

*Required fields are shown with yellow backgrounds and asterisks.*

Page 1 of * 31	SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4		File No.* SR - 2015 - * 159	Amendment No. (req. for Amendments *)
Filing by NASDAQ Stock Market Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934				
Initial * <input checked="" type="checkbox"/>	Amendment * <input type="checkbox"/>	Withdrawal <input type="checkbox"/>	Section 19(b)(2) * <input checked="" type="checkbox"/>	Section 19(b)(3)(A) * <input type="checkbox"/>
			Section 19(b)(3)(B) * <input type="checkbox"/>	
Pilot <input type="checkbox"/>	Extension of Time Period for Commission Action * <input type="checkbox"/>	Date Expires * <input type="text"/>	Rule <input type="checkbox"/> 19b-4(f)(1) <input type="checkbox"/> 19b-4(f)(4) <input type="checkbox"/> 19b-4(f)(2) <input type="checkbox"/> 19b-4(f)(5) <input type="checkbox"/> 19b-4(f)(3) <input type="checkbox"/> 19b-4(f)(6)	
Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010			Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934	
Section 806(e)(1) * <input type="checkbox"/>	Section 806(e)(2) * <input type="checkbox"/>	Section 3C(b)(2) * <input type="checkbox"/>		
Exhibit 2 Sent As Paper Document <input type="checkbox"/>	Exhibit 3 Sent As Paper Document <input type="checkbox"/>			
<b>Description</b>				
Provide a brief description of the action (limit 250 characters, required when Initial is checked *).				
<input type="text" value="Proposal to add new paragraph F to Rule 4752d2, concerning the opening process."/>				
<b>Contact Information</b>				
Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.				
First Name *	<input type="text" value="Sean"/>	Last Name *	<input type="text" value="Bennett"/>	
Title *	<input type="text" value="Associate General Counsel"/>			
E-mail *	<input type="text" value="Sean.Bennett@nasdaq.com"/>			
Telephone *	<input type="text" value="(301) 978-8499"/>	Fax	<input type="text"/>	
<b>Signature</b>				
Pursuant to the requirements of the Securities Exchange Act of 1934,				
has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.				
(Title *)				
Date	<input type="text" value="12/23/2015"/>	<input type="text" value="Executive Vice President and General Counsel"/>		
By	<input type="text" value="Edward S. Knight"/>	<input type="text"/>		
(Name *)				
NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.				
<input type="button" value="edward.knight@nasdaq.com"/>				

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFF website.

**Form 19b-4 Information \***

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The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

**Exhibit 1 - Notice of Proposed Rule Change \***

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

**Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies \***

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

**Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications**

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Exhibit Sent As Paper Document

Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

**Exhibit 3 - Form, Report, or Questionnaire**

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Exhibit Sent As Paper Document

Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

**Exhibit 4 - Marked Copies**

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

**Exhibit 5 - Proposed Rule Text**

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The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.

**Partial Amendment**

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If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1. Text of Proposed Rule Change

(a) Pursuant to the provisions of Section 19(b)(1) under the Securities Exchange Act of 1934 (“Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> The NASDAQ Stock Market LLC (“Nasdaq” or “Exchange”) is filing with the Securities and Exchange Commission (“Commission”) a proposal to add new paragraph (F) to Rule 4752(d)(2), concerning the opening process.

A notice of the proposed rule change for publication in the Federal Register is attached hereto as Exhibit 1 and the text of the proposed rule change is attached as Exhibit 5.

(b) Not applicable.

(c) Not applicable.

2. Procedures of the Self-Regulatory Organization

The proposed rule change was approved by the Board of Directors of the Exchange on December 21, 2015. No other action by Nasdaq is necessary for the filing of the rule change.

Questions regarding this rule proposal may be directed to T. Sean Bennett, Associate General Counsel, Nasdaq, Inc., at (301) 978-8499 (telephone) or (301) 978-8472 (fax).

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

3. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

a. Purpose

The purpose of this filing is to enhance the price protections provided by Rule 4752(d) in the operation of Nasdaq Opening Cross, Nasdaq's process for opening the market for trading System securities.

Background

Rule 4752 concerns Nasdaq's opening process and paragraph (d) of the rule sets forth the processing of the Opening Cross. Specifically, the rule provides that the Opening Cross is initiated at 9:30 a.m. ET, at which time the System attempts to open a security at the price that maximizes the number of shares of MOO,<sup>3</sup> LOO,<sup>4</sup> OIO,<sup>5</sup> Early

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<sup>3</sup> A "Market On Open" or "MOO" order is an Order Type entered without a price that may be executed only during the Nasdaq Opening Cross. Generally, MOO Orders may be entered, cancelled, and/or modified between 4 a.m. ET and immediately prior to 9:28 a.m. ET. An MOO Order may not be cancelled or modified at or after 9:28 a.m. ET. An MOO Order shall execute only at the price determined by the Nasdaq Opening Cross. See Rule 4702(b)(8).

<sup>4</sup> A "Limit On Open Order" or "LOO Order" is an Order Type entered with a price that may be executed only in the Nasdaq Opening Cross, and only if the price determined by the Nasdaq Opening Cross is equal to or better than the price at which the LOO Order was entered. Subject to the qualifications provided below, LOO Orders may be entered, cancelled, and/or modified between 4 a.m. ET and immediately prior to 9:28 a.m. ET. See Rule 4702(b)(9).

