

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-73739; File No. SR-NASDAQ-2014-116)

December 4, 2014

Self-Regulatory Organizations; The NASDAQ Stock Market LLC; Notice of Proposed Rule Change Relating to the NASDAQ Opening and Halt Cross

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 November 21, 2014, The NASDAQ Stock Market LLC (“NASDAQ” or the “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by NASDAQ. 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 the Substance of the Proposed Rule Change

NASDAQ proposes to modify and reorganize Chapter VI (Trading Systems), Section 8 (NASDAQ Opening and Halt Cross) of the NASDAQ Options Market, LLC (“NOM”). The proposal would update or add Section 1 and Section 8 definitions in respect of the NASDAQ Opening and Halt Cross. The proposal would also make changes regarding: the criteria for opening of trading or resumption of trading after a halt; NASDAQ posting on its website any changes to the dissemination interval or prior Order Imbalance Indicator; the procedure if more than one price exists; the procedure if there are unexecuted contracts; and the ability of firms to elect that orders be returned in symbols that were not opened on NOM before the conclusion of the Opening Order Cancel Timer.

The text of the proposed rule change is available at <http://nasdaq.cchwallstreet.com/>, at

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

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

NASDAQ's principal office, and at the Commission's Public Reference Room.

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

In its filing with the Commission, NASDAQ included statements concerning the purpose of, and basis for, the proposed rule change. The text of these statements may be examined at the places specified in Item IV below, and is set forth in Sections A, B, and C below.

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

1. Purpose

The purpose of the proposed rule change is to modify NOM Chapter VI, Section 1 and Section 8 to update or add definitions, which include Current Reference Price, NASDAQ Opening Cross, Eligible Interest, Valid Width National Best Bid or Offer ("Valid Width NBBO"), Away Best Bid or Offer ("ABBO"), and On the Open Order ("OPG"). The purpose is to also make changes regarding: the criteria for opening of trading or resumption of trading after a halt; NASDAQ posting on its website any changes to the dissemination interval or prior Order Imbalance Indicator; the procedure if more than one price exists; the procedure if there are unexecuted contracts; and the ability of firms to elect that orders be returned in symbols that were not opened on NOM before the conclusion of the Opening Order Cancel Timer.<sup>3</sup>

Section 8 of Chapter VI describes the NASDAQ opening and halt cross and opening imbalance process ("Opening Cross").<sup>4</sup> Section 8(a) currently contains definitions that are applicable to Section 8. Section 8(b) currently states that for the opening of trading of System

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<sup>3</sup> The Exchange will explain the proposed change to its participants via an Options Trader Alert.

<sup>4</sup> See Securities Exchange Act Release No. 64463 (May 11, 2011), 76 FR 28257 (May 16, 2011)(SR-NASDAQ-2011-037)(approval order regarding updates to Opening Cross).

Securities,<sup>5</sup> the Opening Cross shall occur at or after 9:30 a.m. Eastern Time<sup>6</sup> if any of the following “conditions” occur: (1) there is no Imbalance;<sup>7</sup> (2) the dissemination of a regular market hours quote or trade (as determined by the Exchange on a class-by-class basis) by the Market for the Underlying Security<sup>8</sup> has occurred (or, in the case of index options, the Exchange has received the opening price of the underlying index); or (3) in the case of a trading halt, when trading resumes pursuant to Chapter V, Section 4, and a certain number (as the Exchange may determine from time to time) of other options exchanges have disseminated a firm quote on the Options Price Reporting Authority (“OPRA”).<sup>9</sup> Market hours trading on NOM in specific options commences, or in the case of specific halted options resumes, when the NASDAQ Opening Cross concludes. Section 8(c) currently describes the procedure if firm quotes are not disseminated for an option by the predetermined number of options exchanges by a specific time

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<sup>5</sup> “System Securities” means all options that are currently trading on NOM pursuant to Chapter IV. All other options shall be “Non System Securities.” Chapter VI, Section 1(b).

<sup>6</sup> In this proposal, all time is Eastern Time unless otherwise noted.

<sup>7</sup> “Imbalance” means the number of contracts of Eligible Interest that may not be equal. Chapter VI, Section 8(a)(1). “Eligible Interest” means any quotation or any order that may be entered into the system and designated with a time-in-force of IOC, DAY, GTC. Chapter VI, Section 8(a)(4). The Exchange is deleting the reference to Imbalance from Section 8(b) because, as discussed, the occurrence of the Opening Cross depends on the parameters proposed in Section 8(b) rather than on whether there is an imbalance.

<sup>8</sup> “Market for the Underlying Security” means either the primary listing market, the primary volume market (defined as the market with the most liquidity in that underlying security for the previous two calendar months), or the first market to open the underlying security, as determined by the Exchange on an issue-by-issue basis and announced to the membership on the Exchange’s web site. Chapter VI, Section 8(a)(5).

<sup>9</sup> For better readability, this part of Section 8(b) is proposed to be broken into two sentences and the phrase “the Opening Cross shall occur” inserted. Reference to firm quote on OPRA is proposed to be deleted from this part of Section 8(b) and is, as discussed, put into proposed Section 8(b)(2)(B).

during the day that is determined by the Exchange;<sup>10</sup> provided that dissemination of a regular market hours quote or trade by the Market for the Underlying Security has occurred (or, in the case of index options, the Exchange has received the opening price of the underlying index). This filing proposes several changes to enhance the usability and effectiveness of Section 8 regarding the opening and halt cross and imbalance process.

First, the Exchange proposes to update or add new Section 8 definitions.

