

Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * <input type="text" value="42"/>	SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4	File No.* SR - <input type="text" value="2021"/> - * <input type="text" value="004"/>	Amendment No. (req. for Amendments *) <input type="text"/>
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Filing by The Nasdaq Stock Market LLC  
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"/>
			Rule		
Pilot <input type="checkbox"/>	Extension of Time Period for Commission Action * <input type="checkbox"/>	Date Expires * <input type="text"/>	<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"/>
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**Description**

Provide a brief description of the action (limit 250 characters, required when Initial is checked \*).

Proposal to disseminate abbreviated order imbalance information prior to the dissemination of the Order Imbalance Indicator, amend certain cutoff times for on-open orders entered for participation in the Nasdaq Opening Cross and extend the time period for accepting certain Limit On Open Orders

**Contact Information**

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="Marsha"/>	Last Name * <input type="text" value="Dixon"/>
Title * <input type="text" value="Assistant General Counsel"/>	
E-mail * <input type="text" value="marsha.dixon@nasdaq.com"/>	
Telephone * <input type="text" value="(301) 978-8193"/>	Fax <input type="text"/>

**Signature**

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="01/29/2021"/>	<input type="text" value="EVP and Chief Legal Officer"/>
By <input type="text" value="John Zecca"/>	<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.

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS 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 the Proposed Rule Change

(a) The Nasdaq Stock Market LLC (“Nasdaq” or “Exchange”), 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> is filing with the Securities and Exchange Commission (“SEC” or “Commission”) a proposal to (i) disseminate abbreviated order imbalance information prior to the dissemination of the Order Imbalance Indicator, (ii) amend certain cutoff times for on-open orders entered for participation in the Nasdaq Opening Cross and (iii) extend the time period for accepting certain Limit On Open Orders.

A notice of the proposed rule change for publication in the Federal Register is attached as Exhibit 1. 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 August 21, 2020. No other action is necessary for the filing of the rule change.

Questions and comments on the proposed rule change may be directed to:

Marsha T. Dixon  
Assistant General Counsel  
Nasdaq, Inc.  
301-978-8183

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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

In July 2017 the Exchange enhanced the Nasdaq Closing Cross (“Closing Cross”) process by allowing customers to enter Limit-On-Close (“LOC”) orders after the first Net Order Imbalance Indicator is disseminated.<sup>3</sup> These enhancements were designed to encourage greater participation and interaction opportunities within the Nasdaq Closing Cross process and support stability in the price discovery process. In March 2019, the Exchange continued to further improve price discovery in the Nasdaq Closing Cross process by creating an Early Order Imbalance Indicator (“EOII”) comprised of certain Net Order Imbalance Indicator (“NOII”) information that would disseminate ten minutes prior to the market close.<sup>4</sup> In conjunction with the adoption of an EOII, in August 2019, the Exchange also expanded the order entry submission time for LOC orders to allow entries after 3:55 p.m. Eastern Time (all times noted hereafter are Eastern Time) and established a second reference price for late LOC orders.<sup>5</sup> The Exchange did not receive public comments regarding any of its enhancements to the Closing Cross process. Given

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<sup>3</sup> See Securities Exchange Act Release No. 81188 (July 21, 2017), 82 FR 35014 (July 27, 2017) (NASDAQ-2017-061); see also Securities Exchange Act Release No. 81556 (September 8, 2017), 82 FR 43264 (September 14, 2017) (NASDAQ-2017-061).

<sup>4</sup> See Securities Exchange Act Release No. 85292 (March 12, 2019), 84 FR 9848 (March 18, 2019) (NASDAQ-2019-010).

<sup>5</sup> See Securities Exchange Act Release No. 86642 (August 13, 2019), 84 FR 42964 (August 19, 2019) (NASDAQ-2019-064).

the improvements in stability and the price discovery process of the Closing Cross, the Exchange is proposing similar changes to the Nasdaq Opening Cross (“Opening Cross”).<sup>6</sup>

The Opening Cross is Nasdaq’s process for matching orders at the launch of regular trading hours and is open to all System Securities.<sup>7</sup> The Opening Cross was designed to create a robust open that allows for efficient price discovery through a transparent automated auction process. Currently, beginning at 4:00 a.m. ET, Nasdaq accepts Market On Open (“MOO”) Orders<sup>8</sup> and Limit On Open (“LOO”) Orders<sup>9</sup> executable for the Opening Cross until immediately prior to 9:28 a.m. Nasdaq also begins accepting Opening Imbalance Only (“OIO”) Orders<sup>10</sup> for the Opening Cross

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<sup>6</sup> See Equity 4, Rule 4752.

<sup>7</sup> The term “System Securities” shall mean (1) all securities listed on Nasdaq and (2) all securities subject to the Consolidated Tape Association Plan and the Consolidated Quotation Plan except securities specifically excluded from trading via a list of excluded securities posted on [www.nasdaqtrader.com](http://www.nasdaqtrader.com). Equity 1, Section 1.

<sup>8</sup> A “Market On Open Order” or “MOO Order” is an Order Type entered without a price that may be executed only during the Opening Cross. Subject to certain qualifications, 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 Opening Cross. See Equity 4, Rule 4702(b)(8)(A).

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

<sup>10</sup> An “Opening Imbalance Only Order” or “OIO Order” is an Order Type entered with a price that may be executed only in the Opening Cross and only against MOO Orders, LOO Orders, or Early Market Hours Orders (as defined in Equity 4, Rule 4752). OIO Orders may be entered between 4:00 a.m. ET until the time of execution of the Opening Cross, but may not be cancelled or modified at or after

beginning at 4:00 a.m. until the time of execution of the Opening Cross. At 9:28 a.m., Nasdaq begins to disseminate by electronic means an Order Imbalance Indicator (also known as the “Net Order Imbalance Indicator” or “NOII”) every second until market open.<sup>11</sup> Nasdaq initiates an Opening Cross in all System Securities for which there are orders that will execute against contra-side orders at 9:30 a.m., at which time the opening book and the Nasdaq continuous book are brought together to create single Nasdaq opening prices for System Securities.

Nasdaq is proposing to (i) establish an Early Order Imbalance Indicator (“EOII”) for the Opening Cross, (ii) amend certain cutoff times for on-open orders entered for participation in the Opening Cross and (iii) extend the time period for accepting certain LOOs, as discussed in further detail below.

#### Establishment of an EOII

Currently, Nasdaq provides transparency into its Opening Cross auction via the NOII. The NOII is a message disseminated by electronic means containing information about MOO orders, LOO orders, OIO orders, and Early Market Hours Orders<sup>12</sup> and information about the price at which those orders would execute at the time of

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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 Equity 4, Rule 4702(b)(10)(A).