<sup>5</sup> An "Opening Imbalance Only Order" or "OIO Order" is an Order Type entered with a price that may be executed only in the Nasdaq Opening Cross and only against MOO Orders, LOO Orders, or Early Market Hours Orders (as defined in Rule 4752). OIO Orders may be entered between 4:00 a.m. ET until the time of execution of the Nasdaq Opening Cross, but may not be cancelled or modified at or after 9:28 a.m. ET. If the entered price of an OIO Order to buy (sell) is higher than (lower than) the highest bid (lowest offer) on the Nasdaq Book, the price of the OIO Order will be modified repeatedly to equal the highest bid (lowest offer) on the Nasdaq Book; provided, however, that the price of the Order will not be moved beyond its stated limit price. See Rule 4702(b)(10).

Market Hours orders,<sup>6</sup> and executable quotes and orders to be executed in the Nasdaq Market Center.<sup>7</sup> If the System determines that more than one price exists that would maximize such quotes and orders to be executed, the Opening Cross will occur at the price that minimizes any Imbalance.<sup>8</sup> If the System determines that more than one price exists that would minimize an Imbalance, the Opening Cross will occur at the entered price at which shares will remain unexecuted in the cross.<sup>9</sup> If the System determines that more than one price exists whereby shares will remain unexecuted in the cross, the Opening Cross will occur at the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at 9:30 a.m.<sup>10</sup>

When the Opening Cross price is calculated, Nasdaq applies a boundary within which the cross must execute to ensure that the price derived does not exceed a price reasonably tied to the prevailing market at the time. Specifically, Nasdaq applies a percentage based threshold (“Threshold Percentage”) to a benchmark (“Benchmark Value”) that, when applied to an individual security, determines the price range that a security may cross (“Threshold Range”), outside of which the opening price of a security

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<sup>6</sup> An Early Market Hours Order is a Market Hours Order that is entered into the system prior to 9:28 a.m. and which is treated as an Opening Imbalance Only order, as appropriate, for the purposes of the Nasdaq Opening Cross. A Market Hours Order is any order that may be entered into the system and designated with a time-in-force of MIOC, MDAY, MGTC. See Rule 4752(a)(7). See also Rules 4703(a) for a discussion of the Time in Force Order attribute, including MIOC, MDAY, and MGTC.

<sup>7</sup> See Rule 4752(d)(2)(A).

<sup>8</sup> See Rule 4752(d)(2)(B).

<sup>9</sup> See Rule 4752(d)(2)(C).

<sup>10</sup> See Rule 4752(d)(2)(D).

may not occur.<sup>11</sup> If an Opening Cross price of a security would otherwise be outside of the Threshold Range, Nasdaq will adjust the Opening Cross price of the security to a price within the Threshold Range that best satisfies the normal process for determining the Opening Cross price.<sup>12</sup> This change happens automatically prior to execution of the Opening Cross, and does not involve any human intervention. All unexecuted shares designated to expire upon the conclusion of the Opening Cross,<sup>13</sup> including those that fall outside of the Threshold Range, are cancelled.

The Threshold Percentage and Benchmark Value are set by Nasdaq officials in advance and communicated to Participants.<sup>14</sup> Nasdaq may adjust the Threshold Percentage based on Nasdaq's experience with the Opening Cross and on unusual market conditions, such as certain options and derivatives expiration days that are heavily affected by the opening price of Nasdaq securities. Nasdaq publishes the Benchmark Value and Threshold Percentages via its public NasdaqTrader website, and sets the Threshold Percentage so that repricing of a security is rare.<sup>15</sup> Currently, Nasdaq applies a Threshold Percentage of 10%, which is applied to the Nasdaq Best Bid and Offer

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<sup>11</sup> See Rule 4752(d)(2)(E).

<sup>12</sup> See Rules 4752(d)(2)(A) – (D).

<sup>13</sup> These are: MOO, LOO, OIO, and Early Market Hours Orders designated to participate in the Opening Cross. Prior to the Opening Cross, the Exchange maintains a continuous order book and an Opening Cross order book. Orders in the Opening Cross order book may execute only in the Opening Cross process, while Orders in the continuous book may execute during pre-market hours trading, in the Opening Cross, or in regular market hours trading if the Order has a time-in-force that will allow it to remain active.

<sup>14</sup> As defined by Rule 4701(c).

<sup>15</sup> See [http://www.nasdaqtrader.com/content/ProductsServices/Trading/Crosses/open\\_close\\_faqs.pdf](http://www.nasdaqtrader.com/content/ProductsServices/Trading/Crosses/open_close_faqs.pdf).

(“QBBO”) midpoint and is added to the Nasdaq Offer and subtracted from the Nasdaq Bid to establish the threshold price range. For example, if the QBBO is \$10.00 x \$11.00, then the midpoint equals 10.50 and the Threshold Percentage is 10%, resulting in a threshold value of \$1.05 (10% of \$10.50 = \$1.05). This value is then added to the offer and subtracted from the bid to obtain the cross’s threshold range. In this example, it would result in a lower threshold of \$8.95 ( $\$10.00 - \$1.05 = \$8.95$ ) and an upper threshold of \$12.05 ( $\$11.00 + \$1.05 = \$12.05$ ), thus creating a range of \$8.95 to \$12.05, within which the cross can occur. This means \$8.95 is the lowest price at which the cross can occur and \$12.05 is the highest price at which it can occur. The threshold range is dynamic; as the QBBO changes, the threshold price range changes.

