BMO 🔺 **Capital Markets**

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Delivered by Email

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CC:
Market Regulation Branch
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Re: Alpha Exchange Inc. ("Alpha") Notice of Proposed Amendments and Request for Comments

Dear Ms. Sanci:

BMO Nesbitt Burns Inc. ("BMO NBI") welcomes the opportunity to provide comments to the Ontario Securities Commission ("OSC") with respect to the proposed amendment and request for comments regarding amendments to the Alpha Trading Policy Manual (the "Alpha Rules") to (i) introduce two new order books on Alpha; (ii) make changes to Alpha's order processing delay; and (iii) make other ancillary amendments (collectively, the "Amendments").

BMO NBI is a subsidiary of BMO Financial Corp., a Canadian financial holding company and the Canadian intermediate holding company of the Bank of Montreal. BMO NBI is committed to fair and equitable access to our equity markets. Transparency in trading and competition that allows market forces to create better and more efficient markets benefits all market participants.

Executive Overview

In today's market microstructure, exchanges and Alternative Trading Systems compete for business on multiple dimensions, including exchange fees, speed, order types, analytics, and execution quality. Competition on execution quality is particularly complex. For example, exchanges competing to improve the execution quality for latency sensitive traders could degrade execution quality for slower market participants. Conversely, exchanges that are competing to limit adverse selection can degrade the execution quality for arbitrageurs. Competition of both forms can be beneficial to the market by allowing brokers to seek trading outcomes that meet their business needs. However, certain design aspects of exchange innovation risk impeding the broader interconnected marketplace, which provides an essential service of price discovery in capital markets.

We commend Canadian securities regulators for seeking a balanced approach – allowing exchanges to innovate, while limiting disruption to a well-functioning market. For example, unprotected exchanges[1], such as TMX Alpha and Aequitas NEO-N limit order books, can be particularly disruptive to certain types of liquidity seeking order routes, which is why their quotes are not protected from trade throughs. However, brokers can use their discretion and route to these venues when deemed appropriate. This flexibility allows the market to innovate without creating harmful externalities that could impede public price discovery.

TMX Group Limited ("TMX") has filed a proposal to introduce two new limit order books, Alpha-X and Alpha-DRK; in doing so, the exchange continues to innovate, creating opportunities to improve execution outcomes for institutional investors and other market participants. While competition and market-based solutions create opportunity for enhanced trading outcomes they are not without cost to the industry in the form of additional complexity, explicit costs such as connectivity and market data, and implicit costs such as the human resources to integrate and maintain new markets into a trading system. In practice there is not a way to measure if there is sufficient competition in a market and we do not believe complexity alone is reason enough to impede new entrants. While new markets undeniably increase costs for the industry, they also have the potential to create material benefits. We have empirical evidence through multiple robust A|B tests that new market centers and or order types can significantly reduce both implementation shortfall and interval VWAP slippage, both key benchmarks of trading costs for institutions[2].

We are generally supportive of the proposed new markets whose methods are novel and targeted specifically to improving institutional trading outcomes. However, we believe substantial disclosure on the proprietary Quote Decay Signal (QDS) is required, and we recommend a limit be placed on the length of access delays that market centers can impose, independent of their protected status.

Disclosure on the TMX Quote Decay Signal (QDS)

TMX's QDS signal predicts adverse ticks, causing their Smart Limit order type to reprice when the signal is active. TMX has not disclosed critical details about the signal's construction, such as if, and how it will change over time, or details on its efficacy, all of which should be made public through the regulatory process.

