Chris Concannon
President and Chief Operating Officer

September 28, 2018

Via Electronic Submission

Mr. Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549-1090

Re: Proposed Transaction Fee Pilot for NMS Stocks (the "Pilot"); S7-05-18

Dear Mr. Fields:

This letter constitutes the second comment letter by Cboe Global Markets, Inc. ("Cboe") on the above captioned proposal by the Securities and Exchange Commission (the "SEC" or "Commission") to establish a pilot program involving thousands of U.S. equity securities.[1] In light of the Commission's recent announcement to sunset a different large-scale pilot: the Tick-Size Pilot, which cost investors $700 million on an annualized basis[2] and involved countless man-hours to implement, Cboe urges the Commission to reconsider the proposed Pilot. It will dramatically alter the manner in which 3,000 of the roughly 8,000 U.S. equities trade today despite the Commission presenting any tangible evidence that the market for these securities is broken or failing investors. To the contrary, the data is clear, the stock market has never been better for investors. Accordingly, Cboe continues to oppose the Pilot on numerous grounds including the tremendous cost the Pilot will impose on investors and the markets.

1 Securities Exchange Act Release 82873 (March 14, 2018), 83 FR 13008 (March 26, 2018) (the "Release").
2 *See infra* FN 8.

The U.S. stock market is a complex inter-connected system with many moving parts and many participants. Imposing structural changes to its fundamental operation through federal mandates poses great risk and should be avoided unless something is clearly broken. Calling this intervention a "pilot" does not reduce the risk (or cost). Importantly, labeling this rulemaking a "pilot" does not lower the rulemaking standards of the Administrative Procedure Act ("APA"). As articulated in Cboe's first letter,[3] the Proposal has not met APA requirements that need to be met for the Commission to impose such significant changes and costs to investors imposed by the Pilot. In addition, solely targeting exchange pricing, such as banning exchange rebates while not considering other forms of rebates, is particularly arbitrary and capricious given all the other mechanisms that exist to encourage liquidity provision that are completely ignored by the Pilot.

Investor Cost

When evaluating this Pilot, Cboe considered, among other factors, the overwhelming positive experience individual investors have today in the form of low costs, speed of execution, significant liquidity, and narrow spreads. Cboe's view is that implementing such a large-scale pilot experiment is not worth the risk of harming the equities market, especially when: 1) exchange access fees and rebates are intertwined with other components that collectively comprise the U.S. equity market structure framework and 2) better, less drastic alternatives exist to achieve the Commission's stated objective around assessing broker conflicts of interest.

Cboe also considered recent experience with another pilot, the Tick-Size Pilot, which should serve as a cautionary tale. In 2014, the Commission required national securities exchanges and the Financial Industry Regulatory Authority to jointly develop and propose a

[3] *See* Letter from Edward T. Tilly, Chairman and CEO, Cboe Global Markets, Inc., to Mr. Brent J. Fields, Secretary, and Securities and Exchange Commission, dated May 25, 2018.

National Market System Plan ("NMS Plan") to implement a pilot that would widen the quoting and trading increments for certain small-capitalization stocks. The Tick-Size Pilot began on October 3, 2016, and is scheduled to end on September 28, 2018. The NMS Plan called for the Plan Participants to publish an assessment of the impact of the Tick-Size Pilot.[4] The Tick-Size Pilot Assessment clearly demonstrates that wider spreads:

- increase effective spreads;
- increase costs for investors;
- increase hidden and midpoint executions;
- cause maker-taker exchanges to lose significant market share; and
- cause market share to migrate to off-exchange venues.[5]

This is particularly edifying – considering the Transaction Fee Pilot will surely cause wider spreads. Long-term retail investors suffer the cost when spreads are wide as they are typically takers of liquidity, not makers of liquidity.

The Tick-Size Pilot assessment highlights that even pilot programs can cause real harm to the marketplace without any tangible benefits. What was the cost of the Tick-Size Pilot in dollar terms? TD Ameritrade estimates that from October 2016 through April 2018 the Tick-Size Pilot cost its customer alone over $26 million.[6] Pragma Securities' estimates the Tick-Size Pilot cost all investors $350 million.[7] Extrapolating from the summary data published in the Tick-Size Pilot Assessment, Cboe estimates the annualized impact to investors from higher

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4 *See* Plan to Implement a Tick Size Pilot Program, *available at*, https://www.sec.gov/rules/sro/nms/2015/34-74892-exa.pdf.