The current price adjustment process under Rule 4752(d)(2)(E) is effective at ensuring the opening price of a security is within a certain range of the QBBO immediately prior to the initiation of the cross in the security; however, the current process does not prevent a cross from occurring at an erroneous price caused by an order or quote entered into the continuous pre-market trading book by a Participant in error that significantly skews the Opening Cross price of a security. This scenario could cause the QBBO to be excessively wide, with one side of the bid/offer significantly distant from the normal range and not representative of the true interest in the security. Nonetheless, the price adjustment process under Rule 4752(d)(2)(E) would allow the Opening Cross price to be set at an erroneous level because it would set the Benchmark Value at the midpoint between the erroneously-priced side of the market and the non-erroneously priced contra side. To illustrate, assume an extreme example as follows: if a security has a bid of \$10 set by an Order to buy 100 shares at \$10 in pre-market trading with no offer

interest until 9:29 a.m., when a Participant erroneously enters an Order to sell 100 shares at \$1100, under the current opening process the Benchmark Value of that security would be the midpoint price of \$555, which would create a threshold range of \$0.0001 by \$1155.50.<sup>16</sup> Under such extreme circumstances a mispriced open could occur, in which case the parties to an erroneous execution would have to avail themselves of the clearly erroneous trade nullification process of Rule 11890.<sup>17</sup>

### New Protection

Nasdaq is proposing an additional price protection process designed to avoid mispriced Opening Crosses and the use of the clearly erroneous post-trade nullification process. Once a security has an Opening Cross price set based on the process under Rule 4752(d)(2)(A) – (E), Nasdaq will require the security to pass at least one of three new “tests” in order for the Opening Cross to occur. If a security does not pass any of the three tests no Opening Cross will occur in that security, all Orders in the Opening Cross<sup>18</sup> will be cancelled back to the Participants, and regular market hours trading will begin.

The three new tests compare the Opening Cross price as calculated under the current rule to a reference price to ensure that the Opening Cross price is reasonably

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<sup>16</sup> The Exchange will not allow the lower threshold to be a negative amount and will set the lower range value to the lowest value possible, which is \$0.0001.

<sup>17</sup> The terms of a transaction executed on Nasdaq are “clearly erroneous” when there is an obvious error in any term, such as price, number of shares or other unit of trading, or identification of the security. A transaction made in clearly erroneous error and cancelled by both parties or determined by Nasdaq to be clearly erroneous will be removed from the consolidated tape. See Rule 11890(a)(1).

<sup>18</sup> See note 13 above. Orders entered in the continuous book eligible to trade in the pre-market session prior to the opening of the security would not be cancelled but would rather continue to rest on the continuous book for potential participation in regular market hours trading.



related to the market and not the product of erroneous Order entry. The reference price range is calculated under each test by applying a threshold set by Nasdaq officials in advance and communicated to Participants (“Price Test Thresholds”). The Price Test Thresholds, like the current Threshold Percentage, will be published via Nasdaq’s public NasdaqTrader website. Nasdaq may apply different Price Test Thresholds to each of the Opening Cross Price Tests. The Price Test Threshold is applied to different measures under each of the new tests to calculate the range within which the Opening Cross price must fall to pass the test (“Price Test Threshold Range”). Nasdaq is initially setting each of the Price Test Thresholds uniformly at the greater of \$0.50 or 10%; however, Nasdaq may adjust the Price Test Thresholds independently of one another.

Opening Cross Price Test A requires the Opening Cross price of a Nasdaq listed security, other than newly-listed Exchange Traded Products (“ETPs”), to be within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security’s prior day Nasdaq Official Closing Price (“NOCP”). Non-Nasdaq listed securities must have an Opening Cross price within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security’s prior day consolidated closing price. Unlike newly-listed company stocks that begin trading at some point after the stock market has opened, newly-listed ETPs usually begin trading in the premarket session prior to regular market hours trading on the security’s initial day of trading and do not have a prior day’s consolidated closing price. For such securities, the Price Test Threshold Range is established by adding and subtracting the Price Test Threshold from the offering price. If the Nasdaq Opening Cross price is higher or lower than the Price Test Threshold Range established under this test, or if a

non-ETP Nasdaq listed security does not have a previous day's closing price,<sup>19</sup> the security fails the test and Opening Cross Price Test B is performed.

Opening Cross Price Test B requires the Opening Cross price of a security to be within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security's Nasdaq last sale (either round or odd lot) occurring after 9:15 a.m. ET but prior to the Opening Cross. If the Opening Cross price is higher or lower than the Price Test Threshold Range established under this test, or if there is no Nasdaq last sale,<sup>20</sup> the security fails the test and Opening Cross Price Test C is performed.

Opening Cross Price Test C requires the Opening Cross price to fall within the Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the Nasdaq best bid (for Opening Cross prices that would be higher than the security's closing price as established in Test A) or Nasdaq best offer (for opening cross prices that would be lower than the security's closing price as established in Test A). For purposes of this test, if a security does not have a NOCP or consolidated closing price, as applicable, for the previous trading day Nasdaq will use a price of \$0. If the Nasdaq Opening Cross price is higher or lower than the Opening Cross price range established under this test all Orders in the Opening Cross<sup>21</sup> will be cancelled back to Participants, no Opening Cross will occur, and the security will open for regular market hours trading.

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<sup>19</sup> For example, a security may not have a NOCP due to a unit separation.

<sup>20</sup> A security may not have a Nasdaq last sale because there was no trading in the security during the premarket session.

<sup>21</sup> See note 18 above.

Using the example above where the QBBO is \$10 x \$11 and Opening Price Range is \$8.95 to \$12.05, if the Opening Cross price is calculated to be \$10.50 then the security would move on to the Opening Cross eligibility test process. Under Opening Cross Price Test A, if the security had a NOCP of \$12.50 then the Price Test Threshold used would be 10% (10% of \$12.50 = \$1.25, which is greater than \$0.50) and the Price Test Threshold Range would be \$11.25 to \$13.75 ( $\$12.50 - \$1.25 = \$11.25$  and  $\$12.50 + \$1.25 = \$13.75$ ). Because the Opening Cross price is less than the lower threshold ( $\$10.50 < \$11.25$ ), the security fails Opening Cross Price Test A and Opening Cross Price Test B is performed.