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[1] OSC Staff Notice – Notice of Commission Approval of Proposed changes to Alpha Exchange Inc. "Alpha"; 4/16/2015 *"orders displayed in the Alpha order book will not be considered to be protected under the Order Protection Rule ("OPR") in Part 6 of National Instrument 23-101 Trading Rules ("NI 23-101")* https://www.osc.ca/sites/default/files/2020-12/alpha-exchange_20150421_noa-proposed-changes.pdf; and CSA Staff Notice 23-216 Order Protection Rule: Implementation of the Market Share Threshold and Amendments to Companion Policy 23-101 Trading Rules – (b) Applications of OPR to marketplaces with intentional order processing delays – "*Consequently, as of July 6, 2016, orders displayed on the Neo Book of Aequitas NEO Exchange Inc. (Aequitas) will be unprotected. This is because the Neo Book does not offer "automated trading functionality" as set out in NI 23-101 and 23-101CP."* https://www.bcsc.bc.ca/-/media/PWS/Resources/Securities_Law/Policies/Policy2/23316-CSA-Staff-Notice-June-20-2016.pdf

[2] We have specifically tested and observed material benchmark improvement from NEO-N in Canada. Additionally in the US venues and order types that limit adverse selection such as Intelligent Cross, IEX D-PEG, Nasdaq MELO, and segmented ATS can materially improve benchmark performance.

There is sensitivity to TMX's access to private data, and the industry should be assured that only public data is used to construct the signal. We recognize TMX's desire to retain intellectual property on the final specifications of the signal, which we believe can be accomplished by not releasing details on their fitting process, as well as the final formula and weights for the signal. However, we feel strongly that the TMX should disclose all other features and inputs in the signal to the public.

TMX's QDS signal is central to the value of their Smart Limit order type; as brokers will build trading strategies around it, TMX should inform market participants when the signal changes as it could impact the execution quality and fill rates of the Smart Limit. Specifically, the TMX should disclose how they will implement modifications to the signal over time and give the industry at least 30 days advanced notice prior to updating the signal.

The signal and displayed Smart Limit orders will generate market data traffic with each repricing event, which the industry will have to process and store. If the signal's ratio of false positive to true positive events were significantly imbalanced, it would burden the industry with extraneous market data traffic. Pushed to a logical extreme, if the signal was wrong 100 times for every time it was correct, the potential burden on all consumers of market data especially those who are not benefiting from the Smart Limit order type but whose systems are compelled to consume and store Alpha-X market data, would be unfair. We believe balance must be struck between the signal's ratio of true positives to false positives. To find that balance, the TMX should begin by disclosing these statistics, along with their coverage of adverse ticks.

Length of Access Delay

Access delays are a common way to mitigate adverse selection. They can be static in nature, randomized, or used as part of a randomized periodic batch auction. As the length of the delay grows, so do the burdens imposed on market participants attempting to access these markets. These burdens can multiply if brokers use multistage smart order routers. For example, a common practice in a liquidity seeking router is to first check the NBBO mid before sweeping the far side of the market. However, accessing TMX Alpha-X and Alpha-DRK as part of these sweeps could impose up to 20-milliseconds of total delay, whereas today these steps can be undertaken in under one millisecond on the protected markets.

While Alpha-X and Alpha-DRK markets would be unprotected, the demands of best execution may compel brokers to access them as part of sweeps if they represent substantial liquidity opportunities. This would impose a 10-millisecond delay for each phase of a router in which they are included.

It is a matter of subjectivity to dictate what constitutes an acceptable delay versus one that is inefficient. However, the ability for a market center to impose access delays of any length they choose creates obvious burdens and additional complexity for all market participants. We believe a limit should be set on access delays generally and that the 10 milliseconds the TMX are proposing for Alpha-X and Alpha-DRK should be reduced.

Conclusion

Conditioned on additional disclosures around the nature of their signal, disclosure when the signal will change, and a modification to the length of delay, we support TMX's vision for Alpha-X and Alpha-DRK.

Alpha-X and Alpha DRK markets could provide a powerful new option for institutional investors and other market participants to improve upon their execution quality, and we applaud the TMX for continued innovation in electronic trading.

Sincerely,

"Joe Wald"
Joe Wald
Managing Director & Co-Head of Electronic Trading
BMO Capital Markets

"Eric Stockland"
Eric Stockland
Managing Director, Global Markets
BMO Capital Markets

"Dave Moore"
Dave Moore
Chief Compliance Officer
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