



**EDWARD S. KNIGHT**  
Executive Vice President and General Counsel  
805 King Farm Boulevard  
Rockville, MD 20850

**P:** [REDACTED]  
**F:** [REDACTED]  
**E:** [REDACTED]

April 25, 2018

Honorable Jay Clayton, Chairman  
U.S. Securities and Exchange Commission  
100 F Street NE  
Washington, DC 20549

**Re: Application to Permit Issuer Choice to Consolidate Liquidity  
By Suspending Unlisted Trading Privileges**

Dear Mr. Clayton:

Pursuant to Section 12(f) of the Securities Exchange Act of 1934 (“Act”),<sup>1</sup> Nasdaq, Inc. (“Nasdaq”) is writing to respectfully apply to the Securities and Exchange Commission (“SEC” or “Commission”) to suspend the unlisted trading privileges (“UTP”) of certain Nasdaq-listed securities (“Application”). As is discussed below, Nasdaq believes that suspension of UTP for these securities is appropriate, and promotes the public interest and the protection of investors. Nasdaq also believes that suspension of UTP for these securities promotes efficiency, competition, and capital formation. As is discussed in greater detail below, Nasdaq believes that the Application:

- Promotes economic and pricing efficiency by focusing the listing and trading of securities for which UTP has been suspended on one venue;
- Encourages national securities exchanges that are listing markets to compete more aggressively to list and trade the securities for which UTP has been suspended;
- Improves market structure and market quality for securities for which UTP has been suspended, incentivizing additional smaller companies to list on the public markets.

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<sup>1</sup> 15 U.S.C. 78(l)(f).

- Preserves competition for listings among exchanges and competition for order flow with off-exchange trading venues and between listing venues. Additionally, Nasdaq is committing to not raise market data fees in connection with this Application. These steps, combined with the Commission’s comprehensive authority to regulate exchanges, are more than adequate to constrain the pricing power that might otherwise result from an exclusive listing.

This Application focuses on the stocks of operating companies and does not address thinly-traded exchange traded products. Nasdaq believes that suspending UTP in the stocks of operating companies will help solve a set of problems facing the public company model. Thinly-traded ETPs face different challenges, use different metrics for measuring liquidity, and encounter different institutional and retail investor dynamics. Nasdaq shares the industry’s concerns about the challenges faced by ETP issuers, particularly around FINRA Rule 5250 and the ability of issuers and market makers to lower the costs of smaller trades in thinly-traded ETPs. We look forward to continuing the debate on ETP-related issues while we pursue a proposed tool for helping publicly traded operating companies.

## **I. Background**

Section 12(f) of the Act provides that any national securities exchange may extend UTP to (1) any security that is listed and registered on a national securities exchange, or (2) any security that is otherwise registered pursuant to this section, or that would be required to be so registered except for the exemption from registration relating to (i) any security issued by an investment company registered pursuant to the Investment Company Act of 1940; or (ii) certain securities issued by an insurance company.<sup>2</sup> The concept of UTP was originally adopted in 1936, and has been subsequently amended. For example, the UTP Act of 1994<sup>3</sup> amended Section 12(f) to remove the application,

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<sup>2</sup> See 15 U.S.C 78(l)(f)(1)(A).

As set forth in Section 12(f), no extension of UTP to securities described in category (2) may occur except pursuant to an SEC rule or order approving such extension or extensions. In promulgating such rule or order, the Commission shall consider various factors, including whether such extension or extensions of unlisted trading privileges is consistent with the maintenance of fair and orderly markets, the protection of investors and the public interest, and otherwise in furtherance of the purposes of this title; the public trading activity in such securities, the character of such trading, the impact of such extension on the existing markets for such securities, and the desirability of removing impediments to and the progress that has been made toward the development of a national market system.

<sup>3</sup> Pub. L. No. 103-389, 108 Stat. 4081 (1994).

notice, and Commission approval process from Section 12(f), except in cases of Commission suspension of UTP in a particular security on an exchange.<sup>4</sup>

Section 12 also sets forth two provisions pursuant to which the Commission may suspend the UTP trading of securities for up to twelve months. Specifically, Section 12(f)(3) provides that the Commission shall suspend, by rules and regulations, UTP in whole or in part for any or all classes of securities for a period not exceeding twelve months, if it deems such suspension necessary or appropriate in the public interest or for the protection of investors or to prevent evasion of the purposes of this title.<sup>5</sup>

Similarly, Section 12(f)(4) provides that the Commission shall by order terminate, or suspend for a period not exceeding twelve months, UTP on its own motion, or on the application of the issuer of any security for which unlisted trading privileges on any exchange have been continued or extended, or of any broker or dealer who makes or creates a market for such security, or of any other person having a bona fide interest in the question of termination or suspension of such unlisted trading privileges. The Commission must find, after appropriate notice and opportunity for hearing, that “such termination or suspension is necessary or appropriate in the public interest or for the protection of investors.”<sup>6</sup>

Nasdaq now applies to the Commission to suspend the UTP trading of certain Nasdaq-listed securities, pursuant to either Section 12(f)(3) or Section 12(f)(4) of the Act, for a period not exceeding twelve months. As the listing exchange for the securities for which it seeks suspension of UTP trading, Nasdaq believes that it has a bona fide interest in, and is uniquely positioned to seek suspension of UTP trading for those securities.