5 *See* Assessment of the Plan to Implement a Tick Size Pilot Program, dated July 3, 2018, revised August 2, 2018, at 32-37, *available at* http://www.finra.org/sites/default/files/tick-size-pilot-assesment.pdf ("Tick-Size Pilot Assessment").

6 *See* Letter from Joseph Kinahan, Managing Director, Client Advocacy and Market Structure, TD Ameritrade, to Brent J. Fields, Securities and Exchange Commission, dated May 25, 2018.

7 *See* SEC's Stock Trading Experiment Cost Investors Over $300 Million, Study Finds, Alexander Osipovich, Wall Street Journal (Sept. 6, 2018), *available at*, https://www.wsj.com/articles/secs-stock-trading-experiment-cost-investors-over-300-million-study-finds-1536206461 (last visited September 12, 2018).

effective spreads resulting from the Tick-Size Pilot to be over $700 million.[8] Consider, too, that the Tick-Size Pilot was implemented on a smaller scale than is proposed for the Transaction Fee Pilot (1,200 securities vs. 3,000 securities), and it is easy to conclude that the Transaction Fee Pilot may cost investors in the hundreds of millions of dollars.

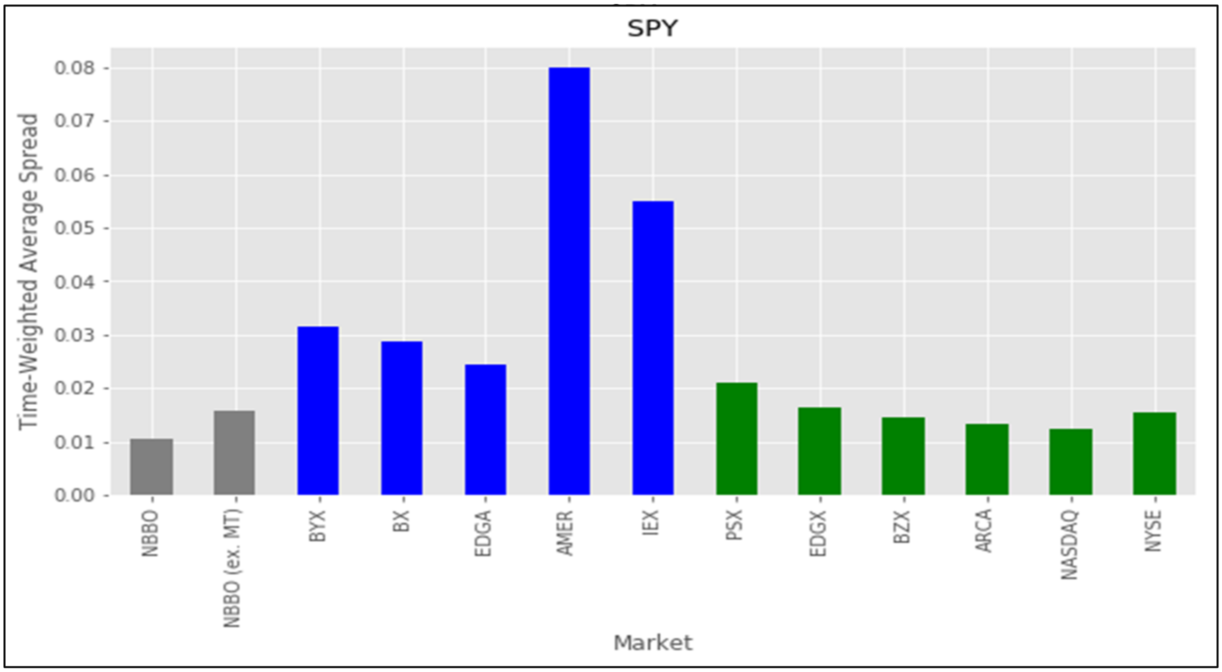
Wider Spreads in the Most Liquid Stocks

Some believe that the Pilot will not cause spreads to widen in the most liquid stocks. Cboe disagrees, and to come to that conclusion one need only compare time-weighted average spreads[9] on flat transaction fee exchanges and taker-maker exchanges to time-weighted average spreads on maker-taker exchanges. Consider the time-weighted average spreads for a highly liquid exchange-traded fund, SPDR S&P 500 ETF (SPY) (Figure 1 below) and a highly liquid common stock, Apple Inc. (AAPL) (Figure 2 below).[10] For SPY, the average time-weighted spread aggregated across exchanges (the NBBO) is $0.010; however, the NBBO is 50% wider ($0.015) when maker-taker exchanges (exchanges providing rebates) are excluded from the NBBO. As these statistics suggest, the time-weighted average spreads for SPY on individual flat transaction fee exchanges (Cboe EDGA, NYSE American, and IEX) and taker-maker exchanges (Cboe BYX and Nasdaq BX) are wider than on maker-taker exchanges (Nasdaq OMX PSX, Cboe EDGX, Cboe BZX, NYSE ARCA, Nasdaq, and NYSE).

