December 20, 2019

Via Electronic Submission

Vanessa Countryman
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549-1090

Re: Release No. 34-87327, File No. S7-18-19

Dear Ms. Countryman:

Cboe Global Markets, Inc. ("Cboe") appreciates the opportunity to comment on the Commission's Statement on Market Structure Innovation for Thinly Traded Securities ("Statement").[1] The Statement requests comment on potential innovations that could improve market quality in equity securities that trade in lower volume ("thinly traded securities"), and seeks further feedback on the regulatory changes that may be needed to facilitate such innovation. Cboe shares the Commission's interest in improving market quality in this segment of the U.S. equities market, and believes that the best way to accomplish this goal is through innovation and targeted approaches that invite investor choice.

I. *Background on Thinly Traded Securities*

Although there is no generally accepted definition of "thinly traded securities," corporate equity securities that have a market capitalization of $2 billion or less, and trade an average daily volume ("ADV") of 50,000 shares or less, may be considered thinly traded.[2] In addition to

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1 See Securities Exchange Act Release No. 87327 (October 17, 2019), 84 FR 56956 (October 24, 2019) (File No. S7-18-19).

2 The Exchange compiled a list of 781 securities that met the above definition on November 21, 2019. This list included 626 securities listed on The Nasdaq Stock Market

infrequent trading, such securities often trade with wider spreads, and with less liquidity displayed at the national best bid or offer ("NBBO"), ultimately making them more difficult for investors to trade in the public market. Table A below illustrates average and median NBBO spreads, which are significantly wider in thinly traded securities than non-thinly traded securities.

Table A: NBBO Spreads in Thinly Traded Securities

(November 21, 2019)

	Thinly Traded Securities	All Other Securities
Average NBBO Spread	$0.39	$0.08
Median NBBO Spread	$0.14	$0.03

Further, as illustrated in Table A below, these securities suffer from significantly less liquidity, with average size displayed at the NBB and NBO that is almost three times smaller than size displayed in non-thinly traded securities.

Table A: Smaller Displayed Size in Thinly Traded Securities

(Per Exchange; January – November 2019)

	Thinly Traded Securities	All Other Securities
Average Exchange Size at NBO	249 shares	786 shares
Average Exchange Size at NBB	266 shares	738 shares
Median Exchange Size at NBO	100 shares	120 shares
Median Exchange Size at NBB	100 shares	119 shares

LLC ("Nasdaq"), 69 securities listed on New York Stock Exchange LLC ("NYSE"), and 86 securities listed on NYSE American LLC ("American"). This list of 781 securities is used for the statistical analyses compiled by Cboe and included in this comment letter.

There are also material differences in *where* thinly traded securities trade. It has been claimed that the problem with thinly traded securities lies with exchange fragmentation, and consequently one solution that has been suggested is for the Commission to suspend or terminate unlisted trading privileges ("UTP") in these securities. The data, however, suggests that *exchange* fragmentation is not actually a problem in thinly traded securities at all. First, when looking exclusively at trading on exchanges, there is actually greater concentration on the primary listing exchange, where more than half of all exchange volume is executed in thinly traded securities, compared to one third of exchange volume for other more liquid securities. Second, looking at the market as a whole, there is greater over-the-counter ("OTC") trading in thinly traded securities, with such securities trading, on average, more than 47% in OTC volume, compared to 37% OTC volume in more liquid securities. In fact, more than one third (37%) of thinly traded securities have significant OTC volume that exceeds exchange volume, and this volume is often dispersed among a large number of different OTC venues.[3] Table B below illustrates the percentage of volume in both thinly traded and non-thinly traded securities that is executed on: (1) the primary listing exchange; (2) other national securities exchanges; and (3) OTC venues.

Table B: Greater Concentration on Primary & OTC in Thinly Traded Securities

(January – November 2019)

	Thinly Traded Securities	All Other Securities
Primary Listing Exchange	29.92%	21.12%
Other National Securities Exchanges	25.78%	41.83%
OTC Venues	47.30%	37.06%

Finally, there are important differences in terms of the prices at which thinly traded securities are executed. Displayed spreads in the public markets can be wide in thinly traded securities, as shown in Table A, but this only tells a part of the whole picture. Almost half of all

3 Specifically, Cboe has found that 292 out of 781 thinly traded securities have OTC volume that constituted more than half of all trading activity.

trading activity in these securities occurs within the spread at prices better than market participants are willing to display in the public markets. One third of all exchange volume in thinly traded securities is executed with price improvement, or about double the amount of price improvement received on exchanges in non-thinly traded securities where a significant majority of trading occurs at the NBBO. Similar results are seen in the OTC market where about half of all volume receives some price improvement in non-thinly traded securities, compared to almost two thirds of all volume executed at improved prices in thinly traded securities. This suggests that solutions to address market quality in these securities require not merely rewarding displayed limit orders posted on an exchange but actually encouraging liquidity to be made available at prices where investors are willing to trade. Table C below illustrates the percentage of volume on exchange and OTC that is executed with price improvement in both thinly traded and non-thinly traded securities.