## **II. Scope of Application**

Nasdaq proposes that suspension of UTP trading be permitted for Nasdaq-listed securities that: (1) are issued by an operating company; (2) have an initial market capitalization of \$700 million or less or a continued market capitalization of \$2 billion or less; (3) have an initial Average Daily Volume (“ADV”) of 100,000 shares or less; and (4) have a bid price greater than \$1 (“Subject Securities”).<sup>7</sup> Securities that are currently

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<sup>4</sup> See Securities Exchange Act Release No. 43217 (August 29, 2000), 65 FR 53560 (September 5, 2000) (S7-29-99).

<sup>5</sup> See 15 U.S.C. 78(l)(f)(3).

<sup>6</sup> See 15 U.S.C. 78(l)(f)(4). See also Rule 12f-3, 17 CFR 240.12f-3 (setting forth procedures for seeking termination or suspension of unlisted trading privileges under Section 12(f)(4)). Sections 12(f)(3) and (4) were added by the Securities Exchange Act Amendments of 1936. See Pub. L. 74-621, 49 Stat. 1375 (1936).

<sup>7</sup> Currently, there are approximately 789 Nasdaq-listed companies with less than \$700M market capitalization, an ADV of 100,000 shares or less, and a bid price

included in Test Groups 1-3 of the National Market System Plan to Implement a Tick Size Pilot Program (“Tick Size Pilot”)<sup>8</sup> would not be eligible for inclusion in the Application for the duration of the Tick Size Pilot.<sup>9</sup> A security that initially meets the conditions set forth above but subsequently fails to meet them shall have a reasonable period of time, not to exceed six months, before UTP is restored.

In addition, an issuer whose security meets these criteria must voluntarily elect to have UTP suspended for that security. This proposal is designed to provide issuers with a high-level choice of market structure. Issuers have communicated to Nasdaq that the lack of a voice in how their securities will trade once public is a significant sacrifice; being forced into a one size fits all model - irrespective of how one’s securities may or may not trade - is an obstacle to choosing the public company model. Issuers are not seeking control over details of market structure, such as tick size or frequency of auctions or array of available order types. The binary choice that Nasdaq proposes -- either in or out of the UTP environment – is sufficient. Making the public markets more attractive to issuers promotes public capital formation which, in turn, benefits retail investors by creating investment opportunities.

Nasdaq believes that suspending UTP trading for the Subject Securities is necessary and appropriate in the public interest and for the protection of investors for several reasons. First, while UTP may promote competition and price discovery in more liquid issuers, Nasdaq believes that UTP may exacerbate market fragmentation and thereby negatively impact market quality for less liquid issuers. The Subject Securities have smaller market capitalization and are, on average, less liquid than stocks with larger market capitalizations. As is discussed in greater detail below, Boards of Directors have the capacity and authority to assess whether the suspension of UTP trading would promote market quality, foster increased innovation in market structure, reduce market complexity and promote efficiency in the subject securities.

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greater than \$1. These securities account for 0.31 percent of total notional value of trading and 1.23 percent of total market capitalization of Nasdaq-listed securities issued by an operating company. There are currently approximately 125 companies listed on the New York Stock Exchange LLC and approximately 100 companies listed on NYSE American LLC that meet these criteria.

<sup>8</sup> See Securities Exchange Act Release No. 74892 (May 6, 2015), 80 FR 27513 (May 13, 2015).

<sup>9</sup> Securities that are currently part of the Control Group of the Tick Size Pilot would be eligible for immediate inclusion in the Application, assuming they meet all of the other criteria of the Application, as would Test Group 1-3 securities upon expiration of the Tick Size Pilot. In the event of the adoption of an access fee pilot program by the Commission, the Exchange would propose a similar exclusion for securities that are included in the test groups of that pilot.

Second, Nasdaq believes that suspending UTP trading in the Subject Securities will promote market quality by, among other things, promoting the submission of displayed limit orders in those securities. Displayed limit orders facilitate price discovery, a fact recognized by the Commission in affording displayed limit orders at the best price enhanced treatment under the Order Protection Rule (“OPR”).<sup>10</sup> Suspending UTP trading for the Subject Securities would allow the trading of those securities, including the posting of limit orders and the submission of contra-side marketable orders, to be concentrated on a single market. This would increase the potential for limit orders in those securities to be executed, which would incentivize the submission of limit orders in the Subject Securities and promote the price discovery process in those securities.<sup>11</sup>

Third, Nasdaq also believes that the absence of UTP trading will foster innovations in market structure that may not be feasible in an environment where stocks trade via UTP. Suspending UTP trading for the Subject Securities would provide Nasdaq with the opportunity to create functional and financial incentives for displayed limit orders in the Subject Securities that are closely tailored to the trading characteristics of those securities, and thereby encourage additional trading, including the increased submission of displayed limit orders, in these securities. As another example, Nasdaq may determine to implement intraday auctions for the Subject Securities, which may be a more effective mechanism to bring together supply and demand in the Subject Securities than continuous trading, and which would be less effective if these securities continued to trade UTP. By way of further example, concentrating exchange trading in the Subject Securities on Nasdaq would make the implementation of an intelligent tick size regime or an intelligent lot size regime more feasible, so that the displayed quote of the Subject Security would be optimized to its trading characteristics to promote more vibrant price discovery.<sup>12</sup>

Fourth, Nasdaq believes that suspending UTP for the Subject Securities would reduce market complexity, promote market stability, and promote efficiency. First, in reducing the venues that trade the Subject Securities, market participants would not need to link to other venues for purposes of price discovery or trade execution for these securities. Second, Nasdaq believes that concentrating all exchange trading in the Subject Securities on Nasdaq may assist broker-dealers in meeting their best execution

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<sup>10</sup> 17 CFR 242.611.

