxed an additional $10.00 in this example (*i.e.*, $0.01 x 1,000 shares) and the CHX market maker would gain $10.00 directly as a result of the Access Delay.[25]

The CHX Proposal is also likely to degrade the efficiency and resiliency of the ETF market, further disproportionately harming retail investors that use ETFs to meet their long-term investment objectives. The efficient functioning of the ETF market is predicated on the ability of ETF market makers to hedge in the underlying securities. The ability of ETF market makers to reliably and efficiently access displayed quotations in the underlying securities keeps the prices of ETFs and their underlying securities in harmony, strengthening the resiliency of the ETF market.[26] By impeding access to displayed quotations in the underlying securities, the CHX Proposal would negatively impact the ability of ETF market makers to reliably hedge. CHX liquidity providers would be able to utilize information regarding ETF executions in order to anticipate impending transactions in the underlying securities and, as a result, cancel or adjust their displayed quotations during the Access Delay period. After failing to execute against displayed quotations on CHX following the expiration of the Access Delay, ETF market makers would then be forced to attempt to hedge again, this time with information leakage having occurred regarding the impending transaction. Retail investors play a significant role in the ETF market, and would be disproportionately and unfairly discriminated against by any degradation in the functioning of this market resulting from the CHX Proposal.

Other liquidity providers are also unfairly discriminated against by the CHX Proposal. Quotations displayed on CHX are not comparable to the quotations provided by liquidity providers on other exchanges given that these other liquidity providers are not able to benefit from a "last look". Therefore, CHX liquidity providers are able to be more aggressive in their quoting, with the knowledge that they will have the opportunity to later back away from these quotations.

[25] This unfair discrimination would be exacerbated if, upon receipt of a liquidity taking order, CHX disseminates the terms of the order immediately as part of its market data while the order rests in the Access Delay queue. This would allow CHX liquidity providers to see incoming liquidity taking orders before determining whether to cancel or modify a quotation. It is unclear from the description of the CHX Proposal whether this could occur, as it only states that the "[Access Delay] will not delay any outbound messages or market data." CHX Proposal at 65443. But, as the above example demonstrates, even if CHX does not immediately disseminate the terms of the order, the Proposal would still unfairly discriminate against liquidity taking orders and market participants that are primarily liquidity takers, such as retail investors.

[26] *See, e.g.*, Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Private Equity Funds; Final Rule, 79 FR 5536, 5608 (Jan. 31, 2014) ("Some firms, whether or not an [authorized participant] in a given ETF, may also actively engage in buying and selling shares of an ETF and its underlying instruments in the market to maintain price continuity between the ETF and its underlying instruments, which are exchangeable for one another. Sometimes these firms will register as market makers on an exchange for a given ETF, but other times they may not register as market maker. Regardless of whether or not the firm is registered as a market maker on any given exchange, this activity not only provides liquidity for ETFs, but also, and very importantly, helps keep the market price of an ETF in line with the NAV of the fund.").

Similar exchange proposals have been withdrawn or disapproved by the Commission. For example, a proposed rule change in 2012 from NASDAQ PHLX that would have applied a five millisecond delay to inbound liquidity taking orders was withdrawn by the exchange.[27] In addition, a proposed rule change by NYSE Amex in 2012 that would have provided certain market makers with access to order information that was unavailable to other market participants was disapproved, with the Commission stating that "while exchanges may legitimately confer special benefits on market participants willing to accept substantial responsibilities to contribute to market quality, such benefits must not be disproportionate to the services provided."[28] The Commission also found it relevant that the exchange had not proposed any additional responsibilities or obligations that would be undertaken by the select NYSE Amex market makers as consideration for the additional order information.[29]

The CHX Proposal provides a select number of highly sophisticated liquidity providers with a structural advantage that allows them to back away from displayed quotations before other market participants can execute against those quotations. This advantage directly contradicts the Commission's express guidance that "[a]n exchange that proposed to provide any member or user with exclusive privileged faster access to its facilities over any other member or user would raise concerns under the [Exchange] Act, including under Section 6(b)(5)."[30] Notably, the CHX Proposal does not contain any additional obligations or responsibilities to be undertaken by these liquidity providers. To the contrary, the CHX Proposal would allow them to avoid complying with their most fundamental obligation, which is to honor a displayed quotation. We therefore urge the Commission to find that the CHX Proposal unfairly discriminates against, among others, liquidity taking orders and market participants that are primarily liquidity takers, such as retail investors, as well as liquidity providers on other exchanges in violation of Section 6(b)(5) of the Exchange Act.