[8] Utilizing data provided by the Tick-Size Pilot Assessment, specifically, "Fig 5: Securities Deleted from the Pilot, by Group", "Fig 13: Consolidated Average Daily Volume and Value Traded, by Group and Period" and "Fig 23: Share-Weighted Effective Spreads for Pilot Securities, by Group and Period", the [number of securities in each test group] x [the average daily volume] x [increase in effective spread] x [252 trading days] > $700 million.

[9] Time-weighted average spread is the average spread throughout the trading day (9:30am – 4:00pm ET) weighted by time (for each venue and for the aggregate NBBO).

[10] Figures 1 and 2 represent data from May 2018. At the time, Cboe EDGA had a flat transaction fee structure and currently has taker-maker fee structure. NYSE National is excluded from the data as it was not yet operational. The Chicago Stock Exchange is excluded from the data due to the infrequency with which its two-sided quotations contribute to the NBBO throughout the trading day.


SPY
Time-Weighted Average Spread
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
NBBO
NBBO (ex. MT)
BYX
BX
EDGA
AMER
IEX
PSX
EDGX
BZX
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Market

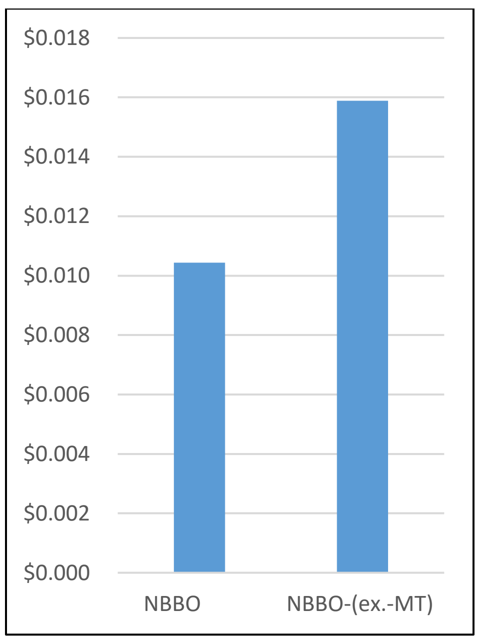
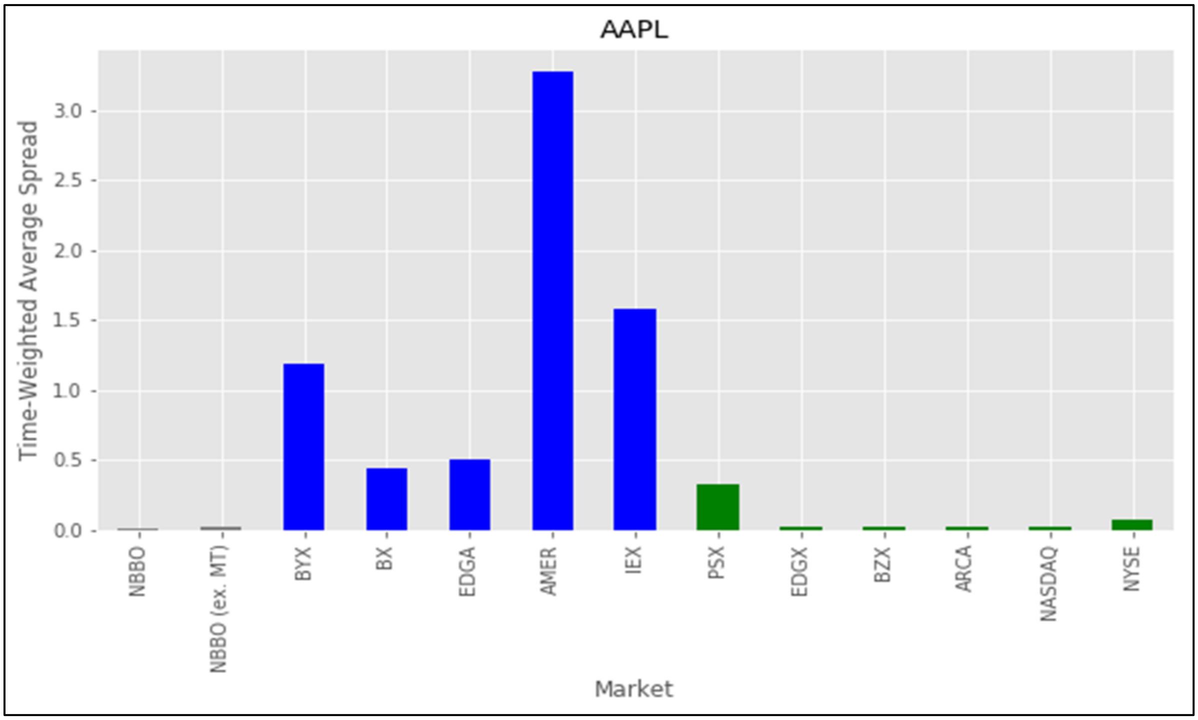