<sup>11</sup> As is discussed below, Nasdaq is not proposing to alter the over-the-counter trading in the Subject Securities through this Petition.

<sup>12</sup> Nasdaq notes that, in its recent report on capital markets, the U.S. Treasury Department also endorsed an intelligent tick size regime, whereby more-liquid stocks would likely have lower tick sizes, and less-liquid stocks would likely have higher tick sizes. *See* U.S. Department of the Treasury, Report to President Donald J. Trump, “A Financial System That Creates Economic Opportunities • Capital Markets”, dated October 2017 (“Treasury Report”), at 61.

obligations, and would further the recommendation of the Treasury Report for simplifying brokers' best execution obligations.<sup>13</sup> Third, concentrating all exchange trading in the Subject Securities on Nasdaq would consolidate the surveillance of exchange trading in those securities on Nasdaq, which would increase regulatory efficiency and may foster innovation in surveillance methods and patterns. Finally, order types and artificial time delays designed specifically to accommodate regulations for a fragmented market can be removed, increasing market simplicity.

Finally, Nasdaq notes that the U.S. Treasury Department ("Treasury") recently endorsed this position in its report on capital markets.<sup>14</sup> Specifically, Treasury recommended "issuers of less-liquid stocks, in consultation with their underwriter and listing exchange, be permitted to partially or fully suspend UTP for their securities and select the exchanges and venues upon which their securities will trade."<sup>15</sup> The report noted that "[c]onsolidating trading to fewer venues would simplify the process of making markets in those stocks and thereby encourage more market makers to provide more liquidity in those issues." The report also noted that issuers "have a unique interest in promoting the liquidity of their stocks and balancing the interests of market-makers and investors."<sup>16</sup>

In the following paragraphs Nasdaq addresses the regulatory impacts of suspending UTP for the Subject Securities. We believe that the current level of system resiliency will be maintained if the Subject Securities are traded only on Nasdaq. We also propose mechanisms for continuing to consider Subject Securities as National Market System ("NMS") stocks, continuing to have their market data included in Nasdaq UTP plan and Nasdaq's proprietary data feeds, and continuing to have their trading subject to Regulation NMS. We believe that the current regulatory environment for NMS stocks can readily accommodate Subject Securities trading only on Nasdaq.

Ensuring that a robust "hot-hot" backup system is in place will mitigate any potential concerns about system resiliency that may arise from suspending UTP for the Subject Securities.<sup>17</sup> If the Application were granted, Nasdaq would commit to

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<sup>13</sup> See Treasury Report at 65-66.

<sup>14</sup> *Id.* at 60.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> Nasdaq notes that NYSE Arca, Inc. is already the official designated back-up exchange in the event of a systems disruption. See Securities Exchange Act Release No. 77309 (March 7, 2016), 81 FR 13007 (March 11, 2016) (SR-NASDAQ-2016-035). Nasdaq also operates two other equities exchanges, Nasdaq BX and Nasdaq PSX that could also serve as back-ups.

implementing such a backup system prior to the suspension of UTP trading in the Subject Securities.

While Nasdaq is requesting that the Commission suspend the UTP trading of the Subject Securities, these securities will continue to be NMS stocks.<sup>18</sup> The Subject Securities will remain “Eligible Securities” pursuant to the Nasdaq UTP Plan, and quotations and trades in those securities will continue to be reported pursuant to that Plan as they are today.<sup>19</sup> Nasdaq believes that, if UTP trading in the Subject Securities is suspended, this approach will preserve Commission regulation to ensure fair and non-discriminatory access to quotation and trade information in the Subject Securities that is currently available today in these securities, promoting transparency and continuity and thereby protecting investors.

Relatedly, if UTP trading in the Subject Securities were suspended, Nasdaq would not put the Subject Securities on a separate proprietary data feed. To the extent that market data information about the Subject Securities is already included as part of Nasdaq proprietary data products, Nasdaq would not impose any Subject Security-specific fee increases for those data products if UTP trading were suspended for those securities. Further, in recognition of the fact that the Subject Securities would no longer trade on other exchanges via UTP, Nasdaq would propose to remove quotation and trading activity in the Subject Securities from the current revenue allocation formula, which would be accomplished through an amendment to the Nasdaq UTP Plan.<sup>20</sup>

To the extent that the Subject Securities remain NMS Securities, the current definitions and requirements set forth in Regulation NMS<sup>21</sup> that apply to NMS stocks and to national securities exchanges and market centers that trade NMS stocks would

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<sup>18</sup> An NMS stock is defined as any NMS security other than an option. *See* 17 CFR 242.600(b)(47). An NMS Security is defined as “any security or class of securities for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan.” *See* 17 CFR 242.600(b)(46).

<sup>19</sup> Section II of the Nasdaq UTP Plan defines an Eligible Security as “any Nasdaq Global Market or Nasdaq Capital Market security, as defined in NASDAQ Rule 4200.” Eligible Securities do not include “any security that is defined as an ‘Eligible Security’ within Section VII of the Consolidated Tape Association Plan.”