III. The CHX Proposal Is Not Designed to Protect Investors or the Public Interest and May Be Susceptible to Manipulative Acts and Practices

Section 6(b)(5) of the Exchange Act requires that the rules of an exchange protect investors and the public interest and be designed to prevent fraudulent and manipulative acts and practices.[31] As discussed above, the CHX Proposal fails to protect market participants that primarily act as liquidity takers, such as retail investors. By hindering their ability to access displayed quotations, the CHX Proposal undermines overall investor confidence in market transparency and efficiency.

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[27] *See* In the Matter of the Application of: Investors' Exchange, LLC for Registration as a National Securities Exchange, 81 FR 41142 at FN 223; Securities Exchange Act Release No. 67680 (Aug. 17, 2012) (SR-PHLX-2012-106) (proposing "five millisecond delay in the execution time for marketable orders on NASDAQ OMX PSX"); and Securities Exchange Act Release No. 67780 (Sept. 5, 2012) (SR-PHLX-2012-106) (withdrawing NASDAQ OMX PSX five millisecond delay proposal).

[28] Exchange Act Release No. 67437, 77 FR 42525, 42527 (SR- NYSEAmex-2011-86) (disapproving a proposed rule change that would allow certain market makers to access certain order information unavailable to other market participants).

[29] *Id*.

[30] Automated Quotations Interpretive Guidance at FN 74.

[31] 15 U.S.C. 78f(b)(5).

The CHX Proposal also does not protect the general public interest, but is instead designed to benefit a select group of highly sophisticated market participants that already appear to significantly impact trading activity on CHX. For example, under the current CHX fee schedule, CHX liquidity providers share in the exchange's market data revenue whenever displaying a competitive quotation, regardless of whether or not that quotation results in a trade.[32] Data published on the Commission's Market Structure website demonstrates that the cancellation rate of orders for SPY placed on CHX is much higher than the corresponding rate on all other exchanges (*see* Appendix, Figure 1). Notably, in the 12 month period from July 2015 through June 2016, quotes for the SPY are displayed and then canceled approximately 10 times more frequently per SPY trade on CHX than on other exchanges. Interestingly, this ratio appears to be falling, though it is still significantly elevated, post-January 2016, which is when CHX asserts its market share in the SPY began to decline.[33]

Since comparing trade and cancel events may mask disparities between the average trade size on different exchanges, the Commission also publishes trade-to-order data in which the total number of shares executed on an exchange during continuous trading hours can be compared to the total number of shares quoted. A plot of this data over the same time period reveals a similar pattern (*see* Appendix, Figure 2). With the exception of PHLX, on average there are approximately 7 times the total number of SPY shares quoted per SPY share executed on the CHX than for all other exchanges. The data also reveals that the CHX ratio has increased to be slightly more in line with the ratio for other exchanges since May 2016.

When evaluated in combination with the CHX market data revenue sharing program that rewards quoting whether or not such quotes result in actual executions, the CHX Proposal may only worsen these cancel-to-trade and trade-to-order metrics (which appear to have evidenced some recent improvement) by facilitating the cancellation or modification of displayed quotes by CHX liquidity providers. This outcome benefits CHX liquidity providers at the expense of overall market quality.

The CHX Proposal would also be susceptible to manipulation because it would provide liquidity providers with an opportunity to deliberately post quotations that they have no intent to honor and that are instead designed only to move the NBBO. This is demonstrated in the following example:

> Assume the NBBO for a security is \$10.00 x \$10.05. A CHX member posts a sell order for 1,000 shares priced at \$10.02 on CHX. The CHX member then immediately sends an immediate-or-cancel midpoint buy order for 1,000 shares to an alternative trading system ("ATS") seeking an execution based on the new NBBO midpoint price of \$10.01. The CHX member also submits an order to cancel its quotation of \$10.02 within 350 microseconds. The CHX member then receives a fill on the ATS against resting midpoint peg order interest for its buy order at the

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[32] *See* CHX Fee Schedule, *available at* http://www.chx.com/regulatory-operations/rules/ and CHX, "Market Data Revenue & SIPs," *available at* http://www.chx.com/chxshare/market-data-revenue.html. CHX allocates a portion of market data revenue to its members based on both "Quote Revenue" and "Trade Revenue".