<sup>11</sup> See Equity 4, Rule 4752(d)(1).

<sup>12</sup> Market Hours Orders shall be designated as “Early Market Hours Orders” if entered into the system prior to 9:28 a.m. and shall be treated as MOO and LOO, as appropriate, for the purposes of the Opening Cross. See Equity 4, Rule 4752(a)(7).

dissemination.<sup>13</sup> MOO, LOO and OIO orders are on-open order types that are executable only during the Opening Cross. Specifically, the NOII consists of: (1) the Current Reference Price;<sup>14</sup> (2) the number of shares represented by MOO, LOO, OIO, and Early Market Hours that are paired at the Current Reference Price; (3) the size of any Imbalance;<sup>15</sup> (4) the buy/sell direction of any Imbalance; and (5) the indicative prices<sup>16</sup> at which the Nasdaq Opening Cross would occur if the Nasdaq Opening Cross were to occur at that time and the percent by which the indicative prices are outside the then current Nasdaq Market Center best bid or best offer, whichever is closer.<sup>17</sup> The NOII is useful because it helps participants to identify at what price and size the Opening Cross

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<sup>13</sup> See Equity 4, Rule 4752(a)(2).

<sup>14</sup> Pursuant to Equity 4, Rule 4752(a)(2), the “Current Reference Price” means the following: (i) the single price that is at or within the current Nasdaq Market Center best bid and offer at which the maximum number of shares of MOO, LOO, OIO, and Early Market Hours orders can be paired; (ii) if more than one price exists under (i), the Current Reference Price shall mean the price that minimizes any Imbalance; (iii) ) if more than one price exists under (ii), the Current Reference Price shall mean the entered price at which shares will remain unexecuted in the cross; and (iv) if more than one price exists under (iii), the Current Reference Price shall mean the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at the time of the order imbalance indicator dissemination.

<sup>15</sup> An “Imbalance shall mean the number of shares of buy or sell MOO, LOO or Early Market Hours orders that may not be matched with other MOO, LOO, Early Market Hours, or OIO order shares at a particular price at any given time. See Equity 4, Rule 4752(a)(2).

<sup>16</sup> The indicative prices shall be the Near Clearing Price and Far Clearing Price (as defined in footnote 18 below). If marketable shares would remain unexecuted above or below the Near Clearing Price or Far Clearing Price, Nasdaq shall disseminate an indicator for "market buy" or "market sell".

<sup>17</sup> See Equity 4, Rule 4752(a)(2).

will commence, as well as the number of shares required to offset any order imbalances to optimize an auction.

Nasdaq is proposing new Equity 4, Rule 4752(a)(1) and Equity 4, Rule 4752(d)(1) to establish an EOII that would commence disseminating information at 9:25 a.m. until the NOII begins to disseminate at 9:28 a.m. The proposed EOII data will comprise of (1) the Current Reference Price, (2) the number of shares represented by MOO, LOO OIO and Early Market Hours orders that are paired at the Current Reference price, (3) any imbalance size, and (4) any imbalance direction. The Exchange is also proposing to disseminate the EOII data every 10 seconds.

The Exchange believes that an early release of a subset of the NOII data would offer participants additional time and flexibility to react to imbalance information in advance of the 9:28 a.m. Opening Cross cutoff time (the “Cutoff”) and aid them in making informed decisions about whether and how to participate in the Opening Cross. In other words, early dissemination of the Current Reference Price, the number of paired shares at that price, any imbalance size, and any imbalance direction would help participants to make informed decisions as to whether, how, and at what prices they may interact with other orders in the Opening Cross. For example, if Nasdaq released an EOII indicating that a buy imbalance exists for a particular symbol, a participant could act on that information in advance of the Opening Cross Cutoff time to offset the imbalance with the full suite of Nasdaq on-open order options, while also providing additional liquidity in the Opening Cross. In addition, participants may continue to enter certain LOO and OIO orders after 9:28 a.m. ET, which allows participants to consider information in the EOII in making informed decisions about whether and how to



participate in the Opening Cross. Nasdaq believes the EOII will also enhance price discovery and liquidity by attracting more participants to the Nasdaq Opening Cross, which establishes the Nasdaq Official Opening Price for a security. However, the Exchange believes that an early release of the NOII should exclude indicative prices, including Near and Far Clearing Prices.<sup>18</sup> Because participants may freely enter new orders that contribute to price discovery prior to the Opening Cross Cutoff, indicative prices may change more substantially than after the Cutoff. Nasdaq believes that the exclusion of the Near and Far Clearing Prices will enhance stability in the Opening Cross process because it will reduce the possibility of large indicative price movements during the early moments of the price formation process. Additionally, the Exchange believes disseminating the EOII data every 10 seconds provides participants more time to digest the information and enter MOO and LOO orders in between dissemination periods. Whereas after the Opening Cross Cutoff, participants face order restrictions and time pressures that render more frequent refreshes of the NOII critical to guiding their decisions, such order restrictions and time pressures do not exist, or are less acute, prior to the Opening Cross Cutoff.

Establishment of the EOII will not affect the Cutoff for entering MOO or LOO orders.<sup>19</sup> However, a participant may no longer cancel or modify an MOO, LOO or OIO

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<sup>18</sup> “Near Clearing Price” shall mean the price at which both the MOO, LOO, OIO, and Early Market Hours orders and Open Eligible Interest in the Nasdaq Market Center would execute. See Equity 4, Rule 4752(a)(2)(E)(i). “Far Clearing Price” shall mean the price at which the MOO, LOO, OIO, and Early Market Hours orders in the Nasdaq Opening Book would execute. See Equity 4, Rule 4752(a)(2)(E)(ii).

<sup>19</sup> However, as discussed below, the Exchange is separately proposing to allow late LOO Orders to be entered after 9:28 a.m. Moreover, unlike MOO and LOO

order once the Exchange commences dissemination of the EOII. Therefore, the Exchange is proposing to amend the time period for cancelling or modifying MOO, LOO or OIO orders from 9:28 a.m. to 9:25 a.m.