<sup>20</sup> *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496 (June 29, 2005) (S7-10-04) (noting that, “[a]s with any other aspects of the [joint industry] Plans, the language added to the Plans by the Allocation Amendment can be adjusted in the future pursuant to the normal process of Commission-approved amendments.”).

<sup>21</sup> *See* 17 CFR 242.600 *et seq.*

continue to apply to the Subject Securities.<sup>22</sup> For example, the current limitations on access fees would continue to apply,<sup>23</sup> as would the current requirements relating to the OPR.<sup>24</sup> Similarly, market-wide regulatory initiatives, such as National Market System Plan to Address Extraordinary Market Volatility, and exchange rules relating to clearly erroneous executions, would not be affected by this proposal. Nasdaq would continue to apply these requirements to the Subject Securities as it does today.

### **III. Economic Analysis**

Nasdaq believes that consolidating displayed liquidity for smaller companies onto a single trading venue would help those companies and their investors by facilitating capital formation and improving investors' ability to source liquidity. Consolidating liquidity for smaller companies would meaningfully improve market quality for these securities by incentivizing increased submission of limit orders thereby improving price discovery and reducing volatility in share trading of smaller issuers. Improved market quality would lower investors' illiquidity discount, reduce the cost of capital, and improve the capital formation process for smaller companies.<sup>25</sup>

Nasdaq is sensitive to the economic effects of the Application, not least the effects on competition for order flow. Nasdaq respectively offers its assessment of the economic impact of the Application on efficiency, competition, and capital formation.

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<sup>22</sup> The following rules and requirements in Regulation NMS apply to NMS stocks and national securities exchanges and market centers that trade NMS stocks:

- Definition of NMS stock (Rule 600);
- Dissemination of transaction reports and last sale data with respect to transactions in NMS stocks (Rule 601);
- Dissemination of quotations in NMS securities (Rule 602);
- Distribution and display of information in NMS stocks (Rule 603);
- Display of customer limit orders (Rule 604);
- Disclosure of order execution information (Rule 605);
- Disclosure of order routing information (Rule 606);
- Access to quotations (Rule 610);
- Order Protection Rule (Rule 611); and
- Minimum pricing increment (Rule 612).

<sup>23</sup> See 17 CFR 242.610(c).

<sup>24</sup> See 17 CFR 242.611.

<sup>25</sup> Investors value liquidity and would pay less, all else being equal, for an asset that is illiquid than for an otherwise identical asset that is fully liquid.

### A. Economic Baseline

As noted in the Application, under Section 12(f) of the Act all national securities exchanges are allowed to trade any security in the National Market System after that security has been initially opened for trading by its listing market. As a matter of practice, every national securities exchange trades essentially every security listed on a national securities exchange in the United States.<sup>26</sup> Consequently, displayable limit orders can be fragmented across a number of exchanges' order books.

With the 2005 adoption of Regulation NMS, the Commission stated its interest in incentivizing the submission and display of public limit orders while recognizing that market fragmentation would increase with the Regulation.<sup>27</sup> Regulation NMS provides for a number of measures to mitigate any negative effects of market fragmentation on displayed limit orders. One important mitigating provision is the OPR which prohibits the execution of orders at prices inferior to the best price displayed in the consolidated tapes ("the SIPs") by each exchange and the FINRA Alternate Display Facility ("ADF").<sup>28</sup>

Since Regulation NMS became effective market fragmentation across non-listing exchanges has expanded considerably relative to the degree of fragmentation experienced in the first decade following the UTP Act of 1994.<sup>29</sup> A full analysis for the effects of Regulation NMS is beyond the scope of this analysis which instead will focus on the effects of fragmentation of displayable limit orders on smaller companies.

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<sup>26</sup> A few securities, such as Berkshire Hathaway A shares, do not trade on all national securities exchanges. The New York Stock Exchange does not currently trade securities it does not list but has announced its intention to do so in 2018. [https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/20170907\\_Summary\\_CTA-UTP\\_General\\_Session.pdf](https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/20170907_Summary_CTA-UTP_General_Session.pdf)

<sup>27</sup> See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37495, 37532 (June 29, 2005) (S7-10-04) (Regulation NMS adopting release) ("NMS Adopting Release") (noting that "[a] primary objective of the Order Protection Rule is to increase displayed depth and liquidity in the NMS and thereby reduce transaction costs for a wide spectrum of investors . . .").

<sup>28</sup> In other words, the OPR affords price priority to an order but not time priority.

<sup>29</sup> See Treasury Report at 53.

Figure 3: NYSE-Listed Equities by Exchange



Sources: Office of Financial Research analysis, U.S. Equities Trade and Quote (TAQ), calculated (or derived) based on data from Daily Stock File ©2017 Center for Research in Security Prices (CRSP®), the University of Chicago Booth School of Business.

Figure 4: NASDAQ-Listed Equities by Exchange



Sources: Office of Financial Research analysis, U.S. Equities Trade and Quote (TAQ), calculated (or derived) based on data from Daily Stock File ©2017 Center for Research in Security Prices (CRSP®), the University of Chicago Booth School of Business.