Under Opening Cross Price Test B, if the last sale at 9:20 a.m. is \$11.90, the Price Test Threshold would be 10% (10% of \$11.90 = \$1.19, which is greater than \$0.50) and the Price Test Threshold Range would be \$10.71 to \$13.09 ( $\$11.90 - \$1.19 = \$10.71$  and  $\$11.90 + \$1.19 = \$13.09$ ). Because the Opening Cross price is less than the lower threshold ( $\$10.50 < \$10.71$ ), the security fails Opening Cross Price Test B and Opening Cross Price Test C is performed.

Under Opening Cross Price Test C, since the Opening Cross price is lower than the NOCP ( $\$10.50 < \$12.50$ ), the QBBO offer price of \$11 would be used to calculate the Price Test Threshold Range, which would result in a Price Test Threshold of 10% (10% of \$11 = \$1.10, which is greater than \$0.50) and a Price Test Threshold Range of \$9.90 to \$12.10 ( $\$11 - \$1.10 = \$9.90$  and  $\$11 + \$1.10 = \$12.10$ ). Because the Opening Cross price is within the Price Test Threshold Range, the security passes the test and the Opening Cross may proceed.

Accordingly, these new protections will mitigate situations in which the Opening Cross price may be erroneous. As a result, the changes will support fair and orderly markets.

### Implementation

Nasdaq is proposing to implement the proposed change, in a measured approach, over the course of approximately four weeks. Although Nasdaq does not foresee any technical issues with implementation of the proposed changes, they affect a fundamental process in the operation of an orderly market. As a result, the Exchange believes it should implement the changes in stages. The Exchange will use a rollout schedule that will start with a small number of securities (e.g., 5-50) with each stage increasing the number of securities to be rolled out. The implementation details will be published via an Exchange Trader Alert and be posted on the NasdaqTrader website. The Exchange believes that this measured approach will minimize risk to the overall market.

#### b. Statutory Basis

The Exchange believes that its proposal is consistent with the requirements of the Act and the rules and regulations thereunder that are applicable to a national securities exchange, and, in particular, with the requirements of Section 6(b) of the Act.<sup>22</sup> Specifically, the proposal is consistent with Section 6(b)(5) of the Act,<sup>23</sup> because it would promote just and equitable principles of trade, remove impediments to, and perfect the mechanism of, a free and open market and a national market system.

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<sup>22</sup> 15 U.S.C. 78f(b).

<sup>23</sup> 15 U.S.C. 78f(b)(5).

The Exchange believes that the proposed change will promote just and equitable principles of trade because it will implement a process designed to prevent Opening Crosses to occur at erroneous prices. As explained, under the current process an erroneous order or quote may significantly skew the current Benchmark Value that is used to create a boundary for the Opening Cross Price. This may then lead to the Opening Cross price would result in a temporary price dislocation from normal pricing and typically the use of the clearly erroneous trade nullification process under Rule 11890.

The Exchange considers that a better approach is to implement a system of tests, as proposed herein, that would not allow an erroneous order or quote affect the opening of a security. The proposed change, moreover, would mitigate the likelihood of an erroneous execution occurring in the Opening Cross, since all Orders in the Opening Cross would be cancelled. There would be no need then to use the clearly erroneous trade nullification process because no such trade would occur. Thus, the proposed rule change also protects investors, by avoiding erroneous transactions, which are disruptive to individual investors and the market overall.

The proposal also promotes just and equitable principles of trade and further perfects mechanism of fair and orderly markets in that it encourages transparency and uniformity in handling erroneous trades in the Opening Cross.

Finally, implementing the proposed changes in a phased approach promotes just and equitable principles of trade, further improves participating in fair and orderly markets, and serves to protect investors because it will limit the potential disruption to the

market to a subset of the total number of securities in the opening cross should the Exchange experience a technical issue with the implementation.

4. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change implicates any competitive issues. The proposed change implements changes that will benefit all market participants by avoiding Opening Prices that are not reasonably related to bona fide market interest. Avoiding such prices will ensure that the information on which market participants make investment decisions is accurate and representative of investors' interest. As such, the proposed changes should not place a burden on competition whatsoever.

5. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

6. Extension of Time Period for Commission Action

Nasdaq does not consent at this time to an extension of the time period for Commission action specified in Section 19(b)(2) of the Act.<sup>24</sup>

7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)

Not applicable.

8. Proposed Rule Change Based on Rules of Another Self-Regulatory Organization or of the Commission

Not applicable.

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<sup>24</sup> 15 U.S.C. 78s(b)(2).

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11. Exhibits

1. Form of Notice of Proposed Rule Change for Federal Register.

5. Text of Proposed Rule Change.

**EXHIBIT 1**

SECURITIES AND EXCHANGE COMMISSION  
(Release No. \_\_\_\_\_ ; File No. SR-NASDAQ-2015-159)

December \_\_, 2015

Self-Regulatory Organizations; The NASDAQ Stock Market LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Implement Additional Price Protections in the Opening Process

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on December 23, 2015, The NASDAQ Stock Market LLC (“Nasdaq” or “Exchange”) filed with the Securities and Exchange Commission (“SEC” or “Commission”) the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization’s Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to add new paragraph (F) to Rule 4752(d)(2), concerning the opening process.