#### Change to LOO Orders

Currently, pursuant to Equity 4, Rule 4702(b)(9)(A), LOO orders may be executed only in the Opening Cross, and only if the price determined by the Opening Cross is equal to or better than the price at which the LOO Order was entered. Subject to certain qualifications, LOO orders may be entered, cancelled, and/or modified between 4 a.m. and immediately prior to commencement of the NOII dissemination at 9:28 a.m.<sup>20</sup>

The Exchange is proposing to establish a First Opening Reference Price and a Second Opening Reference Price through Equity 4, Rules 4753(a)(8) and (9), respectively. The First Opening Reference Price shall mean the previous day's Nasdaq Official Closing Price of the security for Nasdaq-listed securities or the consolidated closing price to cover non-Nasdaq-listed securities. For new Exchange Traded Products that do not have a Nasdaq Official Closing Price or a consolidated closing price, the First Opening Reference Price will be the offering price. The Exchange is using the Nasdaq Official Closing Price as the First Opening Reference Price because the Nasdaq Official Closing price is a well-defined benchmark for the securities market price that serves as the most relevant price of a security at or before Regular Trading Hours. The Second

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Orders, OIO Orders may be entered until the time of execution of the Opening Cross. See Equity 4, Rule 4702(b)(10)(A).

<sup>20</sup> As indicated throughout this filing, Market Hours Orders entered between 9:28 a.m. and 9:29:30 a.m. will be treated as late LOO orders, if applicable and rejected as MOO orders, if applicable.

Opening Reference Price shall mean the Current Reference Price in the Order Imbalance Indicator disseminated at 9:28 a.m. ET. The Exchange is using the Nasdaq Second Opening Price as the Current Reference Price because the Second Opening Price is promotes price stability and prevents us from deviating too far from the price at which the security was trading during regular market hours the previous day.

Additionally, the Exchange is proposing to revise Equity 4, Rule 4702(b)(9)(A) to permit the entry of LOO orders until 9:29:30 a.m., provided that the security has a First Opening Reference Price or a Second Opening Reference Price. The Exchange also proposes to reject any LOO Orders entered after 9:29:30 a.m. ET that is designated as an IOC. The proposed rule would also prevent an LOO Order from being cancelled or modified at or after 9:25 a.m. However, the Exchange believes that allowing the entry of eligible LOO Orders after the Opening Cross Cutoff will enhance the price discovery and liquidity of a security in the Opening Cross, which establishes the Nasdaq Official Opening Price for a security. Also, the Exchange is proposing that an LOO Order entered between 9:28 a.m. ET and 9:29:30 a.m. ET would be accepted at its limit price, unless its limit price is higher (lower) than the higher (lower) of the First Opening Reference Price and the Second Opening Reference Price for an LOO Order to buy (sell), in which case the LOO Order would be handled consistent with the participant's instruction that the LOO Order is to be: (1) rejected; or (2) re-priced to the higher (lower) of the First Opening Reference Price and the Second Opening Reference Price, provided that if either the First Opening Reference Price or the Second Opening Reference Price is not at a permissible minimum increment, the First Opening Reference Price or the Second Opening Reference Price, as applicable, will be rounded (i) to the nearest

permitted minimum increment (with midpoint prices being rounded up) if there is no imbalance, (ii) up if there is a buy imbalance, or (iii) down if there is a sell imbalance.<sup>21</sup>

The default configuration for participants that do not specify otherwise will be to have such LOO Orders re-priced rather than rejected. The Exchange believes that the repricing of LOO orders entered after the Opening Cross Cutoff is designed to reduce order imbalances and volatility for securities that participate in the Opening Cross.

The Exchange believes that allowing Late LOO orders to be priced at the more aggressive of the two reference prices will provide flexibility to market participants by allowing participants to consider information in both the EOII and NOII within the context of the previous day's Nasdaq Official Closing Price or consolidated closing price to facilitate informed decisions about whether and how to participate in the Opening Cross.

#### Additional Conforming and Non-Substantive Changes

The Exchange is proposing to amend Equity 4, Rule 4702(b)(9)(B) to clarify that an Opening Cross/Market Hours Order, with a Time-in-Force<sup>22</sup> other than Immediate or

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<sup>21</sup> The Exchange proposes to use natural rounding when there is no imbalance. When there is an imbalance the Exchange will round such that more offsetting interest can participate. Thus, where there is a buy imbalance the Exchange will round the First Opening Reference Price or Second Opening Reference Price up to allow more sell interest to participate, and when there is a sell imbalance the Exchange will round the First Opening Reference Price or Second Opening Reference Price down to allow more buy interest to participate. For example, if there is a sell imbalance, a First Opening Reference Price of \$10.015 would be rounded down to \$10.01. Re-pricing based on a price of \$10.01 would allow additional buy orders to offset the sell imbalance at that price when they may be excluded at a price of \$10.02.

<sup>22</sup> The "Time-in-Force" assigned to an Order means the period of time that the Nasdaq Market Center will hold the Order for potential execution. Participants specify an Order's Time-in-Force by designating a time at which the Order will

Cancel,<sup>23</sup> entered between 9:29:30 a.m.<sup>24</sup> and the time of the Nasdaq Opening Cross, (i) held and entered into the System after the completion of the Nasdaq Opening Cross if it has been assigned a Pegging Attribute or Routing Attribute, (ii) treated as an Opening Imbalance Only Order and entered into the System after the completion of the Nasdaq Opening Cross if entered through RASH, QIX, or FIX but not assigned a Pegging Attribute or Routing Attribute, or (iii) treated as an Opening Imbalance Only Order and cancelled after the Nasdaq Opening Cross if entered through OUCH or FLITE. An Opening Cross/Market Hours Order entered through RASH or FIX after the time of the Nasdaq Opening Cross will be accepted but the Nasdaq Opening Cross flag will be ignored.<sup>25</sup> The Exchange is also removing language from Equity 4, Rule 4702(b)(9)(B) explaining that a Routable Order flagged to participate in the Nasdaq Opening Cross with a Time-in-Force other than IOC and entered at or after 9:28 a.m. will be held and entered into the System after the Nasdaq Opening Cross. The Exchange believes that this language is duplicative to language already discussed in Equity 4, Rule 4702(b)(9)(B) and is therefore, proposing to remove the language. The Exchange is also proposing to exclude LOO Orders from being rejected and to add that LOO Orders will not be rejected

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become active and a time at which the Order will cease to be active. See Equity 4, Rule 4703(a).

<sup>23</sup> By definition, Opening Cross/Market Hours Orders have a Time-In-Force other than IOC, therefore, this is a clarifying, non-substantive change.

<sup>24</sup> The Exchange is proposing to replace 9:28 am with 9:29:30 a.m. as a conforming change because as discussed above, the Exchange is proposing to allow LOO orders to be entered until 9:29:30 a.m.