## 1. Fragmentation

**Limit Order Isolation.** It is useful to recognize that the “Order” receiving protection in the OPR is the resting limit order displayed on the SIP, contrary to the belief that it is the aggressive order that is being protected from an inferior execution.<sup>30</sup> The

<sup>30</sup> See Regulation NMS Adopting Release, 70 FR at 37505 (noting that “[p]rice protection encourages the display of limit orders by increasing the likelihood that they will receive an execution in a timely manner and helping preserve investors’ expectations that their orders will be executed when they represent the best displayed quotation. Limit orders typically establish the best prices for an NMS stock. Greater use of limit orders will increase price discovery and market depth

purpose of this protection is to strengthen the incentives to submit limit orders which might otherwise be weakened by trade-through executions resulting from market fragmentation. The Application seeks to strengthen the incentive to posting a limit order in less active stocks.

The primary incentive to posting a limit order is an execution. Posted limit orders execute when one of two things occur. First, a resting limit order will execute if it becomes marketable. For example, a limit order to buy becomes marketable if subsequent to submission the National Best Offer falls to a level equal to or less than the limit order price. Secondly, a resting limit order will execute if an opposing order “reaches across the spread” to access it.

Nasdaq has conducted research into this question. It was observed that in more active, typically large, stocks the displayed quote is narrow, often the one cent minimum, and changes in the NBBO are frequent updating the market’s assessment of the best price. In such conditions, resting limit orders are likely to become marketable. It was found that for the most active issues the likelihood was as high as 90% that a limit order priced at the inside bid or offer would become marketable within thirty minutes of submission.

By contrast, in less active, typically small, stocks the quote is wide and changes less often. Displayed limit orders rarely become marketable due to changes in the quote. Execution is primarily triggered by the appearance of an opposing aggressive order. When the market is fragmented across many exchanges, the likelihood of the execution also depends on the order being on the exchange when and where the marketable order arrives.

Nasdaq took a deeper look into the impact of fragmentation by looking at the actual experience of a sample of inactive stocks (daily volume less than 100,000 shares). The analysis identified 791 episodes where: (1) an exchange set a new inside quote in a less active stock (a higher national best bid or lower national best offer); (2) the quote setting exchange was subsequently joined at the quote-setting price by at least one other exchange, and (3) at least one trade occurred at the quote setting price, the quote setting exchange traded in 31% of the cases. It was found the quote setting exchange traded in only 31% of the cases. In the remaining 69% of cases where the quote setting exchange did not trade, another exchange traded in 29% of the cases, an OTC venue traded in 32%

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and liquidity, thereby improving the quality of execution for the large orders of institutional investors.”)

See Investopedia at <https://www.investopedia.com/terms/o/order-protection-rule.asp> for an example of the common misperception. “The rule aims to protect quotations for a given security across the board, so that all market participants can receive the best possible execution price for orders that can be executed immediately.”

of the cases, and both another exchange and an OTC venue traded in 8% of the cases. It was seen, therefore, that the submitter of the price-improving limit order was not necessarily rewarded with an execution.

The execution, that is the economic “reward” for posting a limit order, is more difficult to achieve in a fragmented market and limit orders are consequently disincented. Additional insight into this point was provided by simulation analysis done by Nasdaq. The purpose of the simulation was to analyze the average wait time for limit order executions as the number of order books vary. It was seen that in a multiple order queue setting, if marketable orders can access all order books, the average expected wait time is the same as with a single queue. For the first order at a price level, however, average expected wait time is shortest when there is a single queue.<sup>31</sup> Consequently, the incentives to update the market and tighten spreads by posting the first limit order at a price are increased as the number of queues is reduced.

***Evidence from U.S. stocks.*** The introduction of Regulation NMS greatly increased the level of venue fragmentation in U.S. stocks. The authors of a recent academic study have found that “the relation between fragmentation and market quality is dramatically different for stocks in different size deciles. In particular, we show that fragmentation is associated with reduced bid-ask spreads and better price efficiency for large stocks, while it is associated with increased bid-ask spreads and worse price efficiency for small stocks.”<sup>32</sup> As noted above, a full analysis of Regulation NMS, including the tradeoffs between increased fragmentation and increased competition, is beyond the scope of this Application. Nevertheless, we believe the evidence shows that liquidity in smaller stocks has not benefited from the increase in fragmentation over the past 10 years.

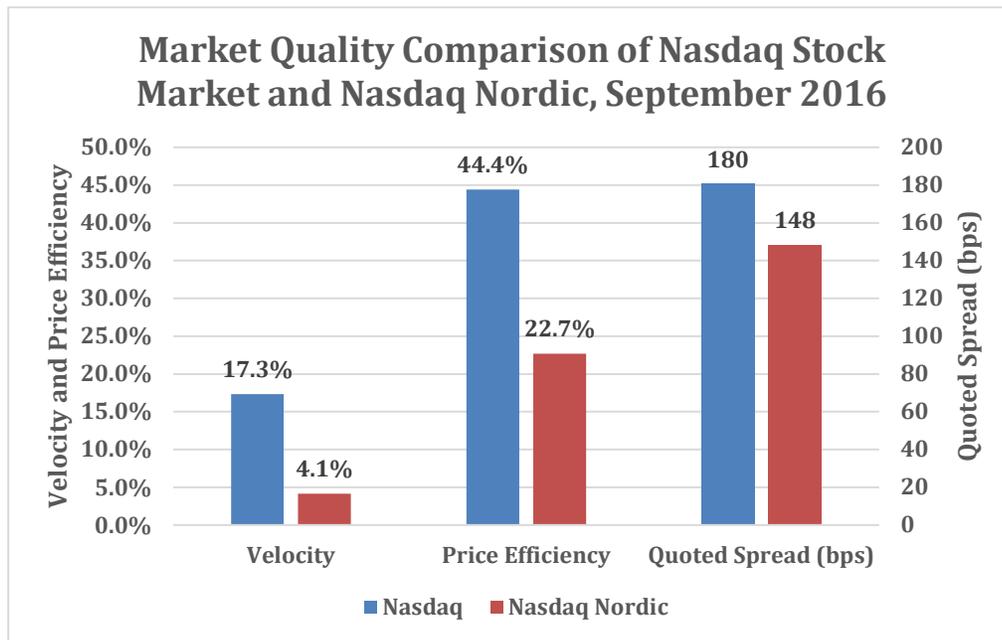
***Evidence from a non-fragmented market.*** The U.S. markets where Nasdaq operates are fragmented but other markets around the world are not. One non-fragmented market is Nasdaq’s First North market in Scandinavia. Both Nasdaq’s U.S. and First North market use the same INET trading technology and employ electronic limit order books for trading. Less active stocks that are not fragmented stocks show lower spreads and lower volatility than less active fragmented stocks although fragmented stocks trade more frequently.<sup>33</sup>