Table C: Greater Price Improvement in Thinly Traded Securities

(January – November 2019)

	OTC		**Exchanges**	
	Thinly Traded Securities	**All Other Securities**	**Thinly Traded Securities**	**All Other Securities**
% Shares Better than NBBO	62%	50%	33%	16%

II. *Suspending or Terminating UTP would Curtail Innovation*

Cboe understands that the Commission would consider proposals that could include the suspension or termination of UTP and/or exemptive relief from Regulation NMS and other rules under the Securities Exchange Act of 1934 ("Exchange Act"). If we are to be successful in improving market quality in thinly traded securities, Cboe believes it is critical that the "innovative proposals" that the Commission has requested enable "fair competition… among exchange markets, and between exchange markets and markets other than exchange market" pursuant to

Section 11A of the Exchange Act.[4] Regulation NMS and related Commission rules have been largely successful in improving market quality as a result of encouraging a diversity of trading venues for investors to transact in NMS stocks. To that end, Cboe's U.S. equities markets are at the forefront of the competition and innovation that has improved market quality and enhanced the experience of investors that rely on the public market for their investments needs.

Indeed, in the last year alone Cboe has filed several innovative proposals to improve the investor experience in the U.S. equities markets. These include: (1) a recently approved proposal to introduce order book priority for retail investors on Cboe EDGX Exchange, Inc. ("EDGX");[5] (2) a proposal to encourage competitive liquidity provision and improved market quality on Cboe EDGA Exchange, Inc. ("EDGA") by introducing a liquidity provider protection;[6] (3) a proposal to facilitate the execution of intraday liquidity on EDGX through the introduction of a midday cross;[7] and (4) an immediately effective fee proposal designed to incentivize Lead Market Makers to improve market quality in exchange traded products ("ETPs") listed on Cboe BZX Exchange, Inc. ("BZX").[8] Without UTP, these innovations would not be available to investors in thinly traded securities, who would be effectively limited to the market structure offered by the primary listing exchange. Proponents of suspending or terminating UTP criticize the "one-size-fits-all" market structure in place today. Their proposed fix is to limit trading to a single national securities exchange, offering a single market structure. The irony of this solution is not lost on Cboe.

The prospect of suspending or terminating UTP in thinly traded securities raises a number of important legal and policy questions that the Commission should confront prior to considering any proposals based on such an impactful change to the regulatory landscape. For example:

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4 See 15 U.S. Code § 78k–1(a)(1)(C)(ii).

5 See Securities Exchange Act Release No. 87200 (October 2, 2019), 84 FR 53788 (October 8, 2019) (SR-CboeEDGX-2019-012) (Approval Order).

6 See Securities Exchange Act Release No. 86168 (June 20, 2019), 84 FR 30282 (June 26, 2019) (SR-CboeEDGA-2019-012) (Notice).

7 See SR-CboeEDGX-2019-076 (pending publication).

8 See Securities Exchange Act Release No. 86213 (June 27, 2019), 84 FR 31951 (July 3, 2019) (SR-CboeBZX-2019-058) (Notice and Immediate Effectiveness).

1. Is it in the public interest to deprive investors of market structure benefits available on diverse equities exchanges (*e.g.*, priority for retail investors) and concentrate exchange trading on a single market that does not offer those benefits?
2. Are sweeping regulatory changes that eliminate innovative and well-regarded trading venues needed to encourage innovation, and would any innovation so encouraged offset present and future innovations lost?
3. Would such limitations be consistent with Section 11A of the Exchange Act, and Congress's intent to facilitate competition as one of its primary goals for the national market system?
4. Would it be legal and consistent with congressional intent for the Commission to suspend or terminate UTP for thinly traded securities as part of a large scale market structure experiment that may harm investors?[9]
5. Does the Commission have the authority to suspend or terminate UTP for thinly traded securities upon the application of an exchange filed pursuant to Section 12(f)(4) of the Exchange Act instead of "by rules and regulation" – *i.e.*, notice and comment rulemaking – as contemplated for "classes of securities" pursuant to Section 12(f)(3)?[10]

Although Cboe is certainly interested in any proposals that the Commission may receive from other U.S. equities exchanges, our answer to each of these questions would be a simple "no." UTP, and the competition and innovation that it permits, is at the heart of the U.S. equities ecosystem.[11] Indeed, the concept of UTP has been repeatedly been strengthened by Congress in

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9 We note that previous attempts to improve liquidity for thinly traded securities have fallen short (e.g. tick size pilot) while imposing meaningful costs. Although this should not deter further attempts at improvement, costs and potential harm to investors must remain front-of-mind as the Commission considers proposals to address these issues.