<sup>25</sup> The Nasdaq Book is a montage for quotes and orders that collects and ranks all quotes and orders submitted by Participants. Equity 4, Rule 4701(a)(1).

if entered after 9:28 a.m. This proposed change conforms with the proposed change to allow LOO orders to be entered until 9:29:30 a.m.

Additionally, the Exchange is proposing to renumber certain provisions of Equity 4, Rule 4752 to conform with the new definitions added to the section. Finally, the Exchange is making a non-substantive change to the Market Hours Orders definition in Equity 4, Rule 4752(a)(7) to use the defined terms throughout the Exchange's rulebook. The Exchange is also making a conforming change to Equity 4, Rule 4752(a)(7) to indicate that Market Hours Orders entered into the System at 9:29:30 a.m. ET<sup>26</sup> or after with an Time-in-Force other than an IOC shall be designated as "Late Market Hours Orders." The Exchange is also making a conforming change to that rule to indicate that beginning at 9:25 a.m., Market Hours Orders will be suspended until after completion of the Opening Cross at which time such requests shall be processed, to the extent that such orders remain available within the System.

Lastly, the Exchange is abbreviating the terms "market-on-open" and "limit-on-open" to conform with terms used in Rule 4752.

b. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,<sup>27</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act,<sup>28</sup> in particular, in that it 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

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<sup>26</sup> This time is a proposed update from the previous time of 9:28 a.m.

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

<sup>28</sup> 15 U.S.C. 78f(b)(5).

market system, and, in general to protect investors and the public interest. As the equities markets continue to evolve and become more efficient and automated, the Exchange believes that in some ways the current on-open order entry process is restrictive to market participants that wish to participate in the Nasdaq Opening Cross. Similar to the changes made to the closing auction,<sup>29</sup> the Exchange believes that the proposed changes will give participants additional methods of contributing to price discovery while still allowing participants to react to and offset Imbalances.

In particular, the proposal to establish the EOII will provide participants with additional information for price discovery, which increases market transparency and the price discovery process of the Opening Cross to the benefit of members and investors that participate in the Opening Cross. Furthermore, limiting the EOII data is reasonable because as discussed above, it will reduce the possibility of large indicative price movements during the early moments of the price formation process. It will also enhance the price discovery and liquidity of a security by providing additional time and flexibility for participants to react to imbalance information and therefore increasing the number of participants in the Nasdaq Opening Cross, which establishes the Nasdaq Official Opening Price for a security. Additionally, the Exchange believes that disseminating the EOII at 10 second intervals is reasonable because it strikes the right balance between conveying material changes in imbalance information prior to the Opening Cross Cutoff time and avoiding excessive messaging traffic. Furthermore, the Exchange has established a similar EOII for the Closing Cross.

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<sup>29</sup> See supra n. 4 - 5.

The Exchange also believes that it is reasonable to prohibit cancellation or modification of MOO, LOO and OIO orders, while allowing the entry of these orders, after 9:25 a.m. in order to enhance stability in the Opening Cross process by reducing the possibility of large indicative price movements due to participants cancelling or modifying orders in reaction to the EOII. The Exchange has established similar prohibitions for its Closing Cross process.

Additionally, extending the time for members to submit LOO orders will increase participation in the Opening Cross as well as allow participants to retain control over their orders for a longer period of time, thereby assisting those market participants in managing their trading at the open. Moreover, repricing eligible LOO Orders entered after the 9:28 a.m. cutoff time is reasonable and equitable because repricing is designed to enhance price discovery and stability while reducing order imbalances by allowing more price forming orders that are priced no more aggressively than the First and Second Opening Reference Prices to offset imbalances and to participate in the Opening Cross.

Moreover, the Exchange believes it is reasonable to clarify in Equity 4, Rule 4703(b)(9)(B) that the Opening Cross/Market Hours Order that has a Time-in-Force other than IOC may be entered until 9:29:30 a.m. and to clarify that LOO Orders will not be rejected after 9:28 a.m. because these are conforming changes.

#### 4. 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. Rather, the Exchange believes that the proposed rule change is evidence of the competitive forces in the equities markets insofar as the establishment of the EOII is designed to render the Opening Cross more transparent and flexible, as well as more



attractive to participants. Additionally, the proposed EOII and the extended time period to enter LOO Orders will be equally available to all participants. Moreover, the proposed changes will equally affect all participants using MOO, LOO and OIO orders.

5. 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.

6. Extension of Time Period for Commission Action

The Exchange does not consent to an extension of the time period for Commission action.

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

The proposed rule changes are substantially similar to changes made to the Closing Cross as discussed above.<sup>30</sup>

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. Notice of Proposed Rule Change for publication in the Federal Register.

5. Text of the proposed rule change.

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<sup>30</sup> See supra n. 4 - 5.

**EXHIBIT 1**

## SECURITIES AND EXCHANGE COMMISSION

(Release No. \_\_\_\_\_ ; File No. SR-NASDAQ-2021-004)

January \_\_, 2021

Self-Regulatory Organizations; The Nasdaq Stock Market LLC; Notice of Filing of Proposed Rule Change to Disseminate Abbreviated Order Imbalance Information, Amend Certain Cutoff Times For On-Open Orders Entered For Participation In The Nasdaq Opening Cross, And, Extend The Time Period For Accepting Certain Limit On Open Orders

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 January 29, 2021, 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 (i) disseminate abbreviated order imbalance information prior to the dissemination of the Order Imbalance Indicator, (ii) amend certain cutoff times for on-open orders entered for participation in the Nasdaq Opening Cross and (iii) extend the time period for accepting certain Limit On Open Orders.

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

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

The text of the proposed rule change is available on the Exchange's Website at <https://listingcenter.nasdaq.com/rulebook/nasdaq/rules>, at the principal office of the Exchange, 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, 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

In July 2017 the Exchange enhanced the Nasdaq Closing Cross ("Closing Cross") process by allowing customers to enter Limit-On-Close ("LOC") orders after the first Net Order Imbalance Indicator is disseminated.<sup>3</sup> These enhancements were designed to encourage greater participation and interaction opportunities within the Nasdaq Closing Cross process and support stability in the price discovery process. In March 2019, the Exchange continued to further improve price discovery in the Nasdaq Closing Cross process by creating an Early Order Imbalance Indicator ("EOII") comprised of certain Net Order Imbalance Indicator ("NOII") information that would disseminate ten minutes

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<sup>3</sup> See Securities Exchange Act Release No. 81188 (July 21, 2017), 82 FR 35014 (July 27, 2017) (NASDAQ-2017-061); see also Securities Exchange Act Release No. 81556 (September 8, 2017), 82 FR 43264 (September 14, 2017) (NASDAQ-2017-061).