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<sup>31</sup> Simulation results available from Nasdaq on request.

<sup>32</sup> See Haslag and Ringgenberg (2017) “The demise of the NYSE and NASDAQ: Market Quality in the Age of Market Fragmentation”.

<sup>33</sup> Based on a matched sample of 128 pairs of stocks drawn from Nasdaq Capital Market and Nasdaq First North. Spread refers to the quoted spread measured in basis points. Volatility refers to variance ratio. Trading frequency refers to turnover velocity.



**Ability to Innovate.** Innovation might offer solutions to problems associated with market fragmentation. Innovation refers to product functionality and features. According to a former SEC Chief Economist, U.S. exchanges offer essentially the same trading functionality and features in all traded stocks.<sup>34</sup> Currently, all exchanges in the U.S. operate electronic limit order books. Exchanges tailor the features and functionality of their order books to attract limit orders. Because the great majority of limit orders are in larger stocks, exchange order books prioritize the functionality and features needed to trade larger stocks. In a fragmented market structure, exchanges that are required to publicly disclose and seek approval of all functionality have limited incentives to innovate and innovations risk alienating members; under this Application, the issuer can choose to shift the balance towards innovation.

An electronic limit order book may, or may not, be the optimal trading system for less liquid securities. Furthermore, in situations where order flow is fragmented posting a limit order is even less attractive. For example, the U.S. market for over-the-counter securities that are not exchange listed does not depend on an electronic limit order book as its primary market design.

<sup>34</sup> See Lawrence Harris “The Homogenization of U.S. Equity Trading.” In contrast to the U.S., other jurisdictions allow exchanges to offer significantly different functionality in stocks with different liquidity characteristics. See, e.g., the range of functionalities offered by the London Stock Exchange <http://www.londonstockexchange.com/products-and-services/trading-services/trading-services.htm>.

Regulation NMS limits innovation through both economic incentives and regulatory requirements for an exchange to operate an electronic limit orders book. An exchange loses protected status for its quotes and the quote share of market data revenue if the exchange is deemed slow under Regulation NMS.<sup>35</sup> Mechanisms designed to concentrate liquidity such as intermittent batch auctions, the order delivery approach common for over-the-counter securities, or negotiated block trading do not fit easily into Regulation NMS.

Pricing is another form of innovation that has the potential to address any problems associated with market fragmentation. Exchanges use their fee structures to attract limit orders. Exchanges' fee schedules do not discriminate between larger and smaller securities. Consequently, exchanges fee structures are optimized for active stocks with narrow spreads. In smaller stocks spreads are often wider, occasionally significantly so. As a consequence, exchange fees are less effective at attracting and concentrating orders in smaller stocks.

#### B. Potential for Market Solutions

The ability for markets to provide solutions is limited, resulting in fewer choices for issuers and their Boards to consider. Currently, only exchanges display accessible quotes. There are no market participants using the ECN display alternative for their orders.<sup>36</sup> Exchanges' abilities to provide solutions are constrained by the regulatory emphasis on a one-size-fits-all market structure particularly within a single exchange.<sup>37</sup>

Furthermore, exchanges face a unique free-rider problem. A stock that lists on one exchange may be traded on any exchange. Consequently, an exchange that incurs the expense of developing an innovative approach to trading smaller stocks may be confronted by a situation where a competing exchange can undercut the innovating exchange on pricing for a listing and free-ride on the trading features of the innovating exchange.