The Exchange proposes a change to the definition of “Current Reference Price”. Current Section 8(a)(2)(A) defines the “Current Reference Price” to mean: i) The single price at which the maximum number of contracts of Eligible Interest can be paired at or within the NBBO; ii) If more than one price exists under subparagraph (i), the Current reference Price shall mean the entered price at which contracts will remain unexecuted in the cross; iii) If more than one price exists under subparagraph (ii), the Current Reference Price shall mean the price that is closest to the midpoint of the (1) National Best Bid or the last offer on NOM against which contracts will be traded whichever is higher, and (2) National Best Offer or the last bid on NOM against which contracts will be traded whichever is lower. Proposed Section 8(a)(2)(A) seeks to simplify the definition of the “Current Reference Price” to state that “Current Reference Price” shall mean an indication of what the Opening Cross price would be at a particular point in time. The “Current Reference Price” determination will be substantively similar to what is currently described in Section 8(a)(2)(A), with the criteria for the Opening Cross price, as discussed below, set forth elsewhere in Section 8,<sup>11</sup> according to various parameters (e.g. existence of opening interest,

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<sup>10</sup> The specific time of day, currently 9:45 a.m., is disseminated at [http://www.nasdaqtrader.com/content/technicalsupport/NOM\\_SystemSettings.pdf](http://www.nasdaqtrader.com/content/technicalsupport/NOM_SystemSettings.pdf).

<sup>11</sup> See proposed Section 8(b).

existence of Valid Width NBBO, whether the issue is open elsewhere).<sup>12</sup> The Exchange believes that this construction makes the rule easier to follow. In addition, this construction also makes the language contained in current Section 8(a)(2)(E) no longer necessary as it is replaced with the new definition proposed for “Current Reference Price” in Section 8(a)(2)(A) and proposed criteria for the Opening Cross price set forth in Section 8(b). Thus, the Exchange proposes to delete current Section 8(a)(2)(E).

The Exchange proposes a change to the definition of “NASDAQ Opening Cross”. Specifically, in proposed Section 8(a)(3) the Exchange introduces a clarifying change that references opening or resuming trading, and states that “NASDAQ Opening Cross” shall mean the process for opening or resuming trading pursuant to this rule and shall include the process for determining the price at which Eligible Interest, as discussed below, shall be executed at the open of trading for the day, or the open of trading for a halted option, and the process for executing that Eligible Interest.

The Exchange proposes to define a new order type in Section 1(e)(7), “On the Open Order”, which is an order with a designated time-in-force of OPG.<sup>13</sup> An On the Open Order will be executable only during the Opening Cross. If such order is not executed in its entirety during the Opening Cross, the order, or any unexecuted portion of such order, will be cancelled back to the entering participant.

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<sup>12</sup> Simultaneously, the price parameters are deleted from current Section 8(a)(2)(A). In a similar vein, current Section 8(a)(2)(E) indicative prices are deleted. The Exchange is re-organizing Section 8 and thereby deleting the noted price parameters and indicative prices in order to offer an integrated description of the opening process in proposed Section 8(b).

<sup>13</sup> The term “On the Open Order” (OPG) is also proposed to be added as a Time in Force to Chapter VI, Sec 1(g), and is added as an Order Type to Chapter VI, Sec 8(a)(4).

The Exchange proposes a change to the definition of “Eligible Interest” contained in current Section 8(a)(4). Specifically, in Section 8(a)(4) the Exchange proposes a change to reflect the addition of a new order type, On the Open Order, with a time-in force of OPG, so that “Eligible Interest” shall mean any quotation or any order that may be entered into the system and designated with a time-in-force of IOC (immediate-or-cancel), DAY (day order), GTC (good-till-cancelled), and OPG.<sup>14</sup> The Exchange also proposes new language to indicate how certain time-in-force orders will be handled, to state that orders received via FIX protocol prior to the NASDAQ Opening Cross designated with a time-in-force of IOC will be rejected and shall not be considered Eligible Interest. Orders received via OTTO and SQF prior to the NASDAQ Opening Cross designated with a time-in-force of IOC will remain in-force through the opening and shall be cancelled immediately after the opening. The Exchange notes that FIX protocol users generally prefer a cancel if an order is not executed immediately in order that these users have an a opportunity to access other markets; while OTTO and SQF users are liquidity providers who prefer that the order lives throughout the entire opening process, until it is clear their liquidity was not utilized in the opening. Also, for purposes of consistency the time-in-force designation is hyphenated throughout Section 8. The Exchange believes that these changes help to clarify how eligible quotations and orders are handled in the opening process.

The Exchange proposes to add the concept of a Valid Width NBBO and ABBO with respect to away and on-Exchange interest. Specifically, in proposed Section 8(a)(6) the Exchange defines “Valid Width NBBO” as the combination of all away market quotes and any

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<sup>14</sup> The Exchange notes that EXPR (wait or expire time) was deleted in a prior filing, see Securities Exchange Act Release No. 64311 (April 20, 2011), 76 FR 23349 (April 26, 2011)(NASDAQ-2011-022)(notice of filing and immediate effectiveness), but inadvertently was left in the rule text where “and OPG” is proposed to be added. EXPR is, therefore, not shown in the proposed rule text.

combination of NOM-registered Market Maker (“Market Maker”) orders and quotes received over the OTTO or SQF Protocols within a specified bid/ask differential as established and published by the Exchange. The Valid Width NBBO will be configurable by underlying, and a table with valid width differentials will be posted by NASDAQ on its website. Away markets that are crossed (e.g. AMEX crosses AMEX, AMEX crosses CBOE) will void all Valid Width NBBO calculations. If any Market Maker orders or quotes on NOM are crossed internally, then all such orders and quotes will be excluded from the Valid Width NBBO calculation. In addition, in proposed Section 8(a)(7), the Exchange defines “ABBO” as the displayed National Best Bid or Offer not including the Exchange’s Best Bid or Offer.

The Exchange is making these proposals to ensure that all away market quotes and any combination of Market Maker orders and quotes<sup>15</sup>, whether they include the Exchange’s Best Bid or Offer or not, are represented. The Exchange believes that including (or adding) the proposed Valid Width NBBO and ABBO within the opening rule should be beneficial to market participants by offering a more robust Opening Cross process. The proposed change will significantly enhance the price discovery mechanism in the opening process to include not only Market Maker orders and quotes but also away market interest.<sup>16</sup>

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<sup>15</sup> In respect of the Valid Width NBBO, the orders and quotes on the Exchange would be received over the OTTO or SQF Protocols.

