MEMORANDUM

TO: Equity Market Structure Advisory Committee (EMSAC)

FROM: EMSAC Regulation NMS Subcommittee

DATE: April 19, 2016

SUBJECT: Framework for Potential Access Fee Pilot

Purpose

To both construct a framework and generate data for a pilot program to reduce the access fee cap (and corresponding liquidity rebates), and measure the commensurate impact on both market quality and marketplace behavior. Specifically:

- Measuring the impact of lower access fees on liquidly provisioning bid/ask spreads, market depth, order routing behaviors, ratio of hidden liquidity vs. displayed liquidity on the exchanges, quoting behavior, average time before getting a fill
- Measuring the impact of lower access fees on liquidity taking ratio of on vs. off exchange trading, order routing behaviors, price impact, slippage/realized spread, trade volume

Justification for Why a Pilot Should be Conducted

- "Maker-taker" is one of the more debated aspects of current market structure. The Regulation NMS adopting release acknowledged that "[p]erhaps more than any other single issue, the proposed limitation on access fees splintered the commenters." ¹
- Regulation NMS Rule 610 limited the fees that any trading center can charge (or can allow to be charged) for accessing its protected quotations to no more than \$0.003 per share.²
- Given the complex ecosystem of our marketplace, definitive conclusions on access fee modifications are difficult to draw without an actual implementation. In addition, market characteristics, such as effective spreads, have declined since the cap was set.
- Limited 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.
- The access fee cap of \$0.003 effectively sets a ceiling for rebates. In the nine years since the cap went into effect, there are and have been multiple exchange pricing models along the spectrum up to the access fee cap, including inverted exchanges where rebates are paid to those accessing quotes. However, the largest exchanges in terms of volume are those that charge access fees at or near the cap and, hence, pay the highest rebates to attract displayed liquidity.
- A pilot would study, and hopefully help to answer, the following questions:
 - o The relationship among access fees, liquidity provision and market quality;

¹ SEC Regulation NMS adopting release, pp.27-28 (https://www.sec.gov/rules/final/34-51808.pdf)

² SEC Regulation NMS adopting release, p.27 (link above)

- o The relationship between access fees, rebates, and order routing practices;
- o The potential impact of access fee dynamics on the price discovery process.

Significant Aspects of the Pilot

- 1. Access fee caps (dispersed to be able to draw meaningful conclusions) in several pilot buckets encompassing all quotations covered under SEC Rule 610(c):
 - a. Bucket 1 Control bucket
 - b. Bucket 2 \$.0020 access fee cap
 - c. Bucket 3 \$.0010 access fee cap
 - d. Bucket 4 \$.0002 access fee cap
 - i. The subcommittee intentionally selected \$.0002 as the rate in Bucket 4 in order to create a bucket where any rebate should result in a de minimis economic incentive.
 - ii. The subcommittee also discussed, but could not reach consensus on, two alternatives for this bucket: (a) prohibiting rebates (in addition to applying the access fee cap); and (b) applying the access fee cap to inverted venues.
 - 1. Given that this is also an area of significant industry debate, we would encourage the SEC to consider including these specific questions as part of the public comment process (should the pilot be proposed).
 - 2. The subcommittee would additionally advocate that if rebates are prohibited within Bucket 4, the \$.0002 cap could be increased to \$.0005 in order to provide additional pricing flexibility to compensate for the loss of rebates.
 - 3. Payment for order flow is not meant to be explicitly covered by this provision.
 - 4. If the pilot does not prohibit rebates and/or does not apply to inverted venues, then we would suggest additional monitoring to ensure that marketplace behavior does not evolve in a way that potentially negates the output of the pilot, e.g.:
 - a. Monitoring for material order flow migration to inverted venues (or ATSs see Point 2. below);
 - b. Potentially institute a moratorium on new inverted pricing schemes.
- 2. While Rule 610 does not apply to nondisplayed liquidity on Exchanges, and current industry fee schedules do not distinguish between displayed and nondisplayed liquidity, the subcommittee is concerned that the lower access fee caps could create a (new) incentive for higher rebates on nondisplayed Exchange liquidity. As such, we think the pilot should institute the same access fee caps for both displayed and nondisplayed Exchange liquidity.
 - a. Similarly, while the subcommittee is sensitive to not inadvertently creating an unlevel playing field for exchanges vs. ATSs by capping access fees on exchanges, we are also sensitive to the fact that applying Rule 610(c) to ATSs for the first time may present a significant regulatory obstacle.

- i. However, assuming a proposal moves forward, we would encourage the SEC to specifically ask through the public comment process whether the access fee limits should additionally apply to ATSs.
- 3. One- to two-year pilot program (long enough to eliminate potential gaming)
- 4. Random sample of [x] stocks with a market capitalization >\$3 billion.
 - a. Access fees are more meaningful in larger-capitalization stocks; in addition this level will limit overlap with the "tick pilot" that is currently in development.
- 5. We may want to build in specific criteria to terminate the program early should there be significant deterioration in any of the measurement criteria.
 - a. For further exploration

Measurement criteria:

- Quoted Spreads
- Effective Spreads (potentially Realized Spreads also)
- Displayed liquidity changes at the inside, depth at 3, 5, 10 cents beyond the NBBO
- Volatility stock-level changes; number of price changes at the NBBO
- Hidden liquidity off-exchange market share; mid-point exchange executions and exchange dark liquidity
- Changes in trading volume
- Behavioral routing changes as evidenced by:
 - o Market share shifts among trading venues
 - o On- vs. off-exchange trading levels
 - o TRF vs. internalization levels
- Changes in the levels of Price improvement in the marketplace
- Percentage of time market locked/crossed
- Slippage and price impact
- Significant behavioral changes in pricing from ATSs and/or Exchange reserve quantities

Other Considerations

- *Trade-At* we understand that some industry participants will push that an access fee pilot should include a "trade-at" provision. However we do not agree for the following reasons:
 - o The access fee pilot is being proposed to determine, in part, if a trade-at provision is needed. Many in the market believe that a motivation for ATS activity (not wholesaler activity) is economic, i.e., take fees are too high.
 - O The purpose of this pilot is to generate data to see the impact on market quality when the cap is changed. It is the subcommittee's opinion that, while many issues are intertwined, trade-at would address a different market structure issue. In addition, the likely shift of flows as a result of trade-at would both make the pilot more complex and impact effective measurement of the access fee change.
 - o We believe an access fee pilot is relatively simple to implement and conduct, and should be kept that way without introducing significant additional complications.
 - o The tick pilot will yield some trade-at results that can be further studied; thus duplication is not warranted.

• Retail

 We are sensitive to unintended negative consequences on retail investors; therefore we recommend including the ability to stop the pilot should any significant unexpected impacts occur.

• Disclosure

- Our understanding is that there is an SEC work-stream being undertaken regarding disclosure and routing. If timing of this potentially precedes the pilot, it would be helpful to understand the nature of such disclosure changes and whether there could be significant interactions with the access pilot that would affect behavior and therefore, need to be reflected in the design of the access fee pilot.
- O Additional avenues for potential disclosure by market centers would include: (1) the priority of their matching engines for the interaction of display, reserve, midpoint, penny increment and sub-penny increment discretionary orders and hidden orders; (2) reserve replenishment operationally how do they do it i.e. do they check the quote for 610(d) prior to re-display?

Open Items

- Selection of the optimal number of pilot stocks (and ETFs) and the possible use of stratified random sampling based on characteristics such as market cap, share price, and trading volume
- We believe no special considerations arise with respect to Options markets, but this warrants further consideration and confirmation.