#### C. Application and its Impact on Current Practices

We discussed some impacts of the Application and how these impacts would be mitigated in the prior section. Additionally, under Regulation NMS broker-dealers and

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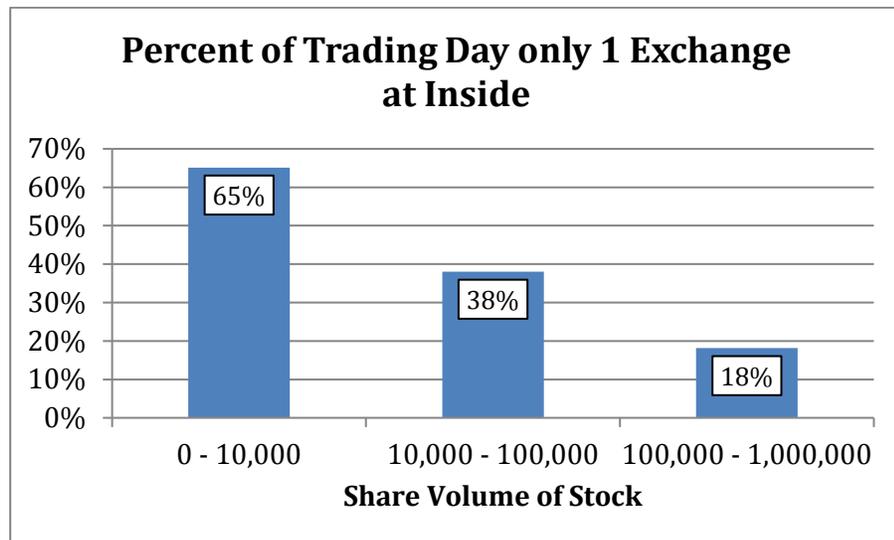
<sup>35</sup> An exchange is deemed slow if its response time to an incoming executable order is longer than one second or it introduces an artificial delay greater than one millisecond.

<sup>36</sup> <http://www.finra.org/industry/adf/participants>. See SEC Rule 602(b)(5)(ii)(A) and (B) for details of the ECN display alternative.

<sup>37</sup> An example of the challenges faced by an exchange seeking to adopt differential market structures is SR-NYSE-2017-36.

exchanges must be able to access protected quotations either through direct access or indirect access via a third party.<sup>38</sup> Consequently, broker-dealer and exchange routing systems could continue to operate under the Application as they do today but with less complexity.

Furthermore, evidence from current market practice is that venue competition to set the best price is muted in inactive stocks where one venue is alone at the best price much of the day in inactive stocks. On average, one market is alone at the best price over 60% of the time for stocks with ADV of 10,000 shares or less. The average time one market is alone averages almost 40% of the trading day for stocks with ADV between 10,000 and 100,000 shares.<sup>39</sup> These percentages of time one exchange is alone at the best price contrasts with an average of 18% of the trading day for stocks with and ADV of between 100,000 shares and 1,000,000 shares. Order competition is paramount in inactive stocks and the Application seeks to emphasize order competition rather than venue competition.



<sup>38</sup> See Regulation NMS Adopting Release, 70 FR at 37539 (noting that “Rules 610(a) and (b) further the goal of fair and efficient access to quotations primarily by prohibiting trading centers from unfairly discriminating against non-members or nonsubscribers that attempt to access their quotations through a member or subscriber of the trading center. Market participants can either become members or subscribers of a trading center to obtain direct access to its quotations, or they can obtain indirect access by ‘piggybacking’ on the direct access of members or subscribers.”).

<sup>39</sup> Data for 561 Nasdaq-listed securities with consolidated less than 1 million shares on October 10, 2017.

## **IV. The Effect on Efficiency, Competition, and Capital Formation**

### **A. Effect on Efficiency**

There are two types of efficiency, which should be considered in evaluating the Application. The first type is economic efficiency. Economic efficiency considers whether resources are optimally allocated to achieve an economic function as best as possible while minimizing waste and inefficiency. The second type is price efficiency. Price efficiency has long been a primary goal of securities markets and considers whether quotation and execution prices provide useful and necessary information to investors and issuers. While price efficiency is related to economic efficiency, the Commission should consider both separately when evaluating the Application's impact on U.S. market structure.

#### **1. Economic Efficiency**

The Application offers three primary mechanisms for improving the economic efficiency of the U.S. equity markets. The first is a reduction in the excess provision of exchange trading services. The second is a reduction of costs generated by broker-dealers' need to access a protected quote in every security on every exchange. The third is the creation of incentives to innovate in providing trading services tailored to smaller stocks.

As discussed above, all U.S. exchanges currently offer trading services in all listed securities or have announced their intention to do so. All U.S. exchanges trading all listed securities is not efficient for exchanges given the limited demand for trading services in inactive stocks. Consequently, every exchanges' trading activity in larger stocks is cross-subsidizing trading activity in smaller stocks. Reducing to one the number of exchanges cross-subsidizing trading activity would reduce the aggregate level of cross-subsidies incurred by exchanges and improve economic efficiency.

Broker-dealers have recommended reducing the complexity of the U.S. equity market system by simplifying their obligations to route orders to protected quotes.<sup>40</sup> This viewpoint has been affirmed by the SEC's own Equity Market Structure Advisory Committee.<sup>41</sup> While these recommendations focused on low volume exchanges, a similar argument can be applied to smaller stocks. There is a technology cost for both broker-dealers and exchanges associated with maintaining routing abilities to every exchange in every symbol. Furthermore, many of the order types offered by exchanges in response to

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<sup>40</sup> <https://www.sifma.org/wp-content/uploads/2017/05/sifma-equity-market-structure-recommendations.pdf>.

<sup>41</sup> <https://www.sec.gov/spotlight/emsac/emaac-regulation-nms-subcommittee-discussion-framework-040317.pdf>.

Regulation NMS would not be necessary under the Application and could be eliminated further reducing the excess complexity of trading smaller stocks.