prior to the market close.<sup>4</sup> In conjunction with the adoption of an EOII, in August 2019, the Exchange also expanded the order entry submission time for LOC orders to allow entries after 3:55 p.m. Eastern Time (all times noted hereafter are Eastern Time) and established a second reference price for late LOC orders.<sup>5</sup> The Exchange did not receive public comments regarding any of its enhancements to the Closing Cross process. Given the improvements in stability and the price discovery process of the Closing Cross, the Exchange is proposing similar changes to the Nasdaq Opening Cross (“Opening Cross”).<sup>6</sup>

The Opening Cross is Nasdaq’s process for matching orders at the launch of regular trading hours and is open to all System Securities.<sup>7</sup> The Opening Cross was designed to create a robust open that allows for efficient price discovery through a transparent automated auction process. Currently, beginning at 4:00 a.m. ET, Nasdaq accepts Market On Open (“MOO”) Orders<sup>8</sup> and Limit On Open (“LOO”) Orders<sup>9</sup>

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<sup>4</sup> See Securities Exchange Act Release No. 85292 (March 12, 2019), 84 FR 9848 (March 18, 2019) (NASDAQ-2019-010).

<sup>5</sup> See Securities Exchange Act Release No. 86642 (August 13, 2019), 84 FR 42964 (August 19, 2019) (NASDAQ-2019-064).

<sup>6</sup> See Equity 4, Rule 4752.

<sup>7</sup> The term “System Securities” shall mean (1) all securities listed on Nasdaq and (2) all securities subject to the Consolidated Tape Association Plan and the Consolidated Quotation Plan except securities specifically excluded from trading via a list of excluded securities posted on [www.nasdaqtrader.com](http://www.nasdaqtrader.com). Equity 1, Section 1.

<sup>8</sup> A “Market On Open Order” or “MOO Order” is an Order Type entered without a price that may be executed only during the Opening Cross. Subject to certain qualifications, 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 Opening Cross. See Equity 4, Rule 4702(b)(8)(A).

executable for the Opening Cross until immediately prior to 9:28 a.m. Nasdaq also begins accepting Opening Imbalance Only (“OIO”) Orders<sup>10</sup> for the Opening Cross beginning at 4:00 a.m. until the time of execution of the Opening Cross. At 9:28 a.m., Nasdaq begins to disseminate by electronic means an Order Imbalance Indicator (also known as the “Net Order Imbalance Indicator” or “NOII”) every second until market open.<sup>11</sup> Nasdaq initiates an Opening Cross in all System Securities for which there are orders that will execute against contra-side orders at 9:30 a.m., at which time the opening book and the Nasdaq continuous book are brought together to create single Nasdaq opening prices for System Securities.

Nasdaq is proposing to (i) establish an Early Order Imbalance Indicator (“EOII”) for the Opening Cross, (ii) amend certain cutoff times for on-open orders entered for participation in the Opening Cross and (iii) extend the time period for accepting certain LOOs, as discussed in further detail below.

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

<sup>10</sup> An “Opening Imbalance Only Order” or “OIO Order” is an Order Type entered with a price that may be executed only in the Opening Cross and only against MOO Orders, LOO Orders, or Early Market Hours Orders (as defined in Equity 4, Rule 4752). OIO Orders may be entered between 4:00 a.m. ET until the time of execution of the 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 Equity 4, Rule 4702(b)(10)(A).

<sup>11</sup> See Equity 4, Rule 4752(d)(1).

Establishment of an EOII

Currently, Nasdaq provides transparency into its Opening Cross auction via the NOII. The NOII is a message disseminated by electronic means containing information about MOO orders, LOO orders, OIO orders, and Early Market Hours Orders<sup>12</sup> and information about the price at which those orders would execute at the time of dissemination.<sup>13</sup> MOO, LOO and OIO orders are on-open order types that are executable only during the Opening Cross. Specifically, the NOII consists of: (1) the Current Reference Price;<sup>14</sup> (2) the number of shares represented by MOO, LOO, OIO, and Early Market Hours that are paired at the Current Reference Price; (3) the size of any Imbalance;<sup>15</sup> (4) the buy/sell direction of any Imbalance; and (5) the indicative prices<sup>16</sup> at

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<sup>12</sup> Market Hours Orders shall be designated as “Early Market Hours Orders” if entered into the system prior to 9:28 a.m. and shall be treated as MOO and LOO, as appropriate, for the purposes of the Opening Cross. See Equity 4, Rule 4752(a)(7).

<sup>13</sup> See Equity 4, Rule 4752(a)(2).

<sup>14</sup> Pursuant to Equity 4, Rule 4752(a)(2), the “Current Reference Price” means the following: (i) the single price that is at or within the current Nasdaq Market Center best bid and offer at which the maximum number of shares of MOO, LOO, OIO, and Early Market Hours orders can be paired; (ii) if more than one price exists under (i), the Current Reference Price shall mean the price that minimizes any Imbalance; (iii) ) if more than one price exists under (ii), the Current Reference Price shall mean the entered price at which shares will remain unexecuted in the cross; and (iv) if more than one price exists under (iii), the Current Reference Price shall mean the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at the time of the order imbalance indicator dissemination.

<sup>15</sup> An “Imbalance shall mean the number of shares of buy or sell MOO, LOO or Early Market Hours orders that may not be matched with other MOO, LOO, Early Market Hours, or OIO order shares at a particular price at any given time. See Equity 4, Rule 4752(a)(2).

<sup>16</sup> The indicative prices shall be the Near Clearing Price and Far Clearing Price (as defined in footnote 18 below). If marketable shares would remain unexecuted

which the Nasdaq Opening Cross would occur if the Nasdaq Opening Cross were to occur at that time and the percent by which the indicative prices are outside the then current Nasdaq Market Center best bid or best offer, whichever is closer.<sup>17</sup> The NOII is useful because it helps participants to identify at what price and size the Opening Cross will commence, as well as the number of shares required to offset any order imbalances to optimize an auction.

Nasdaq is proposing new Equity 4, Rule 4752(a)(1) and Equity 4, Rule 4752(d)(1) to establish an EOII that would commence disseminating information at 9:25 a.m. until the NOII begins to disseminate at 9:28 a.m. The proposed EOII data will comprise of (1) the Current Reference Price, (2) the number of shares represented by MOO, LOO OIO and Early Market Hours orders that are paired at the Current Reference price, (3) any imbalance size, and (4) any imbalance direction. The Exchange is also proposing to disseminate the EOII data every 10 seconds.