The text of the proposed rule change is available on the Exchange’s Website at <http://nasdaq.cchwallstreet.com>, at the principal office of the Exchange, and at the Commission’s Public Reference Room.

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.



II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of this filing is to enhance the price protections provided by Rule 4752(d) in the operation of Nasdaq Opening Cross, Nasdaq's process for opening the market for trading System securities.

Background

Rule 4752 concerns Nasdaq's opening process and paragraph (d) of the rule sets forth the processing of the Opening Cross. Specifically, the rule provides that the Opening Cross is initiated at 9:30 a.m. ET, at which time the System attempts to open a security at the price that maximizes the number of shares of MOO,<sup>3</sup> LOO,<sup>4</sup> OIO,<sup>5</sup> Early

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<sup>3</sup> A "Market On Open" or "MOO" order is an Order Type entered without a price that may be executed only during the Nasdaq Opening Cross. Generally, MOO Orders may be entered, cancelled, and/or modified between 4 a.m. ET and immediately prior to 9:28 a.m. ET. An MOO Order may not be cancelled or modified at or after 9:28 a.m. ET. An MOO Order shall execute only at the price determined by the Nasdaq Opening Cross. See Rule 4702(b)(8).

<sup>4</sup> A "Limit On Open Order" or "LOO Order" is an Order Type entered with a price that may be executed only in the Nasdaq Opening Cross, and only if the price determined by the Nasdaq Opening Cross is equal to or better than the price at which the LOO Order was entered. Subject to the qualifications provided below,

Market Hours orders,<sup>6</sup> and executable quotes and orders to be executed in the Nasdaq Market Center.<sup>7</sup> If the System determines that more than one price exists that would maximize such quotes and orders to be executed, the Opening Cross will occur at the price that minimizes any Imbalance.<sup>8</sup> If the System determines that more than one price exists that would minimize an Imbalance, the Opening Cross will occur at the entered price at which shares will remain unexecuted in the cross.<sup>9</sup> If the System determines that more than one price exists whereby shares will remain unexecuted in the cross, the

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LOO Orders may be entered, cancelled, and/or modified between 4 a.m. ET and immediately prior to 9:28 a.m. ET. See Rule 4702(b)(9).

<sup>5</sup> An “Opening Imbalance Only Order” or “OIO Order” is an Order Type entered with a price that may be executed only in the Nasdaq Opening Cross and only against MOO Orders, LOO Orders, or Early Market Hours Orders (as defined in Rule 4752). OIO Orders may be entered between 4:00 a.m. ET until the time of execution of the Nasdaq Opening Cross, but may not be cancelled or modified at or after 9:28 a.m. ET. If the entered price of an OIO Order to buy (sell) is higher than (lower than) the highest bid (lowest offer) on the Nasdaq Book, the price of the OIO Order will be modified repeatedly to equal the highest bid (lowest offer) on the Nasdaq Book; provided, however, that the price of the Order will not be moved beyond its stated limit price. See Rule 4702(b)(10).

<sup>6</sup> An Early Market Hours Order is a Market Hours Order that is entered into the system prior to 9:28 a.m. and which is treated as an Opening Imbalance Only order, as appropriate, for the purposes of the Nasdaq Opening Cross. A Market Hours Order is any order that may be entered into the system and designated with a time-in-force of MIOC, MDAY, MGTC. See Rule 4752(a)(7). See also Rules 4703(a) for a discussion of the Time in Force Order attribute, including MIOC, MDAY, and MGTC.

<sup>7</sup> See Rule 4752(d)(2)(A).

<sup>8</sup> See Rule 4752(d)(2)(B).

<sup>9</sup> See Rule 4752(d)(2)(C).

Opening Cross will occur at the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at 9:30 a.m.<sup>10</sup>

When the Opening Cross price is calculated, Nasdaq applies a boundary within which the cross must execute to ensure that the price derived does not exceed a price reasonably tied to the prevailing market at the time. Specifically, Nasdaq applies a percentage based threshold (“Threshold Percentage”) to a benchmark (“Benchmark Value”) that, when applied to an individual security, determines the price range that a security may cross (“Threshold Range”), outside of which the opening price of a security may not occur.<sup>11</sup> If an Opening Cross price of a security would otherwise be outside of the Threshold Range, Nasdaq will adjust the Opening Cross price of the security to a price within the Threshold Range that best satisfies the normal process for determining the Opening Cross price.<sup>12</sup> This change happens automatically prior to execution of the Opening Cross, and does not involve any human intervention. All unexecuted shares designated to expire upon the conclusion of the Opening Cross,<sup>13</sup> including those that fall outside of the Threshold Range, are cancelled.

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<sup>10</sup> See Rule 4752(d)(2)(D).

<sup>11</sup> See Rule 4752(d)(2)(E).

<sup>12</sup> See Rules 4752(d)(2)(A) – (D).

<sup>13</sup> These are: MOO, LOO, OIO, and Early Market Hours Orders designated to participate in the Opening Cross. Prior to the Opening Cross, the Exchange maintains a continuous order book and an Opening Cross order book. Orders in the Opening Cross order book may execute only in the Opening Cross process, while Orders in the continuous book may execute during pre-market hours trading, in the Opening Cross, or in regular market hours trading if the Order has a time-in-force that will allow it to remain active.