There is also a potential opportunity cost for broker-dealers' clients if the broker-dealer fails to access a displayed quote in a timely manner due to the complexity of U.S. market structure. Nasdaq does not possess broker-dealer level data that can identify whether there are material challenges in accessing displayed quotes in small stocks.

The limitations on exchanges' abilities to innovate to address order fragmentation were discussed in Section II. Improving exchanges' abilities to innovate in optimizing their systems to trade smaller stocks would improve the efficiency of trading services for those stocks and offer a less costly means of innovating than national Pilots.

## 2. Price efficiency

Price efficiency in equity markets is typically measured by testing whether there is excess short run volatility in a security's prices. As discussed in Section II an analysis of trading in fragmented smaller stocks and fragmented larger stocks or non-fragmented First North smaller stocks shows that there is more excessive volatility in the fragmented smaller stocks. Academic work also provides evidence that disincentives to posting limit orders reduce price efficiency.<sup>42</sup> We believe that by reducing order fragmentation the Application will improve the incentives for posting limit orders and thereby improve price efficiency.

### B. Effect on Competition

Exchanges compete for listings. The competition among exchanges for listing services would increase under the Application as exchanges vie to demonstrate the value of their offerings. Exchanges would continue to be able to compete on the services offered directly to listed companies. The Application would enable the exchanges to also compete on the trading services the listing exchange offers listed companies. The ability of exchanges to compete for listings on the basis of their trading services is very limited today, as a number of market commentators have noted.<sup>43</sup>

Exchanges also compete in the provision of trading services both during regular market hours and during the auctions that begin and end each trading day. Direct competition between exchanges for trading in the stock of an issuer electing to participate would be reduced under the Application. The Application proposes limitations that Nasdaq would undertake if exchange competition is reduced. Unfettered competition would continue between OTC venues and the listing exchange. Competition in trading

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<sup>42</sup> See, e.g., Gökhan, Hautsch, and Horst (2017) "Order Exposure and Liquidity Coordination: Does Hidden Liquidity Harm Price Efficiency?"

<sup>43</sup> [https://www.marketplace.org/2016/03/16/business/stock-exchanges.](https://www.marketplace.org/2016/03/16/business/stock-exchanges)

between exchanges would remain, however, because the competition in listing services creates an incentive for exchanges to offer trading services that are innovative, competitive, and efficient.

Exchanges also compete in the provision of market data. The Application would reduce the number of exchanges providing data in smaller stocks. Consequently, the Application contains provisions that would eliminate any negative competitive effects of the Application in smaller stocks.

Displayed limit orders compete for executions. That competition primarily takes the form of setting the best price. In the fragmented market for trading smaller companies' shares limit orders must also compete by anticipating which exchange will receive an incoming marketable order. Under the Application, displayed limit order competition will be based solely on setting the best price on Nasdaq.

The Application is not expected to affect competition between broker-dealers and exchanges, between competing broker-dealers, or between firms that are vendors to broker-dealers and/or exchanges.

### C. Effect on Capital Formation

The decline in the number of smaller companies choosing a listing on public equity markets is widely acknowledged.<sup>44</sup> Some commentators have blamed U.S. equity market structure, at least in part, for the decline in smaller companies seeking a listing.<sup>45</sup> In the absence of the Application, innovations to equity market structure intended to increase listings by smaller companies must occur at the national level subject to either SEC rule making or SEC ordered pilots. The Application would encourage more market structure innovation by individual exchanges that are competing for listings, subject to SEC rulemaking and oversight. Boards of Directors evaluating whether to suspend unlisted trading privileges would necessarily assess the exchanges' listing and trading services, including the innovations they offer. These innovations can also help regulators assess whether market structure is having a negative impact on capital formation for smaller companies.

## V. Conclusion

Much of the thrust of regulatory action on equity market structure over the past 20 years has been to strike a balance between competition and consolidation. The Application seeks to retain the realized benefits of competition while increasing liquidity

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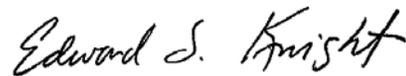
<sup>44</sup> See Chairman Jay Clayton, Remarks at the Economic Club of New York, July 12, 2017, at <https://www.sec.gov/news/speech/remarks-economic-club-new-york>.

<sup>45</sup> See "Making Stock Markets Work to Support Economic Growth", 2013, OECD working paper.

in the trading of smaller stocks. If approved, the Application would increase the level of consolidation in order flow for securities where the level of order flow is already low. Consolidating liquidity for smaller companies this way would improve market quality for these securities. Improved market quality would lower investors' illiquidity discount, reduce the cost of capital, and improve the capital formation process for smaller companies. In short, suspending UTP as this Application requests is both consistent with the statutory requirements of Section 12(f) of the Act, and would allow the SEC to advance all aspects of its tripartite mission.

Nasdaq appreciates the Commission's thoughtful consideration of this Application, and looks forward to discussing this Application with the staff. In the interim, please feel free to contact me if you have any questions.

Sincerely,



Edward S. Knight  
Executive Vice President and  
General Counsel

cc: Commissioner Robert J. Jackson, Jr.  
Commissioner Hester M. Peirce  
Commissioner Michael S. Piwowar  
Commissioner Kara M. Stein  
Brett Redfearn, Director of the Division of Trading and Markets  
William Hinman, Director of the Division of Corporation Finance  
Jeffrey H. Harris, Director of the Division of Economic and Risk Analysis  
Robert Stebbins, Director of the Office of the General Counsel