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September 23, 2016

The Honorable Mary Jo White
Chair
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: Equity Market Structure Advisory Committee (File No. 265-29)

Dear Chair White:

The Royal Bank of Canada (RBC) appreciates this opportunity to comment on the "Recommendation for an Access Fee Pilot" ("Recommendation") approved by the Equity Market Structure Advisory Committee ("EMSAC") on July 8, 2016 by a near-unanimous vote.[1]

As a general matter, we support the EMSAC's Recommendation. We believe that the Recommendation, if adopted and implemented by the Commission, will provide useful data to assist the Commission and other policymakers in deciding how best to structure needed reforms to U.S. equity markets. Further, we applaud your recent statement that you expect the Commission to consider an access fee pilot proposal "in the very near term."[2] In our view, the sooner that a pilot can be approved and commenced, the sooner the Commission will have the benefit of the pilot's data, and the sooner it can implement needed reforms. While U.S. equity markets remain among the strongest, most liquid, and most transparent in the world, there is no question that they also face significant challenges. You and others at the SEC and FINRA have spoken on numerous occasions about those challenges, which include opacity, fragmentation, instability, and conflicts of interest.[3] The body of research supporting these

[1] The comments herein incorporate and supersede the comments contained in our letter of May 24, 2016 regarding the April 19, 2016 "Framework for Potential Access Fee Pilot" put forward by the EMSAC's Regulation NMS Subcommittee.
[2] SEC Chair Mary Jo White, Keynote Address to the Security Traders Association, 14 September 2016. https://www.sec.gov/news/speech/white-equity-market-structure-2016-09-14.html (". . . I have asked the SEC staff to follow up with a recommendation for the Commission to consider in the very near term.") See also remarks at EMSAC meeting, 2 August 2016 (". . . I expect that the Commission will consider a recommendation regarding an access fee pilot later this year.") https://www.sec.gov/news/statement/white-remarks-emsac-meeting-080216.html
[3] SEC Chair Mary Jo White, Remarks on "Enhancing Our Equity Market Structure", *5* June 2014. https://www.sec.gov/News/Speech/Detail/Speech/1370542004312. ("When fees and payments are not passed through from brokers to customers, they can create conflicts of interest and raise serious questions about whether such conflicts can be effectively managed.")

SEC Chair Mary Jo White, Statement to Equity Market Structure Advisory Committee Meeting*,* 15 May 2015. https://www.sec.gov/news/statement/optimizing-our-equity-market-structure.html. ("Complexity can, for example, result in instability if the sophisticated order routing and trading systems necessary to deal with a complex structure do not operate as they are intended to operate. It can create a lack of transparency for investors about how their orders are handled and executed. It can lead to unfair outcomes if professional traders, using the fastest, most sophisticated tools, are able to assessments is significant and growing, including work done by RBC on intraday volatility and exchange pricing.[4]

In light of these challenges, RBC has supported your call for a data-driven reform of our equity markets and believes that the Recommendation is a positive step toward such reform. If properly structured and implemented, an access fee pilot modeled on the Recommendation can provide valuable data to the Commission to determine the extent to which the current practice of "maker-taker" pricing, whereby trading venues rely on

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exploit the complexity in ways that disadvantage investors. Complexity can also make the always-difficult task of regulators in effectively overseeing the markets and enforcing the rules even more difficult.")

SEC Commissioner Kara M. Stein, Remarks before Trader Forum 2014 Equity Trading Summit, 8 February 2014. https://www.sec.gov/News/Speech/Detail/Speech/1370540761194#. ("[W]e should explore how the maker-taker pricing model impacts liquidity and execution quality. Does the current rebate system incentivize or penalize investors? I have heard from many investors, and even exchanges, who are worried about the incentives embedded in the current system, and if there are proposals to explore alternative approaches, we should consider them.")

Richard G. Ketchum, CEO, FINRA, Remarks on "Essential Elements of Sound Capital Market Structure", Exchequer Club, 17 February 2016. https://www.finra.org/newsroom/speeches/021716-remarks-exchequer-club. ("[C]ompetition and regulatory changes have also led to a more complex, fragmented market. In today's increasingly fragmented market, bad actors can consciously disperse their trading activity across markets, asset classes, and broker-dealers in an attempt to hide their footprints and avoid detection.")