<sup>16</sup> Current Section 8(b)(2)(B) and (b)(2)(C) discuss the Opening Cross procedure if more than one price exists. As noted below, the Exchange proposes to add language to current Section 8(b)(2)(C) regarding unexecuted contracts. Proposed Section 8(b)(5) and (b)(6) (renumbered from current Section 8(b)(3) and (b)(4), respectively) discuss how Eligible Interest would be handled vis a vis the Opening Cross; proposed (b)(5) states that if the NASDAQ Opening Cross price is selected and not all Eligible Interest available in NOM is executed, then all Eligible Interest shall be executed at the NASDAQ Opening Cross price in accordance with the execution algorithm assigned to the associated underlying option. No changes are proposed to Sections 8(b)(6) and 8(b)(7) other than re-numbering. Section 8 (b)(6) (renumbered from current Section 8(b)(4)) states that all Eligible Interest executed in the Nasdaq Opening Cross shall be executed at the Nasdaq

Following are examples to illustrate, among other things, the calculation of the Valid Width NBBO as proposed in Section 8(a)(6) and the definition of the ABBO as proposed in Section 8(a)(7).

Example 1 (normal market conditions). Assume that the Valid Width NBBO bid/ask differential is set by the Exchange at .10. MM1 is quoting on the Exchange .90-1.15 and MM2 is quoting on the Exchange .80-.95, thus making the NOM BBO .90-.95. Assume the ABBO is .85- 1.00. The Exchange considers all bid and all offers to determine the bid/ask differential; in this example, the best bid/ask is .90-.95 which satisfies the required .10 bid/ask differential and is considered a Valid Width NBBO. Pursuant to the rule proposed in Section 8(b)(2)(A), NOM will open with no trade and BBO disseminated as .90-.95.

Example 2 (away markets are crossed). Assume the Valid Width NBBO bid/ask differential is set by the Exchange at .10. MM1 is quoting on the Exchange 1.05-1.15 and MM2 is quoting on the Exchange 1.00-1.10, thus making the NOM BBO 1.05-.1.10. Assume Exchange 2 is quoting .90-1.10 and Exchange 3 is quoting .70-.85. Since the ABBO is crossed (.90-.85), Valid Width NBBO calculations are not taken into account until the away markets are no longer crossed. Once the away markets are no longer crossed, the Exchange will determine if a Valid Width NBBO can be calculated. Assume the ABBO uncrosses because Exchange 3 updates their quote to .90-1.15, the NOM BBO of 1.05-1.10 is considered a Valid Width NBBO. Pursuant to the rule proposed in Section 8(b)(2)(A), NOM will open with no trade and BBO disseminated as 1.05-1.10.

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Opening Cross price. Proposed Section 8(b)(7) (renumbered from current Section 8(b)(5)) discusses the procedure of disseminating one additional Order Imbalance Indicator, if the conditions specified in proposed Section 8(b) have occurred, but there is an imbalance containing marketable routable interest; any remaining Imbalance will be canceled, posted, or routed as per the directions on the customer's order.



Example 3 (NOM orders/quotes are crossed, ABBO is Valid Width NBBO). Assume that the Valid Width NBBO bid/ask differential is set by the Exchange at .10. MM1 is quoting on the Exchange 1.05-1.15 (10x10 contracts) and MM2 is quoting on the Exchange .90-.95 (10x10 contracts), thus making the NOM BBO crossed, 1.05-.95, while another MM3 is quoting on the Exchange at .90-1.15 (10x10 contracts). Since the NOM BBO is crossed, the crossing quotes are excluded from the Valid Width NBBO calculation. However, assume Exchange 2 is quoting .95-1.10 and Exchange 3 is quoting .95-1.05, resulting in an uncrossed ABBO of .95-1.05. The ABBO of .95-1.05 meets the required .10 bid/ask differential and is considered a Valid Width NBBO. The Opening Cross will follow the rules set forth in proposed Section 8(b)(4)(B) because MM1 and MM2 have 10 contracts each which cross and there is more than one price at which those contracts could execute. Thus, the Opening Cross will occur with 10 contracts executing at 1.00, which is the mid-point of the National Best Bid and the National Best Offer. At the end of the opening process, only the quote from MM3 remains so the NOM disseminated quote at the end of opening process will be .90-1.15 (10x10 contracts).

Second, in current Section 8(b) the Exchange proposes to remove language that “there is no Imbalance” and language regarding “on a class-by-class basis”, and proposes to add additional clarifying language pertaining to an Opening Cross after a trading halt. The Imbalance language is being removed from the introductory sentence of current Section 8(b) to make the language of the Processing of the Opening Cross apply more generally. The details surrounding the Opening Cross as it relates specifically to an Imbalance is currently provided for in Section 8(b)(5) and is being added in new proposed Section 8(b)(4)(C). The Exchange proposes to remove the “on a class-by-class basis” language because the Exchange will use a regular market hours quote or trade (as determined by the Exchange) for all classes on the

Exchange for the Opening Cross, without distinguishing among different classes. Additionally, the Exchange proposes to add language to current Section 8(b) to make it clear that an Opening Cross shall occur after a trading halt when trading resumes pursuant to Chapter V, Section 4.<sup>17</sup>

Third, the Exchange proposes to add certain criteria to current Section 8(b), in order to describe how the opening process will differ depending on whether a trade is possible or not on NOM. Provided that the ABBO is not crossed these criteria necessitate, per proposed new Section 8(b)(1), that a Valid Width NBBO will always be required to open a series when there is tradable interest on NOM; and require, per proposed new Section 8(b)(2), that in cases where there is no tradable interest, any one of three conditions could trigger a series on NOM to open. Those conditions are listed in proposed new (b)(2) as: (A) a Valid Width NBBO is present, (B) a certain number of other options exchanges (as determined by the Exchange) have disseminated a firm quote on OPRA, or (C) a certain period of time (as determined by the Exchange) has elapsed.<sup>18</sup> The Exchange believes that listing these criteria will, similarly to other proposed changes, organize and clarify the opening process and make it more robust and protective for market participants. The requirement of a Valid Width NBBO being present will help to ensure that opening execution prices are rational based on what is present in the broader marketplace during the opening process.