$0.018
$0.016
$0.014
$0.012
$0.010
$0.008
$0.006
$0.004
$0.002
$0.000
NBBO
NBBO-(ex.-MT)

Figure 1.

It is the same story for AAPL. The NBBO is $0.012, but when maker-taker exchanges are excluded from the NBBO the change in NBBO is even more pronounced than SPY at more than 100% wider ($0.028).



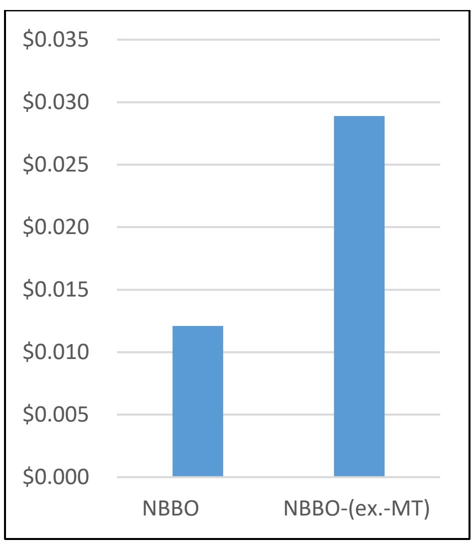


Figure 2.

As Figures 1 and 2 demonstrate, flat transaction fee exchanges and taker-maker exchanges have wider spreads than maker-taker exchanges. What explains this phenomena? Rebates to liquidity providers. Flat transaction fee exchanges and taker-maker exchanges do not provide rebates for liquidity provision. Maker-taker exchanges do provide rebates for liquidity provision. What is likely to occur when the Pilot, as proposed, limits the ability of maker-taker exchanges to offer rebates for liquidity provision? The incentive to provide liquidity on maker-taker exchanges will be diminished – as it is diminished on flat transaction fee exchanges and taker-maker exchanges. With diminished incentives to provide liquidity comes wider spreads, which again, is demonstrated when one compares exchanges with lower incentives to provide liquidity (flat transaction fee and taker-maker exchanges) to exchanges with higher incentives to provide liquidity (maker-taker exchanges).

Putting aside the most liquid stocks, most other stocks subjected to the Pilot will almost certainly suffer wider spreads. As noted in Cboe's first letter, the Commission recognizes that the Pilot "could lead to a temporary reduction of liquidity that could be particularly severe for small or mid-capitalization securities."[11] Cboe does not believe it is justified or prudent to harm trading in these securities through wider spreads and reductions in liquidity.

<u>Additional Test Groups and Notional-Based Pricing</u>

Cboe encourages the Commission to focus on alternatives to fee cap structures rather than implementing arbitrary price controls or rebate bans without any cost benefit analysis. The current access fee cap is set at $0.0030 and was justified as necessary to prevent predatory outlier pricing resulting from the Order Protection Rule.[12] Other commenters have noted that "there has been no serious economic analysis, let alone a cost-benefit analysis, of what the

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[11] *See* Release at 13067.
[12] *See* Securities Exchange Act Release 51808 (June 9, 2005), 70 FR 37496, 37545 (June 29, 2005).