The Threshold Percentage and Benchmark Value are set by Nasdaq officials in advance and communicated to Participants.<sup>14</sup> Nasdaq may adjust the Threshold Percentage based on Nasdaq's experience with the Opening Cross and on unusual market conditions, such as certain options and derivatives expiration days that are heavily affected by the opening price of Nasdaq securities. Nasdaq publishes the Benchmark Value and Threshold Percentages via its public NasdaqTrader website, and sets the Threshold Percentage so that repricing of a security is rare.<sup>15</sup> Currently, Nasdaq applies a Threshold Percentage of 10%, which is applied to the Nasdaq Best Bid and Offer ("QBBO") midpoint and is added to the Nasdaq Offer and subtracted from the Nasdaq Bid to establish the threshold price range. For example, if the QBBO is \$10.00 x \$11.00, then the midpoint equals 10.50 and the Threshold Percentage is 10%, resulting in a threshold value of \$1.05 (10% of \$10.50 = \$1.05). This value is then added to the offer and subtracted from the bid to obtain the cross's threshold range. In this example, it would result in a lower threshold of \$8.95 ( $\$10.00 - \$1.05 = \$8.95$ ) and an upper threshold of \$12.05 ( $\$11.00 + \$1.05 = \$12.05$ ), thus creating a range of \$8.95 to \$12.05, within which the cross can occur. This means \$8.95 is the lowest price at which the cross can occur and \$12.05 is the highest price at which it can occur. The threshold range is dynamic; as the QBBO changes, the threshold price range changes.

The current price adjustment process under Rule 4752(d)(2)(E) is effective at ensuring the opening price of a security is within a certain range of the QBBO

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<sup>14</sup> As defined by Rule 4701(c).

<sup>15</sup> See [http://www.nasdaqtrader.com/content/ProductsServices/Trading/Crosses/openclose\\_faqs.pdf](http://www.nasdaqtrader.com/content/ProductsServices/Trading/Crosses/openclose_faqs.pdf).

immediately prior to the initiation of the cross in the security; however, the current process does not prevent a cross from occurring at an erroneous price caused by an order or quote entered into the continuous pre-market trading book by a Participant in error that significantly skews the Opening Cross price of a security. This scenario could cause the QBBO to be excessively wide, with one side of the bid/offer significantly distant from the normal range and not representative of the true interest in the security. Nonetheless, the price adjustment process under Rule 4752(d)(2)(E) would allow the Opening Cross price to be set at an erroneous level because it would set the Benchmark Value at the midpoint between the erroneously-priced side of the market and the non-erroneously priced contra side. To illustrate, assume an extreme example as follows: if a security has a bid of \$10 set by an Order to buy 100 shares at \$10 in pre-market trading with no offer interest until 9:29 a.m., when a Participant erroneously enters an Order to sell 100 shares at \$1100, under the current opening process the Benchmark Value of that security would be the midpoint price of \$555, which would create a threshold range of \$0.0001 by \$1155.50.<sup>16</sup> Under such extreme circumstances a mispriced open could occur, in which case the parties to an erroneous execution would have to avail themselves of the clearly erroneous trade nullification process of Rule 11890.<sup>17</sup>

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<sup>16</sup> The Exchange will not allow the lower threshold to be a negative amount and will set the lower range value to the lowest value possible, which is \$0.0001.

<sup>17</sup> The terms of a transaction executed on Nasdaq are “clearly erroneous” when there is an obvious error in any term, such as price, number of shares or other unit of trading, or identification of the security. A transaction made in clearly erroneous error and cancelled by both parties or determined by Nasdaq to be clearly erroneous will be removed from the consolidated tape. See Rule 11890(a)(1).

New Protection

Nasdaq is proposing an additional price protection process designed to avoid mispriced Opening Crosses and the use of the clearly erroneous post-trade nullification process. Once a security has an Opening Cross price set based on the process under Rule 4752(d)(2)(A) – (E), Nasdaq will require the security to pass at least one of three new “tests” in order for the Opening Cross to occur. If a security does not pass any of the three tests no Opening Cross will occur in that security, all Orders in the Opening Cross<sup>18</sup> will be cancelled back to the Participants, and regular market hours trading will begin.

The three new tests compare the Opening Cross price as calculated under the current rule to a reference price to ensure that the Opening Cross price is reasonably related to the market and not the product of erroneous Order entry. The reference price range is calculated under each test by applying a threshold set by Nasdaq officials in advance and communicated to Participants (“Price Test Thresholds”). The Price Test Thresholds, like the current Threshold Percentage, will be published via Nasdaq’s public NasdaqTrader website. Nasdaq may apply different Price Test Thresholds to each of the Opening Cross Price Tests. The Price Test Threshold is applied to different measures under each of the new tests to calculate the range within which the Opening Cross price must fall to pass the test (“Price Test Threshold Range”). Nasdaq is initially setting each of the Price Test Thresholds uniformly at the greater of \$0.50 or 10%; however, Nasdaq may adjust the Price Test Thresholds independently of one another.

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<sup>18</sup> See note 13 above. Orders entered in the continuous book eligible to trade in the pre-market session prior to the opening of the security would not be cancelled but would rather continue to rest on the continuous book for potential participation in regular market hours trading.

Opening Cross Price Test A requires the Opening Cross price of a Nasdaq listed security, other than newly-listed Exchange Traded Products (“ETPs”), to be within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security’s prior day Nasdaq Official Closing Price (“NOCP”). Non-Nasdaq listed securities must have an Opening Cross price within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security’s prior day consolidated closing price. Unlike newly-listed company stocks that begin trading at some point after the stock market has opened, newly-listed ETPs usually begin trading in the premarket session prior to regular market hours trading on the security’s initial day of trading and do not have a prior day’s consolidated closing price. For such securities, the Price Test Threshold Range is established by adding and subtracting the Price Test Threshold from the offering price. If the Nasdaq Opening Cross price is higher or lower than the Price Test Threshold Range established under this test, or if a non-ETP Nasdaq listed security does not have a previous day’s closing price,<sup>19</sup> the security fails the test and Opening Cross Price Test B is performed.