Fourth, the Exchange proposes changes to provide additional information during the opening process. Current Section 8(b)(1) indicates that NASDAQ shall disseminate an Order

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<sup>17</sup> Chapter V, Section 4 states that trading in an option that has been the subject of a halt under Section 3 of Chapter V shall be resumed upon the determination by NASDAQ Regulation, that the conditions which led to the halt are no longer present or that the interests of a fair and orderly market are best served by a resumption of trading. Trading shall resume according to the process set forth in proposed Chapter VI, Section 8 of the rules.

<sup>18</sup> In the case of a crossed ABBO, the conditions set forth in new proposed Section (8)(b)(1) and (b)(2) will become operative when the ABBO becomes uncrossed.

Imbalance Indicator every 5 seconds and does not allow for a shorter dissemination interval. New proposed Section 8(b)(3) indicates that NASDAQ shall disseminate by electronic means an Order Imbalance Indicator<sup>19</sup> every 5 seconds beginning between 9:20 a.m. and 9:28 a.m., or a shorter dissemination interval as established by NASDAQ, with the default being set at 9:25 a.m. The start of dissemination, dissemination interval, and changes to prior Order Imbalance Indicators, if any, shall be posted on the Exchange website. To further enhance price discovery and disclosure regarding the Opening Cross process, the Exchange proposes to add the ability for it to disseminate imbalances more frequently, which the rule currently does not allow for. The Exchange will indicate start of dissemination and the dissemination interval on its website. The Exchange believes that, like the other proposed changes, this proposed enhancement regarding additional information disclosure should prove to be very helpful to market participants, particularly those that are involved in adding liquidity during the Opening Cross process.

Fifth, the Exchange proposes to add language regarding how the Opening Cross will occur in relation to the Valid Width NBBO, and further what would happen if more than one price exists under certain circumstances. With this proposal, current Section 8(b)(2)(B) will be deleted and the determination of the Opening Cross price will be more fully described under proposed new Section 8(b)(4)(A) - (C). The new language added to current subparagraph (A) stipulates that the Opening Cross shall occur at the price that maximizes the number of contracts of Eligible Interest in NOM to be executed at or within the ABBO and within a defined range, as

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<sup>19</sup> “Order Imbalance Indicator” means a message disseminated by electronic means containing information about Eligible Interest and the price in penny increments at which such interest would execute at the time of dissemination. For the information disseminated by the Order Imbalance Indicator (e.g. Current Reference Price, number of paired contracts, size and buy/sell direction of Imbalance, indicative prices), see Chapter VI, Section 8(a)(2). The term “order” means a firm commitment to buy or sell options contracts. Chapter 1, Section 1(a)(44).

established and published by the Exchange, of the Valid Width NBBO. Current subparagraph (A) simply states the Opening Cross shall occur at the price that maximizes the number of contracts of Eligible Interest in NOM to be executed at or within the NBBO. The new proposed language being added to (A) will require that the Opening Cross price not only be at a price at or within the ABBO but also be within a defined range of the Valid Width NBBO. This addition will ensure that the Exchange does not open at a price too far away from the best interest available in the marketplace as a whole.

The new proposed Section 8(b)(4)(B) and (C) describe in detail at what price the Opening Cross will occur if there exists more than one price under Section 8(b)(4)(A) at which the maximum number of contracts could be executed at or within the ABBO and equal to or within a defined range of the Valid Width NBBO. Current Section 8(b)(2)(C) (renumbered as proposed to (b)(4)(B)) states that if more than one price exists under subparagraph (B),<sup>20</sup> the NASDAQ Opening Cross shall occur at the price that is closest to the midpoint price of (1) the National Best Bid or the last offer on NOM against which contracts will be traded whichever is higher, and (2) the National Best Offer or the last bid on NOM against which contracts will be traded whichever is lower. In an effort to make the rule language more precise and to signify that to the extent possible the Opening Cross will occur at the midpoint price, the Exchange proposes to delete the language “the price that is closest to”. New subparagraph (B), as proposed, will read

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<sup>20</sup> Current Section 8(b)(2)(B) currently states that if more than one price exists under subparagraph (A), the NASDAQ Opening Cross shall occur at the entered price at which contracts will remain unexecuted in the cross. Subparagraph (A) states that the NASDAQ Opening Cross shall occur at the price that maximizes the number of contracts of Eligible Interest in NOM to be executed at or within the National Best Bid and Offer.

that if more than one price exists under subparagraph (A)<sup>21</sup> and there are no contracts that would remain unexecuted in the cross, the Nasdaq Opening Cross shall occur at the midpoint price, rounded to the penny closest to the price of the last execution in that series and in the absence of a previous execution price, the price will round up, if necessary.<sup>22</sup> The price is determined using the midpoint of (1) the National Best Bid or the last offer on NOM against which contracts will be traded whichever is higher, and (2) National Best Offer or the last bid on NOM against which contracts will be traded whichever is lower. The Exchange believes the proposed language more fully describes how rounding is applied to determine the opening execution price in place of a general statement of “the price that is closest to the midpoint price”. In addition, the Exchange proposes new subparagraph (C) to describe the price at which the Opening Cross will occur when more than one price exists under subparagraph (A) and there are contracts which would remain unexecuted in the cross which was previously described in Section 8(b)(2)(B) with less granularity and without consideration of the new Valid Width NBBO. New proposed subparagraph (C) will state if more than one price exists under subparagraph (A), and contracts would remain unexecuted in the cross, then the opening price will be the highest/ lowest price, in the case of a buy/sell imbalance, at which the maximum number of contracts can trade which is equal to or within a defined range as established and published by the Exchange,<sup>23</sup> of the Valid

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<sup>21</sup> The Exchange proposes to change the subparagraph reference from (B) to (A) as current subparagraph (B) is being deleted and expanded upon with new subparagraphs (B) and (C).