[33] CHX Proposal at 65443. *See supra* note 6.

new midpoint price of $10.01, and cancels its sell order quotation before any take order could execute against it.

By setting a new NBO for the security and narrowing the spread, the CHX member was able to buy the security on another market at the new midpoint price of $10.01 rather than the previous midpoint price of $10.025. The CHX member would be able to do this with no risk of having to honor its offer of $10.02, provided that it is able to cancel that quotation within 350 microseconds.

For all of the reasons above, we urge the Commission to find that the CHX Proposal does not protect investors or the public interest and is not designed to prevent fraudulent and manipulative acts and practices, all in violation of Section 6(b)(5) of the Exchange Act. The CHX Proposal is designed to benefit a select few liquidity providers, with profound negative consequences for investors and overall market structure.

IV. The CHX Proposal Unduly Burdens Competition

The CHX Proposal would unduly burden competition among market participants in violation of Section 6(b)(8) of the Exchange Act by inappropriately favoring a select group of liquidity providers by providing them with a "last look" on their displayed quotations. Under the CHX Proposal, CHX liquidity providers benefit from a structural advantage that gives them the ability to decide on a quotation-by-quotation basis whether to cancel or adjust a resting quote prior to allowing a liquidity taker to execute against that quote. In doing so, these liquidity providers would be able to take into account "the most recent market data,"[34] providing them with an advantage that directly results from the imposition of the intentional Access Delay.

This advantage is similar in certain respects to that which was proposed to be provided to IEX's affiliated routing broker-dealer (the "IEX router"). In its initial exchange application, IEX proposed to delay all outbound messages to its members by 350 microseconds, but to provide the IEX router with such outbound messages without this delay. This raised serious concerns that the IEX router would have an unfair competitive advantage over other routing broker-dealers by having faster access to more current market information and ultimately resulted in IEX amending its exchange application to remove this advantage.[35]

Providing a select group of market participants with an advantage when transacting will significantly impact the existing competitive balance on CHX, where liquidity providers and liquidity takers compete to access quotations. Historically, liquidity providers on CHX may have had a competitive advantage in trading certain products as a result of the geographical proximity

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[34] *Id.*

[35] Exchange Act Release No. 77406, 81 FR 15765, 15768 (March 24, 2016) ("[T]he concern expressed was that [the IEX Router] would have been able to route to away markets the unexecuted portion of any marketable order not fully executed at IEX 350 microseconds before other routing broker-dealers learned that an execution occurred on IEX. Some commenters argued that this arrangement would provide an unfair competitive advantage to IEX and the routing broker that it owns in that [the IEX router] would have faster access to information from the IEX trading system than other members of IEX, including those who offer routing services that compete with [the IEX Router], and thus [the IEX Router] would have the unique ability over other routing brokers to most quickly and efficiently route to away markets.").

between the CHX matching engine and the Chicago Mercantile Exchange ("CME").[36] Based on the information provided in the CHX Proposal, this advantage may have decreased over the last year.[37] However, rather than fostering continued competition among market participants, CHX appears to be seeking to ingrain a structural advantage for its market makers by giving them a "last look" on their displayed quotations.

The CHX Proposal also unfairly burdens competition between national securities exchanges. If the CHX Proposal were to be approved, other exchanges would likely be placed at a competitive disadvantage in attracting liquidity and consequently feel compelled to incur the substantial costs of implementing a similar asymmetrical delay despite the resulting detrimental impact on overall market quality.[38] Otherwise, CHX market share would benefit from the fact that its liquidity providers would be the only ones able to aggressively quote while knowing that they could selectively later back away from their quotations.