[4] Peter Haslag, Olin Business School, Washington University, and Matthew C. Ringgenberg, Olin Business School, Washington University, Paper on "The Causal Impact of Market Fragmentation on Liquidity", 6 April 2015. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2591715. ("For small stocks, fragmentation causes increased bid-ask spreads, worse price efficiency, and more variability in liquidity. These effects are consistent with models in which exchange competition and fragmentation lead to negative network externalities which reduces liquidity. In particular, several models note that as trading fragments across exchanges, it becomes harder for individual traders to match with a counterparty on a given exchange, which further discourages trading thereby leading to reduced market quality (e.g., Pagano (1989b), Madhavan (1995), Madhavan (2000)).")

Shawn M. O'Donoghue, Paper on "The Effect of Maker-Taker Fees on Investor Order Choice and Execution Quality in U.S. Stock Markets", 23 January 2015. http://people.stern.nyu.edu/jhasbrou/SternMicroMtg/SternMicroMtg2015/Papers/MakerTakerODonoghue.pdf. ("[M]aker-taker pricing has aggravated agency issues between brokers and their clients. Brokers are incentivized to direct non-marketable limit orders to the venue offering the highest rebate. However, this destination may not necessarily be the best for clients, if it offers a relatively slow execution speed, high nonexecution probability, or a high probability of execution outside-the-quote. Maker-taker pricing has increased the cost to brokers of executing marketable orders in the exchanges; consequently, brokers will internalize uninformed marketable orders whenever possible. As a result, non-marketable limit orders that are sent to the exchange are more likely to execute when the price moves against them since the orders submitted there are disproportionately informed.")

James J. Angel, Lawrence E. Harris, and Chester S. Spatt, Paper on "Equity Trading in the 21st Century", 23 February 2010. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1584026. ("The make-or-take pricing model thus would appear to accomplish nothing besides reducing quoted spreads and thereby obfuscating true economic spreads, which are the net spreads inclusive of the access fees and liquidity rebates. The obfuscation makes it more difficult for traders to recognize the true costs of their trading.")

Stephen Bain, Shary Mudassir, Jennifer Hadiaris, and Michael Liscombe, RBC Capital Markets, "The Impact of Intraday Volatility on Investor Costs", May 2014. https://www.rbccm.com/globalequity/file-863454.pdf. ("Our market structure has evolved into the most fragmented and complex it has ever been. There are several widespread practices that, while fitting within the legal parameters of today's market structure, have created incentives for industry participants that are not aligned with investor interests.")

RBC Capital Markets, "Complexity of Exchange Pricing and Corresponding Challenges to Transparency and Routing", February 2016. https://www.rbccm.com/globalequity/file-863455.pdf. ([T]he proliferation of equity exchange pricing tiers contributes to a number of negative incentives and outcomes on these venues. These outcomes include reduced transparency, increased complexity and heightened conflicts of interest between brokers and clients with regard to routing of client orders. Additionally, pricing changes, which require technology adjustments by exchanges and trading firms, can elevate operational risks that could cause market 'glitches' and other risks to market stability.")

fees and rebates, is contributing to opacity, fragmentation, instability, and conflicts of interest, and to support appropriate reforms.

In addition to the features of the pilot described in the Recommendation, we believe that an access fee pilot should also include the following features:

1. **A "bucket" that prohibits payment of rebates.** In the view of many market participants – including RBC -- and others, rebates – more than access fees – contribute disproportionally to conflicts of interest and other problems in U.S. equity markets. By removing the incentive to route orders based on rebates, conflicts and other problems can be mitigated. A "no-rebate bucket", properly structured and implemented, would allow the Commission to assess the impact of rebates. In addition, any pilot program should ensure that trading venues do not substitute other inducements to incentivize orders. We appreciate and understand the EMSAC's view that a $.0002 access fee cap in one of the pilot buckets would create a bucket where any rebate "should result in a de minimis economic incentive."[5] However, we believe that a no-rebate bucket would be more appropriate and useful for the following reasons:
    a. A $.0002 access fee cap, while reducing the economic incentive of a rebate, does not eliminate that incentive. Given the concerns raised by you and others about the significant negative effects of rebates, it would seem that at least one of the buckets in a pilot study should examine the impact of eliminating rebates and other comparable inducements.
    b. Capping rebates and other inducements is, as the EMSAC Recommendation says, "currently not an existing component of our market structure." We also understand that "the Committee worries about the complicating impacts of introducing such a restriction."[6] However, we believe that, for the purposes of a pilot study, the issue is whether such a cap is an appropriate way to gather data to determine if a cap will mitigate the opacity, fragmentation, instability, and conflicts of interest that rebates and other inducements may be causing to the markets.
    c. The EMSAC correctly points out that rebates are one of several types of inducements to trade, along with others such as payment for order flow, soft dollars, and rebates to liquidity takers on inverted exchanges.[7] The EMSAC goes on to say that it encourages the SEC to consider a separate study and/or pilot regarding the role of inducements in trading, but that it does not believe that the pilot described in the Recommendation "is the place" for such a study and/or pilot. In our view, a pilot that limits or prohibits the economic incentive of rebates, such as the pilot recommended by the EMSAC, without similarly restricting other inducements to trade, runs a serious risk of actually encouraging the use of such inducements and thereby undermining the integrity of the pilot. Given the limited amount of stocks in each bucket, we believe that the

[5] See EMSAC, "Recommendation for an Access Fee Pilot", 8 July 2016, at 4. https://www.sec.gov/spotlight/emsac/recommendation-access-fee-pilot.pdf
[6] Id at 4.
[7] Id .

SEC will be able to restrict, with little complication or cost, the use of other inducements as it administers the pilot.

2. **Application across other platforms.** Any pilot program testing the effects of maker-taker pricing should be applied not only to Exchanges, as defined pursuant to the 1934 Securities Exchange Act, but to Alternative Trading Systems (ATSs), as well. If a pilot program were implemented solely on Exchanges, it could create an un-level playing field in relation to other trading venues. This scenario could result in unintended consequences and undermine the data-driven results the pilot is designed to achieve. In addition, we believe that the pilot program also should cover so-called "inverted Exchanges" as well as non-displayed orders on Exchanges. Having the pilot program implemented across all venues where stocks in the pilot are traded will reduce the possibility of data distortions and gaming, and will provide more accurate testing of order flows. As the EMSAC itself acknowledged in its justification for the Recommendation, "[l]imited experiments, such as the recent NASDAQ pilot, have shown that individual market experiments do not yield conclusive results about the potential impact of market-wide policy reform on access fees."[8] This same rationale should, in our view, compel the pilot to capture to the fullest extent possible trading activity involving the stocks that are in the pilot. Any other approach would be inconsistent with the goal of a comprehensive, "holistic" and "data-driven" approach that you, other Commissioners, and the EMSAC have outlined as an important priority in the pilot and in equity market structure reform efforts more generally. At a minimum, we agree with the EMSAC's recommendation that the SEC, in administering a pilot, should not allow any rule filings that would exploit the inapplicability of the pilot to non-displayed Exchange liquidity.[9] Similarly, the SEC should monitor any changes on inverted exchanges and ATSs that might suggest an attempt to subvert the pilot, including significant changes in volumes, fees, and rebates on those venues.

3. **No "Trade-At" component.** RBC agrees with the EMSAC's Recommendation that an access fee pilot program need not and should not include a "trade-at" component. Currently, the SEC's tick-size pilot program contains a trade-at component, so adding a trade-at component to a maker-taker pilot would be duplicative and therefore is unwarranted. Further, adding a trade-at component to a maker-taker pilot could obscure the data showing the impact of maker-taker pricing, which is the principal purpose of the pilot recommended by the EMSAC.

4. **Inclusion of ETFs**. We agree with the EMSAC that ETFs should be included in any pilot measuring the impact of fees and rebates. Including ETFs, in our view, will yield additional meaningful data without introducing significant new complexities into the design and operation of a pilot.

Thank you again for the opportunity to comment on this important proposal. We would be pleased to answer any questions about the views expressed in this letter, and we

[8] Id at 3.
[9] Id at 4.

stand ready to assist the EMSAC and the Commission in their important work to strengthen U.S. equity markets.

Sincerely,

Richard Steiner
Electronic Trading Strategist

cc: Commissioner Kara M. Stein
Commissioner Michael S. Piwowar
Mr. Stephen Luparello, Director, Division of Trading and Markets
Mr. Brent Fields, Secretary