Opening Cross Price Test B requires the Opening Cross price of a security to be within a Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the security’s Nasdaq last sale (either round or odd lot) occurring after 9:15 a.m. ET but prior to the Opening Cross. If the Opening Cross price is higher or lower than the Price Test Threshold Range established under this test, or if there is no

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<sup>19</sup> For example, a security may not have a NOCP due to a unit separation.

Nasdaq last sale,<sup>20</sup> the security fails the test and Opening Cross Price Test C is performed.

Opening Cross Price Test C requires the Opening Cross price to fall within the Price Test Threshold Range established by adding and subtracting the Price Test Threshold from the Nasdaq best bid (for Opening Cross prices that would be higher than the security's closing price as established in Test A) or Nasdaq best offer (for opening cross prices that would be lower than the security's closing price as established in Test A). For purposes of this test, if a security does not have a NOCP or consolidated closing price, as applicable, for the previous trading day Nasdaq will use a price of \$0. If the Nasdaq Opening Cross price is higher or lower than the Opening Cross price range established under this test all Orders in the Opening Cross<sup>21</sup> will be cancelled back to Participants, no Opening Cross will occur, and the security will open for regular market hours trading.

Using the example above where the QBBO is \$10 x \$11 and Opening Price Range is \$8.95 to \$12.05, if the Opening Cross price is calculated to be \$10.50 then the security would move on to the Opening Cross eligibility test process. Under Opening Cross Price Test A, if the security had a NOCP of \$12.50 then the Price Test Threshold used would be 10% (10% of \$12.50 = \$1.25, which is greater than \$0.50) and the Price Test Threshold Range would be \$11.25 to \$13.75 ( $\$12.50 - \$1.25 = \$11.25$  and  $\$12.50 + \$1.25 = \$13.75$ ). Because the Opening Cross price is less than the lower threshold

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<sup>20</sup> A security may not have a Nasdaq last sale because there was no trading in the security during the premarket session.

<sup>21</sup> See note 18 above.



(\$10.50 < \$11.25), the security fails Opening Cross Price Test A and Opening Cross Price Test B is performed.

Under Opening Cross Price Test B, if the last sale at 9:20 a.m. is \$11.90, the Price Test Threshold would be 10% (10% of \$11.90 = \$1.19, which is greater than \$0.50) and the Price Test Threshold Range would be \$10.71 to \$13.09 (\$11.90 - \$1.19 = \$10.71 and \$11.90 + \$1.19 = \$13.09). Because the Opening Cross price is less than the lower threshold (\$10.50 < \$10.71), the security fails Opening Cross Price Test B and Opening Cross Price Test C is performed.

Under Opening Cross Price Test C, since the Opening Cross price is lower than the NOCP (\$10.50 < \$12.50), the QBBO offer price of \$11 would be used to calculate the Price Test Threshold Range, which would result in a Price Test Threshold of 10% (10% of \$11 = \$1.10, which is greater than \$0.50) and a Price Test Threshold Range of \$9.90 to \$12.10 (\$11 - \$1.10 = \$9.90 and \$11 + \$1.10 = \$12.10). Because the Opening Cross price is within the Price Test Threshold Range, the security passes the test and the Opening Cross may proceed.

Accordingly, these new protections will mitigate situations in which the Opening Cross price may be erroneous. As a result, the changes will support fair and orderly markets.

### Implementation

Nasdaq is proposing to implement the proposed change in a measured approach over the course of approximately four weeks. Although Nasdaq does not foresee any technical issues with implementation of the proposed changes, they affect a fundamental process in the operation of an orderly market. As a result, the Exchange

believes it should implement the changes in stages. The Exchange will use a rollout schedule that will start with a small number of securities (e.g., 5-50) with each stage increasing the number of securities to be rolled out. The implementation details will be published via an Exchange Trader Alert and be posted on the NasdaqTrader website. The Exchange believes that this measured approach will minimize risk to the overall market.

## 2. Statutory Basis

The Exchange believes that its proposal is consistent with the requirements of the Act and the rules and regulations thereunder that are applicable to a national securities exchange, and, in particular, with the requirements of Section 6(b) of the Act.<sup>22</sup> Specifically, the proposal is consistent with Section 6(b)(5) of the Act,<sup>23</sup> because it would promote just and equitable principles of trade, remove impediments to, and perfect the mechanism of, a free and open market and a national market system.

The Exchange believes that the proposed change will promote just and equitable principles of trade because it will implement a process designed to prevent Opening Crosses to occur at erroneous prices. As explained, under the current process an erroneous order or quote may significantly skew the current Benchmark Value that is used to create a boundary for the Opening Cross Price. This may then lead to the Opening Cross price would result in a temporary price dislocation from normal pricing and typically the use of the clearly erroneous trade nullification process under Rule 11890.

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<sup>22</sup> 15 U.S.C. 78f(b).

<sup>23</sup> 15 U.S.C. 78f(b)(5).

The Exchange considers that a better approach is to implement a system of tests, as proposed herein, that would not allow an erroneous order or quote affect the opening of a security. The proposed change, moreover, would mitigate the likelihood of an erroneous execution occurring in the Opening Cross, since all Orders in the Opening Cross would be cancelled. There would be no need then to use the clearly erroneous trade nullification process because no such trade would occur. Thus, the proposed rule change also protects investors, by avoiding erroneous transactions, which are disruptive to individual investors and the market overall.