CHX attempts to justify the burden on competition among both market participants and exchanges that results from the Access Delay by referencing a decline in its own market share in trading the SPY and suggesting that this has impacted liquidity market-wide.[39] In addition to the fact that the declining market share of a single exchange in *one* security is insufficient to justify a structural change of this magnitude, it should be noted that CHX's market share in overall SPY trading volume prior to the apparent recent decline was only 5.73%.[40] In addition, a review of market-wide trading activity in the SPY over the last five years does not reveal any market-wide issue to support the CHX Proposal.

By simply plotting the total daily volume (in US$) of SPY executions over the last five years, the data suggests that (a) a baseline trading level of about $20-$25 billion per day appears relatively

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[36] For example, the E-mini S&P 500 futures product trading on CME typically informs the price of related securities index and exchange-traded products, including the SPY. The CHX Proposal provides that "The Exchange believes that much of the CHX liquidity in SPY and other S&P 500-correlated securities is provided as part of an arbitrage strategy between CHX and the futures markets, whereby liquidity providers utilize, among other things, proprietary algorithms to price and size resting orders on CHX to track index market data from a derivatives market." CHX Proposal at FN 10. Again, the CHX Proposal is focused on the declining market share of a single exchange in *one* security.

[37] The CHX Proposal does not provide any details on the nature of the liquidity-taking orders that started to appear on the CHX in January 2016, nor does it describe the behavior as potentially manipulative. CHX provides no rationale for why these orders are harmful to the market or represent an unfair advantage. Rather, CHX simply notes that it has lost market share and appears to be trying to preserve it by implementing an asymmetric delay.

[38] *See, e.g.*, Exchange Act Release No. 65362, 76 FR 59466, 59469 (Sept. 26, 2011) (SR-NASDAQ-2011-010) (rejecting proposed inducements to market participants designed "to attract order flow" and noting that the exchange should instead "rel[y] on the quality of its [services] to compete for orders" with other exchanges). Although liquidity takers might direct their order flow to exchanges that did not implement an asymmetric delay, they would still be obliged to transact on venues with asymmetric delays whenever such venues displayed the best protected bid or offer, consistent with Rule 611.

[39] *See* CHX Proposal at 65443. In attempting to demonstrate that liquidity in the SPY materially decreased market-wide, CHX selectively uses limited data by focusing on the 6 months before and after January 2016. In addition, its analysis of the SPY is based on a somewhat arbitrary comparison to three other products (IWM, QQQ and DIA) that are each materially different from the SPY and that do not form the basis of a robust control group.

[40] *Id*. at 65443, FN 11.

constant, and (b) there is no obvious negative trend subsequent to January 2016 that appears materially different from other similar periods (*see* Appendix, Figure 3). If anything, the data in Figure 3 suggests that there was a temporary uptick in SPY trading just before the end of January 2016, consistent with similar spikes in trading the SPY over the last five years.

The lack of data evidencing a market-wide issue further highlights the overriding purpose of the CHX Proposal, which is to provide CHX liquidity providers with an ingrained structural advantage in order to increase CHX market share. This cannot justify the undue burden on competition impacting liquidity takers, other liquidity providers, and other exchanges. We urge the Commission to find that the CHX Proposal unduly burdens competition in violation of Section 6(b)(8) of the Exchange Act.

V. The Access Delay Is Not *De Minimis* under the Commission's Interpretive Guidance

If, notwithstanding the above, the Commission were to find the CHX Proposal to be consistent with the Exchange Act, the Access Delay is still inconsistent with the Commission's Automated Quotations Interpretive Guidance.[41] By denying fair and efficient access to CHX's quotations, the Access Delay cannot be considered a *de minimis* delay and, therefore, CHX quotations subject to the Access Delay should not be afforded protected quotation status under Regulation NMS.

In the Automated Quotations Interpretive Guidance, the Commission stated that Rule 611 does not preclude a *de minimis* intentional delay, which is a delay that is "so short as to not frustrate the purposes of Rule 611 by impairing fair and efficient access to an exchange's quotations."[42] The Access Delay is plainly not *de minimis,* as its intended purpose is to specifically frustrate the ability of liquidity takers to access CHX quotations. By introducing delay in an asymmetrical manner, the CHX Proposal is explicitly designed to alter the competitive balance between liquidity providers and liquidity takers that exists on CHX today.