<sup>22</sup> The Exchange notes that rounding will be applied, if needed, in the following manner: if the previous closing price is less than the midpoint, then the opening price rounds down; and if the previous closing price is greater than the midpoint, or if there is no closing price, then the opening price rounds up. For example, if there is a midpoint of 1.045, the opening price would be rounded to 1.04 if the previous closing price was 1.00, and would be rounded to 1.05 if the previous closing price was 1.10.

<sup>23</sup> The Exchange notes that the system will also calculate a defined range to limit the range of prices at which an order will be allowed to execute. Chapter VI, Section 10 (7).

Width NBBO on the contra side of the imbalance that would not trade through the ABBO.

Where there is more than one price and there is an imbalance, in Section 8(b)(4)(C) the Exchange is proposing that the Opening Cross price also be within a defined range of the Valid Width NBBO on the contra side of the imbalance, to help ensure that the opening price does not stray too far from the best prices available and that the opening price is rational. In addition, the Opening Cross price will be the highest price, in the case of a buy imbalance, where the maximum number of contracts can trade which is equal to or within the defined range of the Valid Width NBBO. Similarly, in the case of a sell imbalance, the Opening Cross price will be the lowest price at which the maximum number of contracts can trade which is equal to or within the defined range of the Valid Width NBBO. This serves to provide opening execution price protections as well as an Opening Cross price which will not have residual unexecuted interest reflected in the marketplace, after the Opening Cross execution, at a price which crosses the Opening Cross execution price.

The following examples illustrate, among other things, the determination of the Opening Cross price.

Example 4 (no imbalance and one possible price). Assume a Valid Width NBBO bid/ask differential allowance of .10 and a defined range of .10. Also, assume that the ABBO is 1.00-1.10 (10x10 contracts) and the NOM BBO is .99-1.15 (10x10 contracts) which represents a quote from MM1. Assume that a Customer Order 1 comes in to Buy 10 contracts for 1.05 and a Customer Order 2 comes in to Sell 10 contracts at 1.05. Once regular markets hours have begun and the underlying security has opened, the system determines if there is a Valid Width Quote present. While the NOM BBO of .99-1.15 is wider than the allowed bid/ask differential to qualify as a Valid Width NBBO on its own, the ABBO market of 1.00-1.10 does qualify as a

Valid Width NBBO. In this scenario, there is not an opening imbalance since there are 10 contracts on both the buy and sell side which could possibly trade. Thus, the Opening Cross will follow the rules set forth in proposed Section 8(b)(4)(A). Under this rule, the Opening Cross will occur at the price which maximizes the number of contracts of Eligible Interest at or within the ABBO and within a defined range of the Valid Width NBBO. In this scenario, the Opening Cross price will be 1.05 with 10 contracts executing and NOM BBO disseminated as .99-1.15.

Example 5 (no imbalance and more than one possible price). Assume a Valid Width NBBO bid/ask differential allowance of .10 and a defined range of .10. Assume the ABBO is 1.00-1.10 (10x10 contracts) and the NOM BBO is .99-1.11 (10x10 contracts) which represents a quote from MM1. Assume that a Customer Order 1 comes in to Buy 10 contracts for 1.08, and a Customer Order 2 comes in to Sell 10 contracts at 1.00. Once regular markets hours have begun and the underlying security has opened, the system determines if there is a Valid Width Quote present. While the NOM BBO of .99-1.11 is wider than the allowed bid/ask differential to qualify as a Valid Width NBBO on its own, the ABBO market of 1.00-1.10 does qualify as a Valid Width NBBO. In this scenario, there is not an imbalance as there are 10 contracts to buy and 10 contracts to sell, however, there exist multiple price points at which those 10 contracts could execute within the ABBO and within a .10 range of the Valid Width NBBO. Thus, the Opening Cross will follow the rules set forth in proposed Section 8(b)(4)(B) and the Opening Cross will occur with 10 contracts executing at 1.04. 1.04 represents the midpoint of 1.00 (the last offer on NOM against which contracts will be traded or the National Best Bid since the two are equal) and 1.08 (the last bid on NOM against which contracts will be traded). If the example is changed slightly such that Order 1 is a market order to Buy 10 contracts, the Opening Cross will occur with 10 contracts executing at 1.05 which represents the midpoint of 1.00 (the last

offer on NOM against which contracts will be traded or the National Best Bid since the two are equal) and 1.10 (the National Best Offer against which contracts will be traded). The market order is considered to be a price higher than the National Best Offer and outside of the NBBO therefore, the National Best Offer is used in determining the Opening Cross price. The NOM BBO disseminated after the opening in either case will be .99-1.11.