10 See 15 U.S. Code § 78l(f). Section 12(f) contains two provisions related to the temporary suspension or termination of UTP for up to twelve months. Although Section 12(f)(4) authorizes the Commission to suspend or terminate UTP temporarily for individual securities on the application of an interested party, or on its own motion, Section 12(f)(3) requires that such action be taken "by rules and regulations" for suspensions of UTP involving "any or all classes of securities."

11 In its 2018 application to suspend UTP in a number of Nasdaq-listed securities, Nasdaq suggested that the clear harm to competition between venues that would result from suspending UTP would be mitigated by greater competition for listings. In fact, there is

the years following the 1936 amendment to the Exchange Act that permitted UTP subject to Commission review, including notably through the UTP Act of 1994, which eliminated the prior application, notice, and review process that had already by that time become largely perfunctory.[12] Suspending or terminating UTP in thinly traded securities would risk many of the benefits that have been accrued through increased competition, and may do so in a manner that has spillover effects on the broader market. Cboe is concerned that suspending or terminating UTP may impair rather than improve market quality in thinly traded securities, including by locking innovators like Cboe out of the market. Further, such a change risks eliminating liquidity that is not easily ported to the primary listing exchanges (*e.g.*, liquidity from market makers not registered on those exchanges), and shifting even more order flow from transparent exchange markets into a number of more fragmented and less regulated off-exchange markets. We therefore respectfully suggest that the Commission consider innovations that are designed to improve market quality without eliminating the existing competition that drives innovation in the first place. Some such innovations are discussed in the following section of this letter.

III. *Cboe Recommendations to Improve Trading in Thinly Traded Securities*

Improving market quality in thinly traded securities first requires an understanding of how those securities trade today, and the issues faced by market participants. Although certain commenters have suggested that the problem in these securities is exchange fragmentation, these arguments are simply not supported by the facts. The fact is, Regulation NMS has already fostered seamless interconnectivity between national securities exchanges that trade NMS stocks, allowing investors to source liquidity across the U.S. equities exchanges. Moreover, *there is already significantly lower exchange fragmentation and greater consolidation of liquidity on the primary*

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hardly any competition for listing of securities identified by Nasdaq in its application, in large part due to the fact that many of those securities only qualify for listing on a single primary listing market. Of the 776 securities selected by Nasdaq for suspension of UTP only 169 would even qualify for listing on NYSE. That is, the significant majority of those securities (78%) do not meet the higher listing requirements for NYSE, and would therefore effectively be limited to listing on Nasdaq.

[12] The legislative history indicates that the Commission routinely approved requests for UTP, such that no requests for UTP had been denied since 1934. See 140 Cong. Rec. H6508 (daily ed. Aug. 1, 1994) (statement of Rep. Markey).

listing exchanges in these securities. Despite this fact, close to half of trading in thinly traded securities occurs on a large number of diverse OTC venues.

A successful approach to improving market quality in thinly traded securities should therefore focus on the difficulties that market participants face in trading these securities in the public markets today – *e.g.*, sourcing liquidity, the availability of price improvement opportunities, and the potential for significant market impact in securities that are less liquid and trade infrequently. Cboe is currently working on a handful of complementary approaches that may allow market participants to source liquidity without market impact, and potentially at improved prices. While not an exhaustive list by any means, these recommendations can be built upon by Cboe and other U.S. equity exchange operators to improve market quality while continuing to encourage meaningful competition that can drive further innovation.

Improving Market Quality Through Innovative Pricing Initiatives

Our experience in operating a listings business for ETPs has shown that there is a significant opportunity for national securities exchanges to enhance market quality through pricing programs that are designed with thinly traded securities in mind. Indeed, Cboe has done this with its own listed ETPs, many of which trade in lower volume, and has seen positive improvements in market quality as a result of those changes. Notably, Cboe recently introduced an innovative Lead Market Maker ("LMM") program on BZX that provides daily incentives to LMMs that meet certain enhanced market quality standards in BZX-listed ETPs. The revised LMM program was designed to specifically address issues related to encouraging liquidity provision in new and lower volume ETPs where transaction-based compensation (*i.e.*, rebates) may not be sufficient to incentivize improvements in market quality. While Cboe's analysis is ongoing, initial results show very promising improvements in market quality in thinly traded ETPs. For example, comparing the first three months where the Program was fully in effect (*i.e.*, September, October, and November) and the three months prior to implementation (*i.e.*, May, June, and July) shows improvement in both spreads and size in BZX-listed ETPs with less than 50,000 shares of consolidated average daily volume.[13] Specifically, Cboe has found: (1) a 11.1% decrease in quoted

[13] The month of August is excluded from this analysis as the current program was not fully implemented until September in order to provide sufficient time for LMMs to adjust to the new structure. In addition, symbol RODI is excluded due to infrequent quoting in that symbol during the period studied.

spreads on BZX, a 12.5% decrease in NBBO spreads; and a 28.8% increase in size at the inside on BZX. Table D below illustrates the improvements in market quality in thinly traded ETPs listed on BZX following the recent introduction of our revised LMM Program.