The Exchange believes that an early release of a subset of the NOII data would offer participants additional time and flexibility to react to imbalance information in advance of the 9:28 a.m. Opening Cross cutoff time (the "Cutoff") and aid them in making informed decisions about whether and how to participate in the Opening Cross. In other words, early dissemination of the Current Reference Price, the number of paired shares at that price, any imbalance size, and any imbalance direction would help participants to make informed decisions as to whether, how, and at what prices they may interact with other orders in the Opening Cross. For example, if Nasdaq released an EOII

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above or below the Near Clearing Price or Far Clearing Price, Nasdaq shall disseminate an indicator for "market buy" or "market sell".

<sup>17</sup> See Equity 4, Rule 4752(a)(2).

indicating that a buy imbalance exists for a particular symbol, a participant could act on that information in advance of the Opening Cross Cutoff time to offset the imbalance with the full suite of Nasdaq on-open order options, while also providing additional liquidity in the Opening Cross. In addition, participants may continue to enter certain LOO and OIO orders after 9:28 a.m. ET, which allows participants to consider information in the EOII in making informed decisions about whether and how to participate in the Opening Cross. Nasdaq believes the EOII will also enhance price discovery and liquidity by attracting more participants to the Nasdaq Opening Cross, which establishes the Nasdaq Official Opening Price for a security. However, the Exchange believes that an early release of the NOII should exclude indicative prices, including Near and Far Clearing Prices.<sup>18</sup> Because participants may freely enter new orders that contribute to price discovery prior to the Opening Cross Cutoff, indicative prices may change more substantially than after the Cutoff. Nasdaq believes that the exclusion of the Near and Far Clearing Prices will enhance stability in the Opening Cross process because it will reduce the possibility of large indicative price movements during the early moments of the price formation process. Additionally, the Exchange believes disseminating the EOII data every 10 seconds provides participants more time to digest the information and enter MOO and LOO orders in between dissemination periods. Whereas after the Opening Cross Cutoff, participants face order restrictions and time pressures that render more frequent refreshes of the NOII critical to guiding their

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<sup>18</sup> “Near Clearing Price” shall mean the price at which both the MOO, LOO, OIO, and Early Market Hours orders and Open Eligible Interest in the Nasdaq Market Center would execute. See Equity 4, Rule 4752(a)(2)(E)(i). “Far Clearing Price” shall mean the price at which the MOO, LOO, OIO, and Early Market Hours orders in the Nasdaq Opening Book would execute. See Equity 4, Rule 4752(a)(2)(E)(ii).



decisions, such order restrictions and time pressures do not exist, or are less acute, prior to the Opening Cross Cutoff.

Establishment of the EOII will not affect the Cutoff for entering MOO or LOO orders.<sup>19</sup> However, a participant may no longer cancel or modify an MOO, LOO or OIO order once the Exchange commences dissemination of the EOII. Therefore, the Exchange is proposing to amend the time period for cancelling or modifying MOO, LOO or OIO orders from 9:28 a.m. to 9:25 a.m.

#### Change to LOO Orders

Currently, pursuant to Equity 4, Rule 4702(b)(9)(A), LOO orders may be executed only in the Opening Cross, and only if the price determined by the Opening Cross is equal to or better than the price at which the LOO Order was entered. Subject to certain qualifications, LOO orders may be entered, cancelled, and/or modified between 4 a.m. and immediately prior to commencement of the NOII dissemination at 9:28 a.m.<sup>20</sup>

The Exchange is proposing to establish a First Opening Reference Price and a Second Opening Reference Price through Equity 4, Rules 4753(a)(8) and (9), respectively. The First Opening Reference Price shall mean the previous day's Nasdaq Official Closing Price of the security for Nasdaq-listed securities or the consolidated closing price to cover non-Nasdaq-listed securities. For new Exchange Traded Products that do not have a Nasdaq Official Closing Price or a consolidated closing price, the First

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<sup>19</sup> However, as discussed below, the Exchange is separately proposing to allow late LOO Orders to be entered after 9:28 a.m. Moreover, unlike MOO and LOO Orders, OIO Orders may be entered until the time of execution of the Opening Cross. See Equity 4, Rule 4702(b)(10)(A).

<sup>20</sup> As indicated throughout this filing, Market Hours Orders entered between 9:28 a.m. and 9:29:30 a.m. will be treated as late LOO orders, if applicable and rejected as MOO orders, if applicable.

Opening Reference Price will be the offering price. The Exchange is using the Nasdaq Official Closing Price as the First Opening Reference Price because the Nasdaq Official Closing price is a well-defined benchmark for the securities market price that serves as the most relevant price of a security at or before Regular Trading Hours. The Second Opening Reference Price shall mean the Current Reference Price in the Order Imbalance Indicator disseminated at 9:28 a.m. ET. The Exchange is using the Nasdaq Second Opening Price as the Current Reference Price because the Second Opening Price is promotes price stability and prevents us from deviating too far from the price at which the security was trading during regular market hours the previous day.

Additionally, the Exchange is proposing to revise Equity 4, Rule 4702(b)(9)(A) to permit the entry of LOO orders until 9:29:30 a.m., provided that the security has a First Opening Reference Price or a Second Opening Reference Price. The Exchange also proposes to reject any LOO Orders entered after 9:29:30 a.m. ET that is designated as an IOC. The proposed rule would also prevent an LOO Order from being cancelled or modified at or after 9:25 a.m. However, the Exchange believes that allowing the entry of eligible LOO Orders after the Opening Cross Cutoff will enhance the price discovery and liquidity of a security in the Opening Cross, which establishes the Nasdaq Official Opening Price for a security. Also, the Exchange is proposing that an LOO Order entered between 9:28 a.m. ET and 9:29:30 a.m. ET would be accepted at its limit price, unless its limit price is higher (lower) than the higher (lower) of the First Opening Reference Price and the Second Opening Reference Price for an LOO Order to buy (sell), in which case the LOO Order would be handled consistent with the participant's instruction that the LOO Order is to be: (1) rejected; or (2) re-priced to the higher (lower)

of the First Opening Reference Price and the Second Opening Reference Price, provided that if either the First Opening Reference Price or the Second Opening Reference Price is not at a permissible minimum increment, the First Opening Reference Price or the Second Opening Reference Price, as applicable, will be rounded (i) to the nearest permitted minimum increment (with midpoint prices being rounded up) if there is no imbalance, (ii) up if there is a buy imbalance, or (iii) down if there is a sell imbalance.<sup>21</sup> The default configuration for participants that do not specify otherwise will be to have such LOO Orders re-priced rather than rejected. The Exchange believes that the repricing of LOO orders entered after the Opening Cross Cutoff is designed to reduce order imbalances and volatility for securities that participate in the Opening Cross.