Example 6 (imbalance and more than one possible price). Assume that the ABBO is 1.05-1.50 (10x10 contracts) and MM1 is quoting on NOM 1.15-1.20 (10x10 contracts) as well as MM2 is quoting on NOM 1.05-1.50 (10x10 contracts). Also assume that the Valid Width NBBO bid/ask differential allowance and defined range are each .10. Also assume a Customer Order 1 is entered to Buy 30 contracts for 1.45. In this example, the Valid Width NBBO is comprised solely of the NOM 1.15-1.20 quote. There is more than one price at which the Exchange can maximize the number of contracts executed, 10 contracts, during the Opening Cross and there exist multiple prices at which 20 contracts will remain unexecuted in the Opening Cross. Thus, the Opening Cross price will be determined under proposed Section 8(b)(4)(C). In this example, the Valid Width NBBO is 1.15-1.20 which is the best bid and best offer of the MM1 quote and the ABBO and is tighter than the allowed differential of .10. With a defined range of .10 of the Valid Width NBBO on the contra side of the imbalance ( $1.20 + .10$ ), and a buy imbalance, the Opening Cross price will be 1.30 with Order 1 buying 10 contracts from MM1. The Opening Cross price of 1.30 represents the highest price at which the maximum number of contracts, 10 contracts, can trade which is equal to or within the defined range of the Valid Width NBBO on the contra side of the imbalance that would not trade through the ABBO. The remaining unexecuted contracts will be posted on the book and reflected in the NOM quote as a 1.30 bid with NOM BBO disseminated as 1.30-1.50 [sic] with offer as non-firm, as proposed in Section



8(b)(4)(C)(iii). If this example were changed slightly such that the ABBO was 1.05 – 1.25, the opening price would be 1.25 since the Opening Cross cannot occur at a price outside of the ABBO.

Because new proposed subsections (b)(1) and (b)(2) are added, current subsections (b)(1) through (b)(5) are re-numbered to (b)(3) through (b)(7), and the reference to (b)(2) in current (b)(7) is re-numbered to (b)(4).

Sixth, the Exchange is proposing new language to indicate the price at which remaining unexecuted contracts will be posted. Specifically, in proposed Section 8(b)(4)(C), formerly covered in (b)(2), the Exchange proposes to state that if more than one price exists under subparagraph (A), and contracts would remain unexecuted in the cross, then the opening price will be the price at which the maximum number of contracts can trade that are equal to or within the defined range of the Valid Width NBBO on the contra side of the imbalance that would not trade through the ABBO. New proposed subsections (i) – (iv) to Section 8(b)(4)(C) indicate the price at which unexecuted contracts will be posted on the book following the Opening Cross and the subsequent handling of the residual unexecuted contracts, as follows: (i) if unexecuted contracts remain with a limit price that is equal to the opening price, then the remaining unexecuted contracts will be posted at the opening price, displayed one minimum price variation (MPV) away if displaying at the opening price would lock or cross the ABBO, with the contra-side NOM BBO reflected as firm; (ii) if unexecuted contracts remain with a limit price that is through the opening price, and there is a contra side ABBO at the opening price, then the remaining unexecuted contracts will be posted at the opening price, displayed one minimum price variation (MPV) away from the ABBO, with the contra side NOM BBO reflected as firm and order handling of any remaining interest will be done in accordance with the routing and

time-in-force instructions of such interest and shall follow the Acceptable Trade Range mechanism set forth in Chapter VI, Section 10; (iii) if unexecuted contracts remain with a limit price that is through the opening price, and there is no contra side ABBO at the opening price, then the remaining contracts will be posted at the opening price, with the contra-side NOM BBO reflected as non-firm; and (iv) order handling of any residual unexecuted contracts will be done in accordance with the reference price set forth in Chapter VI, Section 10, with the opening price representing the reference price. This proposed behavior ensures that residual unexecuted contracts from the Opening Cross, regardless of their limit prices, are posted on the book at the opening price before subsequently being routed pursuant to Chapter VI, Section 11 or walked to the next potential execution price(s) under the Acceptable Trade Range set forth in Chapter VI, Section 10(7), with the opening price representing the “reference price” of that rule. This enhancement to the NOM Opening Cross ensures that aggressively priced interest does not immediately post at prices which may be considered to be egregious if the interest were to post and execute immediately following the Opening Cross. The ‘firm’ versus ‘non-firm’ tagging of contra-side interest when residual Opening Cross interest is posted follows the construct currently in place on the Exchange when aggressive interest is received and triggers an Acceptable Trade Range (ATR) process. Contra-side NOM BBO interest is reflected as non-firm when the Exchange has interest with a limit price (or market order) that is more aggressive than the Opening Cross price. The purpose behind this is to ensure that aggressively priced residual interest maintains priority should other aggressively priced interest be entered before the residual interest is permitted to access the next allowable range of prices.

Following are examples illustrating the proposed rule text regarding the handling of unexecuted contracts.

Example 7 (proposed Section 8(b)(4)(C)(i)). Assume the ABBO is 1.00-1.10 (10x10 contracts), and the NOM BBO is .99-1.11 (10x10 contracts). Assume there is a Customer order to Buy 10 contracts at the market and a Customer order to Sell 50 contracts at 1.00. Further assume the Valid Width NBBO is defined as .10 and the defined range is also .10. The Valid Width NBBO in this example is comprised solely of the ABBO which has a bid/ask differential equal to the allowance of .10. Since there is 1) an imbalance, 2) multiple prices at which the maximum number of contracts (10) can execute equal to or within the ABBO and, 3) multiple prices at which the maximum number of contracts can execute equal to or within a defined range of the Valid Width NBBO on the contra side of the imbalance that would not trade through the ABBO, the Opening Cross will occur at a price determined under Section 8(b)(4)(C). The Opening Cross will result in 10 contracts being executed at 1.00. The 40 remaining unexecuted contracts will be posted as a 40 contract offer at 1.00 and displayed at 1.01 (one MPV away from the away market bid of 1.00) in order to not display at a price which locks the ABBO under proposed Section 8(b)(4)(C)(i). The resulting displayed NOM BBO would be .99-1.01, reflected as firm on both sides of the market, and the remaining interest would be handled in accordance with the routing and time in-force instructions of the residual interest<sup>24</sup>. Since the residual interest is posted at its limit and therefore would not be permitted to execute at more aggressive prices, the contra-side NOM BBO is reflected as firm.