The proposal also promotes just and equitable principles of trade and further perfects mechanism of fair and orderly markets in that it promotes transparency and uniformity in handling erroneous trades in the Opening Cross.

Finally, implementing the proposed changes in a phased approach promotes just and equitable principles of trade, further improves participating in fair and orderly markets, and serves to protect investors because it will limit the potential disruption to the market to a subset of the total number of securities in the opening cross should the Exchange experience a technical issue with the implementation.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change implicates any competitive issues. The proposed change implements changes that will benefit all market participants by avoiding Opening Prices that are not reasonably related to bona fide market interest. Avoiding such prices will ensure that the information on which market participants make investment decisions is accurate and representative of investors' interest. As such, the proposed changes should not place a burden on competition whatsoever.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission shall: (a) by order approve or disapprove such proposed rule change, or (b) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-NASDAQ-2015-159 on the subject line.

Paper comments:

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-NASDAQ-2015-159. This file number should be included on the subject line if e-mail is used. To help the Commission

process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site

(<http://www.sec.gov/rules/sro.shtml>).

Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly.

All submissions should refer to File Number SR-NASDAQ-2015-159 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>24</sup>

Robert W. Errett  
Deputy Secretary

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<sup>24</sup> 17 CFR 200.30-3(a)(12).

**EXHIBIT 5**

The text of the proposed rule change is below. Proposed new language is underlined.

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**4752. Opening Process**

(a) - (c) No change.

(d) Processing of Nasdaq Opening Cross. For System securities, the Nasdaq Opening Cross shall occur at 9:30, and market hours trading shall commence when the Nasdaq Opening Cross concludes.

(1) No change.

(2) (A) The Nasdaq Opening Cross shall occur at the price that maximizes the number of shares of MOO, LOO, OIO, Early Market Hours orders, and executable quotes and orders in the Nasdaq Market Center to be executed.

(B) If more than one price exists under subparagraph (A), the Nasdaq Opening Cross shall occur at the price that minimizes any Imbalance.

(C) If more than one price exists under subparagraph (B), the Nasdaq Opening Cross shall occur at the entered price at which shares will remain unexecuted in the cross.

(D) If more than one price exists under subparagraph (C), the Nasdaq Opening Cross shall occur at the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at 9:30 a.m.

(E) If the Nasdaq Opening Cross price established by subparagraphs (A) through (D) is outside the benchmarks established by Nasdaq by a threshold amount, the Nasdaq Opening Cross shall occur at a price within the threshold amounts that best satisfies the conditions of subparagraphs (A) through (D). Nasdaq management shall set and modify such benchmarks and thresholds from time to time upon prior notice to market participants.

**(F) Opening Cross Eligibility:** In addition to the Nasdaq Opening Cross price process of subparagraphs (A) through (E), each security in the Nasdaq Opening Cross must also pass one of the Opening Cross Price Tests in subparagraphs (i) through (iii) below or all MOO, LOO, OIO, and Early Market Hours orders in the Nasdaq Opening Cross in the security will be cancelled back to Participants, no Nasdaq Opening Cross in that security will occur, and the security will open for regular market hours trading consistent with paragraph (c) above. Each Opening Cross Price Test applies a price range within which the Opening Cross Price, as calculated by subparagraphs (A) through (E) above, must fall to pass the individual Opening Cross Price Test. For each Opening Cross Price Test, Nasdaq will calculate the price range by using a threshold applied to the unique measures

under each test. Nasdaq will establish and publish the thresholds used in the Opening Cross Price Tests below. Nasdaq management shall set and modify the Opening Cross Price Test thresholds from time to time upon prior notice to market participants.

(i) Opening Cross Price Test A. For Nasdaq listed securities, the Opening Cross price range for Test A is established by adding and subtracting the Opening Cross Price Test A threshold from the Nasdaq Official Closing Price of the security for the previous trading day. For non-Nasdaq listed securities, the Opening Cross price range for Test A is established by adding and subtracting the Opening Cross Price Test A threshold from the consolidated closing price of the security for the previous trading day. For new Exchange Traded Products that do not have a Nasdaq Official Closing Price, the Opening Cross price range is established by adding and subtracting the Opening Cross Price Test A threshold from the offering price. If the Nasdaq Opening Cross price is higher or lower than the Opening Cross price range established by this subparagraph or the security does not have a Nasdaq Official Closing Price or consolidated closing price for the previous trading day, Opening Cross Price Test B will be performed.

(ii) Opening Cross Price Test B. The Opening Cross price range for Test B is established by adding and subtracting the Opening Cross Price Test B threshold from the Nasdaq last sale (either round or odd lot) after 9:15 a.m. ET but prior to the Opening Cross. If the Nasdaq Opening Cross price is higher or lower than the Opening Cross price range established by this subparagraph or if there is no Nasdaq last sale, Opening Cross Price Test C will be performed.

(iii) Opening Cross Price Test C. The Opening Cross price range for Test C is established by adding to and subtracting the Opening Cross Price Test C threshold from the Nasdaq best bid (for Opening Cross prices that would be higher than the closing price used under subparagraph (i) above) or Nasdaq best offer (for Opening Cross prices that would be lower than the closing price used under subparagraph (i) above). For purposes of this test, if a security does not have a Nasdaq Official Closing Price or consolidated closing price, as applicable, for the previous trading day Nasdaq will use a price of \$0. If the Nasdaq Opening Cross price is higher or lower than the Opening Cross price range established by this subparagraph all Orders in the Opening Cross will be cancelled back to Participants, no Opening Cross will occur, and the security will open for regular market hours trading consistent with paragraph (c) above.

**(3) – (4)** No change.

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