The Exchange believes that allowing Late LOO orders to be priced at the more aggressive of the two reference prices will provide flexibility to market participants by allowing participants to consider information in both the EOII and NOII within the context of the previous day's Nasdaq Official Closing Price or consolidated closing price to facilitate informed decisions about whether and how to participate in the Opening Cross.

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<sup>21</sup> The Exchange proposes to use natural rounding when there is no imbalance. When there is an imbalance the Exchange will round such that more offsetting interest can participate. Thus, where there is a buy imbalance the Exchange will round the First Opening Reference Price or Second Opening Reference Price up to allow more sell interest to participate, and when there is a sell imbalance the Exchange will round the First Opening Reference Price or Second Opening Reference Price down to allow more buy interest to participate. For example, if there is a sell imbalance, a First Opening Reference Price of \$10.015 would be rounded down to \$10.01. Re-pricing based on a price of \$10.01 would allow additional buy orders to offset the sell imbalance at that price when they may be excluded at a price of \$10.02.

Additional Conforming and Non-Substantive Changes

The Exchange is proposing to amend Equity 4, Rule 4702(b)(9)(B) to clarify that an Opening Cross/Market Hours Order, with a Time-in-Force<sup>22</sup> other than Immediate or Cancel,<sup>23</sup> entered between 9:29:30 a.m.<sup>24</sup> and the time of the Nasdaq Opening Cross, (i) held and entered into the System after the completion of the Nasdaq Opening Cross if it has been assigned a Pegging Attribute or Routing Attribute, (ii) treated as an Opening Imbalance Only Order and entered into the System after the completion of the Nasdaq Opening Cross if entered through RASH, QIX, or FIX but not assigned a Pegging Attribute or Routing Attribute, or (iii) treated as an Opening Imbalance Only Order and cancelled after the Nasdaq Opening Cross if entered through OUCH or FLITE. An Opening Cross/Market Hours Order entered through RASH or FIX after the time of the Nasdaq Opening Cross will be accepted but the Nasdaq Opening Cross flag will be ignored.<sup>25</sup> The Exchange is also removing language from Equity 4, Rule 4702(b)(9)(B) explaining that a Routable Order flagged to participate in the Nasdaq Opening Cross with a Time-in-Force other than IOC and entered at or after 9:28 a.m. will be held and entered

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<sup>22</sup> The "Time-in-Force" assigned to an Order means the period of time that the Nasdaq Market Center will hold the Order for potential execution. Participants specify an Order's Time-in-Force by designating a time at which the Order will become active and a time at which the Order will cease to be active. See Equity 4, Rule 4703(a).

<sup>23</sup> By definition, Opening Cross/Market Hours Orders have a Time-In-Force other than IOC, therefore, this is a clarifying, non-substantive change.

<sup>24</sup> The Exchange is proposing to replace 9:28 am with 9:29:30 a.m. as a conforming change because as discussed above, the Exchange is proposing to allow LOO orders to be entered until 9:29:30 a.m.

<sup>25</sup> The Nasdaq Book is a montage for quotes and orders that collects and ranks all quotes and orders submitted by Participants. Equity 4, Rule 4701(a)(1).

into the System after the Nasdaq Opening Cross. The Exchange believes that this language is duplicative to language already discussed in Equity 4, Rule 4702(b)(9)(B) and is therefore, proposing to remove the language. The Exchange is also proposing to exclude LOO Orders from being rejected and to add that LOO Orders will not be rejected if entered after 9:28 a.m. This proposed change conforms with the proposed change to allow LOO orders to be entered until 9:29:30 a.m.

Additionally, the Exchange is proposing to renumber certain provisions of Equity 4, Rule 4752 to conform with the new definitions added to the section. Finally, the Exchange is making a non-substantive change to the Market Hours Orders definition in Equity 4, Rule 4752(a)(7) to use the defined terms throughout the Exchange's rulebook. The Exchange is also making a conforming change to Equity 4, Rule 4752(a)(7) to indicate that Market Hours Orders entered into the System at 9:29:30 a.m. ET<sup>26</sup> or after with an Time-in-Force other than an IOC shall be designated as "Late Market Hours Orders." The Exchange is also making a conforming change to that rule to indicate that beginning at 9:25 a.m., Market Hours Orders will be suspended until after completion of the Opening Cross at which time such requests shall be processed, to the extent that such orders remain available within the System.

Lastly, the Exchange is abbreviating the terms "market-on-open" and "limit-on-open" to conform with terms used in Rule 4752.

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<sup>26</sup> This time is a proposed update from the previous time of 9:28 a.m.

## 2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,<sup>27</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act,<sup>28</sup> in particular, in that it 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. As the equities markets continue to evolve and become more efficient and automated, the Exchange believes that in some ways the current on-open order entry process is restrictive to market participants that wish to participate in the Nasdaq Opening Cross. Similar to the changes made to the closing auction,<sup>29</sup> the Exchange believes that the proposed changes will give participants additional methods of contributing to price discovery while still allowing participants to react to and offset Imbalances.

In particular, the proposal to establish the EOII will provide participants with additional information for price discovery, which increases market transparency and the price discovery process of the Opening Cross to the benefit of members and investors that participate in the Opening Cross. Furthermore, limiting the EOII data is reasonable because as discussed above, it will reduce the possibility of large indicative price movements during the early moments of the price formation process. It will also enhance the price discovery and liquidity of a security by providing additional time and flexibility for participants to react to imbalance information and therefore increasing the number of

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

<sup>28</sup> 15 U.S.C. 78f(b)(5).

<sup>29</sup> See supra n. 4 - 5.

participants in the Nasdaq Opening Cross, which establishes the Nasdaq Official Opening Price for a security. Additionally, the Exchange believes that disseminating the EOII at 10 second intervals is reasonable because it strikes the right balance between conveying material changes in imbalance information prior to the Opening Cross Cutoff time and avoiding excessive messaging traffic. Furthermore, the Exchange has established a similar EOII for the Closing Cross.

The Exchange also believes that it is reasonable to prohibit cancellation or modification of MOO, LOO and OIO orders, while allowing the entry of these orders, after 9:25 a.m. in order to enhance stability in the Opening Cross process by reducing the possibility of large indicative price movements due to participants cancelling or modifying orders in reaction to the EOII. The Exchange has established similar prohibitions for its Closing Cross process.