Example 8 (proposed Section 8(b)(4)(C)(ii)). Assume the ABBO is 1.00-1.10 (10x10 contracts), and the NOM BBO is .99-1.11 (10x10 contracts). Assume there is a Customer order to Buy 10 contracts at the market and a Customer order to Sell 50 contracts at .85. Further

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<sup>24</sup> As set forth in proposed Section 8(b)(4)(C)(iv), order handling of any residual interest in the Opening Cross will also be done in accordance with the reference price set forth in Chapter VI, Section 10, with the opening price representing the reference price.

assume the Valid Width NBBO is defined as .10 and the defined range is also .10. The Valid Width NBBO in this example is comprised solely of the ABBO which has a bid/ask differential equal to the allowance of .10. Since there is an imbalance and multiple prices exist at which the maximum number of contracts (10) can execute equal to or within the ABBO and within a defined range of the Valid Width NBBO without trading through the ABBO, the Opening Cross will occur at a price determined under Section 8(b)(4)(C). The Opening Cross would result in 10 contracts being executed at 1.00. The 40 remaining unexecuted contracts will be posted as a 1.00 offer and be displayed at 1.01 so as not to lock the away market bid under proposed Section 8(b)(4)(C)(ii). Since the residual interest is posted at a price which internally locks the ABBO and therefore would not be permitted to execute at more aggressive prices until the ABBO moves, the contra-side NOM BBO is reflected as firm. The resulting displayed NOM BBO would be .99-1.01, reflected as firm on both sides of the market, and the remaining interest would be handled in accordance with the routing and time-in-force instructions of the residual interest and in accordance with Chapter VI, Section 10 of the NOM rules, and the contra-side BBO will be marked as firm or non-firm in accordance with the same Section 10 rule.

Example 9 (proposed Section 8(b)(4)(C)(iii)). Assume the ABBO is .00-5.00 (0x10 contracts). Also assume the Valid Width NBBO bid/ask differential is defined as 0.10 and the defined range as described in proposed Section 8(b)(4)(C) is .10. Further, assume NOM has received a quote of .99-1.09 (10x10), a Customer order to Buy 10 contracts at the market, a Customer order to Buy 10 contracts for .70, and a Customer order to Sell 50 contracts at .85. There is a Valid Width NBBO present with the NOM quote of .99-1.09, which is equal to the defined bid/ask differential of .10. The Opening Cross has an imbalance on the sell side. Since there is more than one price at which contracts would remain unexecuted in the cross, the

Opening Cross price is determined using the logic included in proposed Section 8(b)(4)(C). This will result in an execution of 20 contracts at .89, since the Valid Width NBBO on the bid side (contra to the imbalance side) is .99 less the defined range of .10, with the residual contracts of the .85 Sell Order posted on the book at .89. The resulting NOM BBO would be reflected as .70-.89, reflected as non-firm on the bid, firm on the offer, and the remaining unexecuted interest would be handled in accordance with the routing and time-in-force instructions of the residual interest. The .70 bid is reflected as non-firm to ensure that incoming interest will not be permitted to immediately execute ahead of the more aggressively priced Opening Cross residual interest. The residual interest from the Opening Cross will be handled in accordance with Chapter VI, Section 10 of the NOM rules, and the contra-side BBO will be marked as firm or non-firm in accordance with the same Section 10 rule.

Seventh, the Exchange is proposing new language to indicate the use of execution algorithms assigned to the underlying options. Specifically, in proposed Section 8(b)(5) (formerly (b)(3)), the Exchange proposes to delete price/time priority and add the use of execution algorithms by stating that if the Nasdaq Opening Cross price is selected and fewer than all contracts of Eligible Interest that are available in NOM would be executed, all Eligible Interest shall be executed at the Nasdaq Opening Cross price in accordance with the execution algorithm assigned to the associated underlying option. By substituting language indicating use of execution algorithms rather than price/time priority, the Exchange recognizes that there are now multiple execution allocation models,<sup>25</sup> and these are factored into the Opening Cross.

Lastly, the Exchange proposes to add a provision regarding the return of orders in unopened symbols in the absence of an Opening Cross. Proposed new Section 8(c) is substituted

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<sup>25</sup> See, e.g., Chapter VI, Section 10(1).

for current Section 8(c) and provides the procedure if an Opening Cross in a symbol is not initiated before the conclusion of the Opening Order Cancel Timer. Specifically, proposed new Section 8(c) states that if an Opening Cross is not initiated under such circumstances, a firm may elect to have orders returned by providing written notification to the Exchange. These orders include all non GTC orders received over the FIX protocol. The Opening Order Cancel Timer represents a period of time since the underlying market has opened, and shall be established and disseminated by NASDAQ on its website. Proposed Section 8(c) will provide participants the ability to have their orders returned to them if NOM is unable to initiate an Opening Cross within a reasonable time of the opening of the underlying market. In addition, proposed Section 8(c) deletes language which is present in current Section 8(c) regarding how the Opening Cross operates in relation to the presence or absence of a regular market hour quote or trade by the Market for the Underlying and the process of the Opening Cross in relation to opening quotes or orders which lock or cross each other. The deleted provisions are now being more thoroughly described in proposed Section 8(b).

The Exchange believes that the proposed changes significantly improve the quality of execution of NOM's opening. The proposed changes give participants more choice about where, and when, they can send orders for the opening that would afford them the best experience. The Exchange believes that this should attract new order flow. The proposed changes should prove to be very helpful to market participants, particularly those that are involved in adding liquidity during the Opening Cross. Absent these proposed enhancements, NOM's opening quality will remain less robust than on other exchanges.

## 2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act<sup>26</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act<sup>27</sup> in particular, in that the proposal is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

The proposal is consistent with the goals of the Act because it will enhance and clarify the Opening Cross process, minimize or negate unnecessary complexity, and encourage liquidity at the crucial time of market open. The proposed change will also enhance the price discovery mechanism in the opening process to include not only Market Maker orders and quotes but also away market interest as represented by quotes. The Exchange believes this change will make the transition from the Opening Cross period to regular market trading more efficient and thus promote just and equitable principles of trade and serve to protect investors and the public interest.

