September 29, 2016

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

Re: Release No. 34-78860; File No. SR-CHX-2016-16; Chicago Stock Exchange, Inc.; Notice of Filing of Proposed Rule Change to Adopt the CHX Liquidity Taking Access Delay

Dear Mr. Fields:

There are several troubling aspects to the Chicago Stock Exchange's ("CHX") above noted rule filing ("Filing"), which proposes to implement a speed bump for liquidity taking orders.

Unlike the only currently approved speed bump (implemented by IEX), CHX's speed bump will be implemented in software and not hardware. CHX recognizes an indeterminacy because of that, that orders and cancels subject to its speed bump will also be subject to variable length "system-processing delays" that CHX neither precisely quantifies or limits. Because of this indeterminacy alone the SEC should reject the rule filing.

If an exchange can't guarantee within some reasonable minimum range the duration of a proposed speed bump, if an exchange says its speed bump might in practice be considerably longer than what it specifies in its rules, if common sense suggests that a software-implemented speed bump might vary by 50 microseconds, or 100, or even 1,000 microseconds under load, and so in practice risks going far beyond the SEC staff's speed bump guidelines, the SEC should reject it. *More broadly, the SEC should reject speed bumps implemented in software because of the indeterminacies inherent in software-imposed speed bumps.*[1]

Next, CHX's proposed speed bump is discriminatory. We might imagine it discriminates only against liquidity taking orders. Its discriminatory impact is more narrow, however, and favors one type of professional trader. CHX is proposing the rule mainly to protect its market makers; the Filing is quite clear about that. In particular CHX believes its SPY market makers are being picked off by arbitrageurs who see prices change in the futures market (presumably at the Chicago Mercantile Exchange ("CME")) and then take stale prices on CHX. The delay is intended to give those market makers a chance to respond to price changes on the futures market ahead of all other market participants; it discriminates in favor of market participants who subscribe to the CME's data feeds and have the capital and sophistication to speedily gather and process intermarket signals.

Though justified by behavior it sees in SPY, so far as I can tell CHX's Filing is not limited to just SPY. The Filing proposes a speed bump for any and every NMS security, or not, subject to CHX's judgment, without further justification; this is another sop to market participants with the capital and sophistication to use a speed bump to their advantage. Anyone can easily imagine participants lobbying an exchange to implement a preferential speed bump in certain names and not others, and then using their advantages to withdraw in

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[1] Unless - perhaps - indeterminacy is the point, as with former SEC Chief Economist Larry Harris's proposal to add a random speed bump to *all* orders and cancels. Harris's proposal is very different from this Filing, however.

speed bumped names while they pick off other names - for example, to pick off correlated instruments not subject to the speed bump. In other words, nothing prevents a market maker from using its speed advantage to pull its own quotes while simultaneously picking off everyone else everywhere else it can. *The SEC should always reject speed bumps left to an exchange's discretion to implement or withdraw on a security-by-security basis.*

Unlike CHX's proposal, IEX's speed bump is designed mainly to give a time advantage to the *exchange* so the exchange can update the prices of certain unpriced orders entrusted to it. CHX's speed bump is designed to favor a particular class of participants. *The SEC should always reject speed bumps explicitly or implicitly favoring any particular class of participants.*

Far from discouraging latency arbitrage, the Filing might well enable latency arbitrage on a whole new playing field. It might well enable latency arbitrage among correlated instruments on the same exchange whenever one instrument is speed bumped and another is not - a scheme likely to be done by the most sophisticated participants against anyone unwary enough to rest an order.

Sincerely,

R. T. Leuchtkafer