optimal fee cap (if any) should be."[13] Cboe agrees. The $0.0030 level was arbitrarily determined, has never been tested to validate if it is properly calibrated, and may in fact be an unnecessary impediment to competition. If an exogenous shock to pricing is the Commission's method of studying the impact of price controls, controlled elimination of the fee cap would best test whether an access fee cap is necessary to prevent predatory outlier pricing. However, as others have suggested, a test group that increases the access fee cap to $0.0040 (or higher) also may allow the Commission to study the effects of the fee cap.[14]

Cboe believes it is time to reconsider the method of applying an access fee cap solely on a per share basis. An access fee cap that does not consider the share price of a stock disproportionally impacts lower priced stocks as the access fee makes up a higher percentage of the share price of a lower priced stock. Notional-based pricing that factors in the share price of a stock would level the playing field between lower priced and higher priced stocks and align the access fee with the notional risk of a transaction. *The $0.0030 fee cap as a proportion of the average share price has significantly decreased over time, decreasing nearly 80% from 2.93 bps*[15] *in 2008 to 0.60 bps in the first quarter of 2018*.[16] If over this period of time the access fee were notional-based and rose or fell in proportion to share prices the $0.0030 access fee cap would now be $0.0147 (or $1.47 per 100 shares).[17] To be clear, Cboe is not advocating for the access fee cap to be $0.0147, but a higher fee cap – or elimination of the fee cap altogether – should be on the table if a Pilot is forced on the markets. If the Commission proceeds with the Pilot, Cboe believes the fee cap should be tested to validate if it is properly calibrated. Regardless of whether the fee cap is properly calibrated today, the Commission should also consider

[13] *See* Letter from James J. Angel, Associate Professor of Finance, Georgetown University, McDonough School of Business, to the Securities and Exchange Commission, dated August 3, 2018.
[14] *See id*.
[15] Cboe's first comment letter mistakenly stated that the $0.0030 access fee cap was 0.29% of the Average Share Price in 2008; however, the fee cap was 0.029% of the Average Share Price in 2008.
[16] Average share price is calculated by dividing total notional value by share volume traded during each period. The average share price in 2008 was $10.22 and the first quarter of 2018 was $50.09.
[17] $0.0030 x (2.93/0.60) = $0.0147.

adopting a notional-based approach that will allow the access fee cap to fluctuate with share prices. The Commission failed to even consider this approach as an alternative to their currently proposed price control pilot.

No Barometer of Success

At a minimum, a proposed pilot should articulate what defines success. Market participants often disagree about which data points are most valuable. For example, the Tick-Size Pilot Assessment states that "tight bid-ask spreads are widely thought of as hallmarks of market quality, as they result in lower prices paid by investors buying shares and higher prices attained by sellers."[18] Cboe agrees. Bid-ask spreads are important data points to study because the Pilot has the potential to increase bid-ask spreads (i.e., increase the prices actually paid by investors buying shares and decrease prices attained by investors selling shares) for a large number of securities.

However, some disagree and believe a better measure of market quality is the 1-minute markout, or "1-minute P&L", which looks at an open position's profitability (on paper) within the first 60 seconds of a trade. Cboe believes the Commission's focus should be on long-term investors and fails to understand how measuring a position's potential profitability within the first 60 seconds is relevant to long-term investors; whereas spreads directly impact investors because they impact the prices investors actually pay. Even if 1-minute P&L data had value and eliminating rebate incentives on maker-taker exchanges would increase potential paper profits within the first 60 seconds of a trade (which is dubious), the wider spreads caused by eliminating rebate incentives would be more harmful to investors than any perceived benefits from larger paper profits within the first 60 seconds of a trade. For this reason, among others,

[18] *See* Tick-Size Pilot Assessment at 10.

Cboe does not believe it's sensible to eliminate a direct, rebate-driven benefit to investors in the hopes of increasing paper profits within the first 60 seconds of a trade.

This discussion underscores Cboe's belief that bid-ask spread data is of more value to long-term investors than paper profits/losses within the first 60 seconds of a trade. It also illustrates that if the Commission does not identify the criteria by which it will judge this Pilot, market participants will be in the same position post-pilot as they are pre-pilot—strongly disagreeing about which data points are most telling and which best demonstrate the quality of the customer experience. It is ill-advised to implement an experiment without a common understanding of success. This is even more apparent when one considers the Tick-Size Pilot discussed above. As market participants have noted, the Tick-Size Pilot did not include any mechanism for measuring the goals of the Tick-Size Pilot, and the results of the Tick-Size Pilot are that "[w]e are left in a situation where we can measure a clear harm, and have no way to measure whether there's any compensating benefit."[19] Cboe fears this Pilot is on the same path.