The proposal is designed to promote just and equitable principles of trade by updating and clarifying the rules regarding the NASDAQ Opening and Halt Cross. In particular, the proposal would update or add Chapter VI, Section 8 definitions regarding NASDAQ Opening Cross, Eligible Interest, NBBO, and ABBO in respect of the Opening Cross and resuming options trading after a halt. The Exchange would add to Chapter VI, Section 1 the definition of “On the Opening Order” (OPG) as used in Section 8 in respect of the Opening Cross. The proposal would also, as discussed, make changes in Section 8 regarding: the criteria for opening of trading or resumption of trading after a halt; NASDAQ posting on its website any changes to

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<sup>26</sup> 15 U.S.C. 78f(b).

<sup>27</sup> 15 U.S.C. 78f(b)(5).

the dissemination interval or prior Order Imbalance Indicator; the procedure if more than one price exists; the procedure if there are unexecuted contracts; and the ability of firms to elect that orders be returned in symbols that were not opened on NOM before the conclusion of the Opening Order Cancel Timer.

The proposal is designed to remove impediments to and perfect the mechanism of a free and open market and a national market system. In particular, the Exchange proposes in Chapter VI, Section 8(b) to remove the class-by-class quote or trade characteristic because for the Opening Cross the Exchange will use a regular market hours quote or trade (as determined by the Exchange) for all underlyings [sic] on the Exchange, without distinguishing among underlying symbols, or, in the case of a trading halt the Opening Cross shall occur when trading resumes pursuant to Chapter V, Section 4. The Exchange proposes to set forth in Section 8(b) clear language describing under what circumstances an Opening Cross will occur, and how the Opening Cross will occur if more than one price exists under certain circumstances. Thus, for example, proposed Section 8(b)(4) specifies that if more than one price exists under subparagraph (A), and contracts would remain unexecuted in the cross, then the opening price will be the highest/lowest price, in the case of a buy/sell imbalance, at which the maximum number of contracts can trade which is equal to or within a defined range, as established and published by the Exchange, of the Valid Width NBBO on the contra side of the imbalance that would not trade through the ABBO. The Exchange proposes, in Section 8(b)(4)(C), three alternatives for how remaining unexecuted contracts will be handled. These include: if unexecuted contracts remain with a limit price that is equal to the opening price, if unexecuted contracts remain with a limit price that is through the opening price and there is a contra side ABBO at the opening price, and if unexecuted contracts remain with a limit price that is through



the opening price and there is no contra side ABBO at the opening price. The Exchange also proposes to clarify what happens if an Opening Cross in a symbol is not initiated before the conclusion of the Opening Order Cancel Timer. In that case, proposed Section 8(c)(2) [sic] indicates that a firm may elect to have orders returned by providing written notification to the Exchange. These orders include all non GTC orders received over the FIX protocol. The Opening Order Cancel Timer represents a period of time since the underlying market has opened, and shall be established and disseminated by the Exchange on its website.

The proposal is designed in general to protect investors and the public interest. The Exchange proposes to add certain criteria to current Section 8(b), in order to describe how the opening process will differ depending on whether a trade is possible or not on NOM. Assuming that ABBO is not crossed, proposed new Chapter VI, Section 8(b)(1) states that if there is a possible trade on NOM, a Valid Width NBBO must be present. Assuming that ABBO is not crossed, proposed Section 8(b)(2) states that if no trade is possible on NOM, then NOM will open dependent upon one of the following: A Valid Width NBBO is present; A certain number of other options exchanges (as determined by the Exchange) have disseminated a firm quote on OPRA; or A certain period of time (as determined by the Exchange) has elapsed. The Exchange proposes to further enhance price discovery and disclosure regarding the Opening Cross process, by proposing in current Section (b)(1) (renumbered to be (b)(3)) that NASDAQ may choose to establish a dissemination interval that is shorter than every 5 seconds; and that the Exchange will indicate the interval on its website in conjunction to other information regarding the Opening Process. Moreover, the Exchange proposes to add language in current Section 8(c)(2) regarding the return of orders in un-opened symbols in the absence of an Opening Cross. Thus, if an Opening Cross in a symbol is not initiated before the conclusion of the Opening Order Cancel

Timer, a firm may elect to have orders returned by providing written notification to the Exchange. These orders include all non GTC orders received over the FIX protocol. The Opening Order Cancel Timer represents a period of time since the underlying market has opened, and shall be established and disseminated by NASDAQ on its website.

For the above reasons, NASDAQ believes the proposed rule change is consistent with the requirements of Section 6(b)(5) of the Act. The Exchange believes that the proposed changes significantly improve the quality of execution of NOM's opening. The proposed changes give participants more choice about where, and when, they can send orders for the opening that would afford them the best experience. The Exchange believes that this should attract new order flow. The proposed changes should prove to be more robust and helpful to market participants, particularly those that are involved in adding liquidity during the Opening Cross.

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

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. While the Exchange does not believe that the proposal should have any direct impact on competition, it believes the proposal should help to further clarify the Opening Cross process and make it more efficient, reduce order entry complexity, enhance market liquidity, and be beneficial to market participants. Moreover, the Exchange believes that the proposed changes significantly improve the quality of execution of NOM's opening. The proposed changes give participants more choice about where, and when, they can send orders for the opening that would afford them the best experience. The Exchange believes that this should attract new order flow. Absent these proposed enhancements, NOM's opening quality will remain less robust than on other exchanges, and the Exchange will remain at a competitive disadvantage.

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

Written comments were neither solicited nor 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 (i) as the Commission may designate up to 90 days of such date 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-2014-116 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-2014-116. 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 website (<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 such filing also will be available for inspection and copying at the principal offices 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-2014-116, 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>28</sup>

Kevin M. O’Neill  
Deputy Secretary

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<sup>28</sup> 17 CFR 200.30-3(a)(12).