The Access Delay is significantly different from the intentional delay imposed by IEX that was recently considered by the Commission. First, the asymmetrical application denies liquidity takers fair and efficient access to CHX quotations, as the intentional delay is specifically designed to "neutralize" and "minimize the effectiveness of" such orders.[43] Second, during the delay, CHX liquidity providers are able, unfairly, to decide on a quotation-by-quotation basis whether to cancel or modify the quote, benefiting from a structural advantage in the process. Third, the Access Delay may not be limited to 350 microseconds and could vary on an order-by-order basis depending on how quickly CHX processes other messages in the relevant security that were received during the delay period.[44] This additional delay may be material, particularly during times of market stress, and could significantly impact liquidity taking retail orders or those seeking to hedge positions,

[41] We incorporate by reference our more general concerns with the Automated Quotations Interpretive Guidance, which is itself inconsistent with the Exchange Act and Regulation NMS. *See* Letter to Brent J. Fields, Secretary, Commission, from John C. Nagel, Managing Director and Sr. Deputy General Counsel, Citadel LLC (April 14, 2016).

[42] Automated Quotations Interpretive Guidance at 40786.

[43] CHX Proposal at 65443.

[44] Proposed CHX Rule 8(h). *See also* CHX Proposal at FN 28 and FN 35 ("the releasable message would be subject to an additional unintentional variable delay that is a function of the then-current messaging volume in the security").

such as market participants providing liquidity in ETFs and seeking to hedge in the underlying securities.

The CHX Proposal would further frustrate the purposes of Rule 611 by impeding the ability of intermarket sweep orders ("ISOs"), specifically used to prevent trade-throughs, to sweep better-priced liquidity on an away market.[45] For example:

> Assume CHX is alone at the NBB of $10.00 for 1,000 shares and a market participant wants to execute the bulk of its sell order for 5,000 shares on another exchange against that exchange's quotation of $9.99. To avoid a trade-through, the market participant must send an immediate-or-cancel ISO with a limit price of $10.00 to execute against the CHX quotation for 1,000 shares. The market participant simultaneously sends an order for 4,000 shares to its desired exchange with a limit price of $9.99. Since the ISO sent to CHX is subject to the Access Delay, the CHX liquidity provider can cancel or adjust its displayed quote for $10.00 based on the most recent market data even though this part of the investor order has already arrived for execution at CHX. The market participant is then left with 1,000 shares to sell and the market is now aware of the other execution.

The failed execution in this example directly results from the asymmetrical operation of the Access Delay, providing the CHX market maker with a "last look" and the ability to cancel its quotation faster than the inbound ISO could execute against it.[46] Once again, the Access Delay intentionally hinders market participants from fairly and efficiently accessing CHX quotations, the precise result that Rule 611 was designed to prevent.

For these reasons, the Access Delay cannot be considered a *de minimis* delay and thus is inconsistent with the Commission's Automated Quotations Interpretive Guidance. This means that even if the Commission were to find that the CHX Proposal is consistent with the Exchange Act — which it should not — CHX quotations subject to the delay should not be afforded protected quotation status under Regulation NMS.

VI. Conclusion

The Access Delay is an asymmetrical intentional delay that structurally provides CHX liquidity providers with a "last look" and the ability to back away from their purportedly firm quotations. This structural advantage violates both the Exchange Act and Regulation NMS and would undermine the healthy functioning of the national market system. By unfairly discriminating against, among others, retail investors submitting liquidity taking orders and liquidity providers on other exchanges, the CHX Proposal is designed to benefit a select group of CHX liquidity providers and the market share of CHX at the expense of overall market quality. The resulting impediments to accessing displayed quotations would have fundamental consequences for not only U.S. listed equities, but also the resiliency and efficiency of the ETF market, given the need for

[45] *See* 17 CFR 242.611 and 17 CFR 242.600(b)(30).

[46] Under the IEX intentional delay, a liquidity provider's message to cancel its quotation would be subject to the same delay as the inbound ISO seeking to access the quotation.

ETF market makers to hedge in the underlying securities. In both cases, retail investors would be disproportionately affected, and overall market efficiency, transparency, and quality would be severely undermined.