Better Alternatives

As more fully articulated in Cboe's first comment letter, Cboe supports the Commission's approval of the ATS amendments[20] but requests the Commission go further by better-defining broker-dealers' Duty of Best Execution. If the Commission were to define how brokers should treat their customers, the industry could innovate and develop tools to help brokers achieve that goal. Constraining competition by constraining exchange access fees is not the answer.

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19 *See* David Mechner, *SEC Transaction Fee Pilot Must Define and Measure Execution Quality*, TABB FORUM,May 30, 2018, https://tabbforum.com/opinions/sec-transaction-fee-pilot-must-define-and-measure-execution-quality (last visited September 14, 2018).

20 *See* Securities Exchange Act Release 83663 (July 18, 2018), 80 FR 38768 (August 7, 2018).

Cboe also takes this opportunity to reiterate and summarize its concerns with the Proposal:

- The Pilot would overhaul the pricing structure for 3,000 of the roughly 8,000 equity securities available for trading in the U.S. stock market. This is concerning because pricing impacts market quality, and market quality impacts investors. It is an incredibly large-scale experiment.
- The Commission has offered no evidence that U.S. equity market structure is damaged. To the contrary, quoted spreads, execution costs, and liquidity are better than ever, which begs an important question: what is the Commission trying to fix?
- The only justification offered for the proposal is to address perceived conflicts of interest of brokers. As discussed in Cboe's first letter, there are multiple ways to examine potential conflicts of interest that are far less intrusive.
- Most rebates accrue to liquidity-providing market-makers who trade their own capital. Those market-makers do not act in a brokerage capacity and have no agency obligations. The rebates facilitate the posting of more aggressive quotations by market-makers. Banning rebates out of concern over unsubstantiated broker activity really just impairs the ability of market-makers to provide the tightest possible markets for investors.[21] The Commission's proposal fails to recognize or even analyze the fact that the majority of rebates are provided to market participants that have no agency conflict.
- The proposal ignores the 40% of equities market activity that occurs off-exchange. The U.S. equities market is a complex interconnected eco-system, yet the proposal dangerously only imposes caps and pricing bans on registered exchanges—no other market participants or venues are targeted including dark pools and brokers. Once

[21] As previously noted, retail investor orders are overwhelmingly takers of liquidity and not makers of liquidity. This proposal hurts those investors.

again, the Commission's proposal fails to recognize or analyze the impact of creating such pricing distortion across the over-the-counter and on-exchange markets.

- The proposal picks winners and losers between ETF issuers and between listed companies.

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Cboe is also compelled to add its view concerning the heated rhetoric between several commenters. There is clearly a cynical narrative: that because certain exchanges are successful under the existing market structure, they are unwilling to accept changes to that market structure for fear of losing revenue and/or market share. Cboe rejects that narrative, but also seeks to point out that it has a flip-side which is virtually never discussed: are less successful exchanges willing to accept change *regardless of the potential negative consequences* in order to improve their business fortunes? Cboe is concerned that this debate about motives is obfuscating the facts, diminishing important data, and potentially diverting the Commission from the proper question—**Is a Pilot experiment that has the potential to seriously harm investors and issuers worth the risk?**

Put another way, the Pilot will likely cost investors millions of dollars, limit competition, create price controls, and, importantly, does nothing to solve the concern the Commission has identified as the purpose of the Pilot (i.e., potential broker conflicts of interest). Today, Investors enjoy low execution costs, fast executions, significant liquidity, and narrow spreads. How can it be that exchange fees (whether for transactions or market data) need to be subjected to regulatory intervention and price controls if investors are experiencing lower costs and better fills than ever?

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Cboe supports the Commission's focus on market structure health. However, Cboe urges the Commission to undertake a comprehensive review of equity market structure. The proposed pilot will come at a tremendous cost to everyday investors.

Sincerely,

Chris Concannon
President and Chief Operating Officer

Cc: The Honorable Jay Clayton, Chairman
The Honorable Kara M. Stein, Commissioner
The Honorable Michael S. Piwowar, Commissioner
The Honorable Hester M. Peirce, Commissioner
The Honorable Robert J. Jackson, Jr., Commissioner
Brett Redfearn, Director, Division of Trading and Markets
David S. Shillman, Associate Director, Division of Trading and Markets
Richard Holley III, Assistant Director, Division of Trading and Markets