Table D: Market Quality Improvements in BZX Listed ETPs
Following Introduction of the Revised LMM Program

	Pre-Period (May – July 2019)	**Post-Period** (Sept. – Nov. 2019)	**% Change**
Average BZX Quoted Spread (%)	0.36%	0.32%	-11.1%
Average NBBO Quoted Spread (%)	0.32%	0.28%	-12.5%
Average BZX Inside Size (bid and ask)	2,292 shares	2,951 shares	28.8%

Of course, there may be relevant differences between trading of ETPs and corporate securities but innovative approaches like this should not be ignored by primary listing exchanges that are interested in improving market quality in thinly traded securities. Moreover, such approaches should be considered prior to enacting major market structure reforms that have the potential to reduce competition and harm investors. Although Cboe has chosen this particular approach for improving market quality in its listed ETPs, primary listing exchanges for corporate securities can and should consider different approaches to improve market quality in their listed securities. Such pricing programs need not apply to all NMS stocks but could be limited to thinly traded securities, and therefore be used address the specific issues that investors face when trading those securities in the public markets today, including, for example, by incentivizing more robust midpoint liquidity in thinly traded securities that may not make it to the public markets today.[14]

[14] During January to November 2019, Cboe found that in thinly traded securities listed on Nasdaq, only 17% of midpoint volume was executed on the primary listing market, compared to 25% on other national securities exchanges, and 58% on OTC venues.

On Demand Auctions

Cboe has also been actively working on market structure solutions to enhance market quality and improve the ability for investors to access liquidity in securities traded on our U.S. equities exchanges. As mentioned in the previous section of this letter, this includes efforts to encourage more aggressive liquidity provision through the introduction of a liquidity provider protection on EDGA, as well as a new project to introduce a midday cross on EDGX that would help investors source liquidity in size intraday, *i.e.*, outside the open and close of trading. In addition to these projects, which have both been filed with the Commission, Cboe is intends to submit proposals for further refinements that would allow market participants to source liquidity when they need it, rather than at a particular time of day. Specifically, Cboe is considering the introduction of "on demand auctions" – *i.e.*, auctions initiated by a market participant entering an order in a particular security. For example, upon entry of an order entered with an auction instruction, an exchange could initiate a blind auction in that security specifying that an order is available, but without indicating price, side, or size. Such auctions could allow investors to source liquidity without displaying their orders, and could be implemented by one or more exchanges without compromising available liquidity. Further, such mechanisms could reduce the potential for information leakage that moves the market in thinly traded securities, as neither the auction initiator nor responders would be required to display trading interest on the continuous order book.

Regulatory Changes to Facilitate Market Quality Proposals

The proposals outlined above highlight meaningful changes that Cboe and other U.S. equities exchange operators may be able to implement within the existing regulatory framework. That said, the impact of regulation is a key factor that should be considered thoughtfully in any market structure debate, and Cboe appreciates the Commission's willingness to consider different approaches for encouraging market quality improvements in thinly traded securities. Although revoking UTP would do little to encourage innovation that helps investors, the Commission should remain open to proposals that request relief from Regulation NMS, including the firm quote requirements of Rule 602 ("Quote Rule"), and block or other exemptions from Rule 611 ("Order Protection Rule"). Specifically, the Commission should consider approaches that would allow U.S. equities exchanges to compete directly with OTC venues that offer unique features, such as conditional orders, that cannot be offered on a national securities exchange under current regulations. A limited exemption from the Quote Rule, for example, would allow exchanges to bring some of this order flow into the public market by permitting them to either offer conditional order types to their members, or to display conditional orders already being used on OTC venues.

IV. *Conclusion*

Cboe appreciates the opportunity to share its views on how to improve market quality in thinly traded securities. While there is clearly work to be done, Cboe believes that approaches to solving the issues that investors face in trading these securities must: (1) allow for continued competition and innovation, consistent with Section 11A of the Exchange Act; and (2) be properly attuned to the realities of trading in thinly traded securities, and the specific issues experienced by investors in trading these securities in the public market.

Sincerely,

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Adrian Griffiths
Assistant General Counsel