For the foregoing reasons, Citadel strongly urges the Commission to disapprove the CHX Proposal.

*   *   *   *   *   *   *   *   *   *

We appreciate the opportunity to provide comments on the CHX Proposal. Please feel free to call the undersigned at ([redacted] with any questions regarding these comments.

Respectfully,

/s/ Adam C. Cooper

Senior Managing Director and Chief Legal Officer

APPENDIX

Figure 1

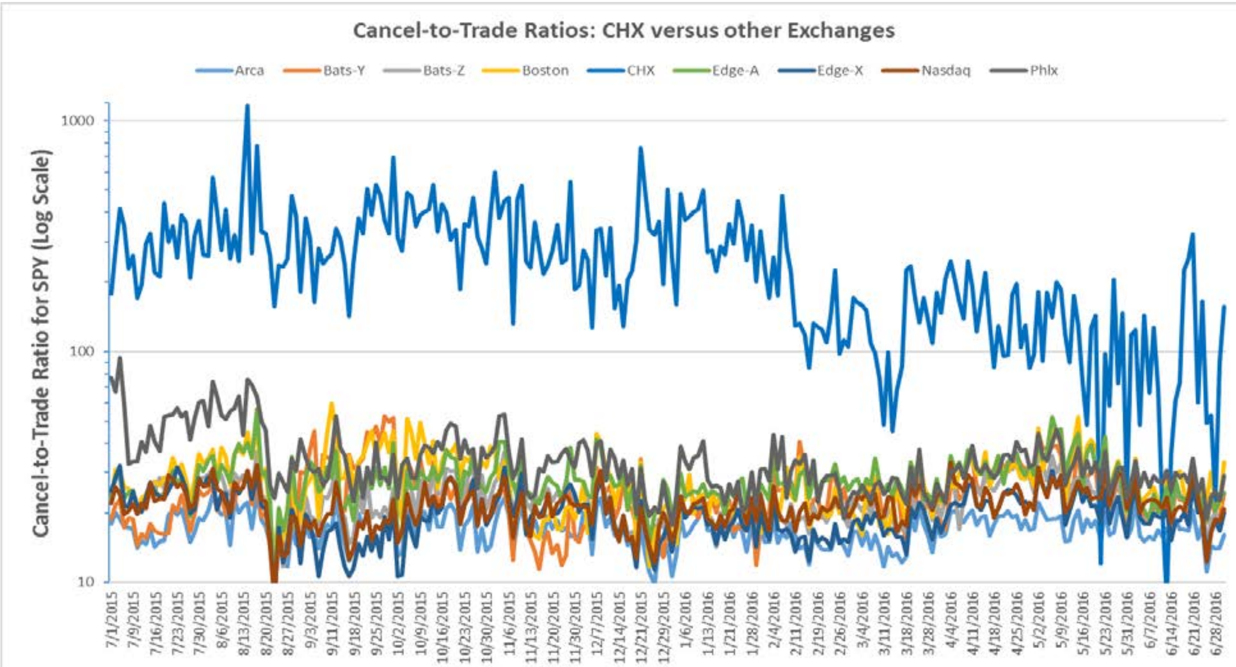


Figure 2

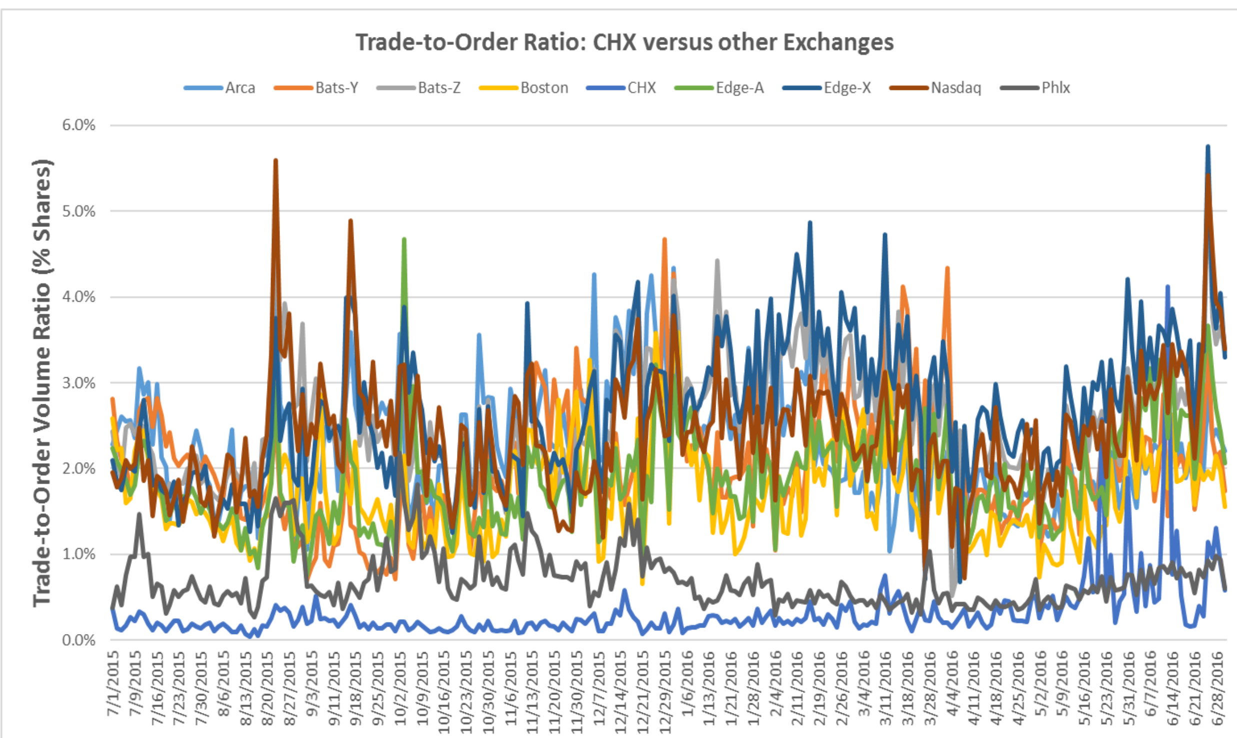
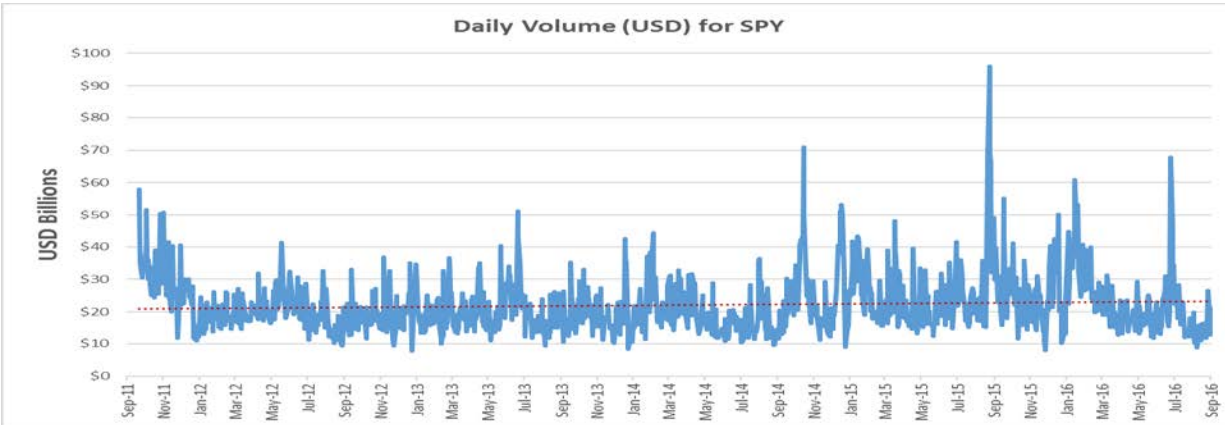


Figure 3


Daily Volume (USD) for SPY
USD Billions
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
Sep-11
Nov-11
Jan-12
Mar-12
May-12
Jul-12
Sep-12
Nov-12
Jan-13
Mar-13
May-13
Jul-13
Sep-13
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