Additionally, extending the time for members to submit LOO orders will increase participation in the Opening Cross as well as allow participants to retain control over their orders for a longer period of time, thereby assisting those market participants in managing their trading at the open. Moreover, repricing eligible LOO Orders entered after the 9:28 a.m. cutoff time is reasonable and equitable because repricing is designed to enhance price discovery and stability while reducing order imbalances by allowing more price forming orders that are priced no more aggressively than the First and Second Opening Reference Prices to offset imbalances and to participate in the Opening Cross.

Moreover, the Exchange believes it is reasonable to clarify in Equity 4, Rule 4703(b)(9)(B) that the Opening Cross/Market Hours Order that has a Time-in-Force other

than IOC may be entered until 9:29:30 a.m. and to clarify that LOO Orders will not be rejected after 9:28 a.m. because these are conforming changes.

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. Rather, the Exchange believes that the proposed rule change is evidence of the competitive forces in the equities markets insofar as the establishment of the EOII is designed to render the Opening Cross more transparent and flexible, as well as more attractive to participants. Additionally, the proposed EOII and the extended time period to enter LOO Orders will be equally available to all participants. Moreover, the proposed changes will equally affect all participants using MOO, LOO and OIO orders.

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 (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-2021-004 on the subject line.

Paper comments:

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

All submissions should refer to File Number SR-NASDAQ-2021-004. 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-2021-004 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>30</sup>

J. Matthew DeLesDernier  
Assistant Secretary

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<sup>30</sup> 17 CFR 200.30-3(a)(12).

**EXHIBIT 5**

Deleted text is [bracketed]. New text is underlined.

**The Nasdaq Stock Market LLC Rules**

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**EQUITY RULES**

\* \* \* \* \*

**Equity 4 Equity Trading Rules**

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**4702. Order Types**

(a) No change.

(b) (1) – (7) No change.

(8) (A) A "Market On Open Order" or "MOO Order" is an Order Type entered without a price that may be executed only during the Nasdaq Opening Cross. Subject to the qualifications provided below, 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 until immediately prior to 9:2[8]5 a.m. ET]. An MOO Order shall execute only at the price determined by the Nasdaq Opening Cross.

(B) The following Order Attributes may be assigned to a Market On Open Order:

- Price. An MOO Order is entered without a price and shall execute only at the price determined by the Nasdaq Opening Cross.
- Size.
- Time-in-Force. An MOO Order may execute only in the Nasdaq Opening Cross. However, a Participant may designate the Time-in-Force for an MOO Order either by designating a Time-in-Force of "On Open" or by entering another Order Type with a Market Pegging Attribute and flagging the Order to participate in the Nasdaq Opening Cross. An MOO Order entered through RASH or FIX with a Time-in-Force of IOC and flagged to participate in the Nasdaq Opening Cross that is entered after the time of the Nasdaq Opening Cross will be accepted but will be converted into a Non-Displayed Order with a Time-in-Force of IOC and a price established using the Market Pegging Order Attribute with no offset. An Order with a Market Pegging Attribute and a Time-in-Force other than IOC that is

flagged to participate in the Nasdaq Opening Cross and entered at or after 9:28 a.m. will be held and entered into the System after the completion of the Nasdaq Opening Cross. All other MOO Orders entered at or after 9:28 a.m. will be rejected.

- Participation in the Nasdaq Opening Cross is required for this Order Type.

(9) (A) 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 but may not be cancelled or modified at or after 9:25 a.m. ET. Between 9:28 a.m. ET and 9:29:30 a.m. ET, an LOO Order may be entered, provided that there is a First Opening Reference Price or a Second Opening Reference Price. An LOO Order entered after 9:29:30 a.m. ET that is designated as an IOC will be rejected. An LOO Order entered between 9:28 a.m. ET and 9:29:30 a.m. ET will be accepted at its limit price, unless its limit price is higher (lower) than the higher (lower) of the First Opening Reference Price and the Second Opening Reference Price for an LOO Order to buy (sell), in which case the LOO Order will be handled consistent with the Participant's instruction that the LOO Order is to be: (1) rejected; or (2) re-priced to the higher (lower) of the First Opening Reference Price and the Second Opening Reference Price, provided that if either the First Opening Reference Price or the Second Opening Reference Price is not at a permissible minimum increment, the First Opening Reference Price or the Second Opening Reference Price, as applicable, will be rounded (i) to the nearest permitted minimum increment (with midpoint prices being rounded up) if there is no imbalance, (ii) up if there is a buy imbalance, or (iii) down if there is a sell imbalance. The default configuration for Participants that do not specify otherwise will be to have such LOO Orders re-priced rather than rejected.

(B) The following Order Attributes may be assigned to a Limit On Open Order:

- Price.
- Size.
- Time-in-Force. In general, an LOO Order may execute only in the Nasdaq Opening Cross. However, a Participant may designate the Time-in-Force for an LOO Order either by designating a Time-in-Force of “On Open,” in which case the Order will execute solely in the Nasdaq Opening Cross, or by entering another Order Type and Time-in-Force and flagging the Order to participate in the Nasdaq Opening Cross. In the latter case, if the Participant designates a Time-in-Force of IOC, the Order will participate solely in the Nasdaq Opening Cross. If the Participant enters a Time-in-Force that continues after the time of the Nasdaq Opening Cross, the Order will participate in the Nasdaq Opening Cross like an

LOO Order, while operating thereafter in accordance with its designated Order Type and Order Attributes (if not executed in full in the Nasdaq Opening Cross). Such an Order may be referred to as an "Opening Cross/Market Hours Order." If such an Order has a Time-in-Force that continues until at least the time of the Nasdaq Closing Cross, the Order may be referred to as a "Cross to Cross Order."

Following the Nasdaq Opening Cross, an Opening Cross/Market Hours Order may not operate as a Post-Only Order, Midpoint Peg Post-Only Order, a Supplemental Order, a Retail Order, or an RPI Order. In the case of a Market Maker Peg Order entered prior to 9:28 a.m. ET that is also designated to participate in the Nasdaq Opening Cross, the price of the Order for purposes of operating as an LOO Order will be established on entry and will not thereafter be pegged until after the completion of the Nasdaq Opening Cross. An Opening Cross/Market Hours Order that has a Time-in-Force other than IOC and is entered between 9:2[8]9:30 a.m. ET and the time of the Nasdaq Opening Cross will be (i) held and entered into the System after the completion of the Nasdaq Opening Cross if it has been assigned a Pegging Attribute or Routing Attribute, (ii) treated as an Opening Imbalance Only Order and entered into the System after the completion of the Nasdaq Opening Cross if entered through RASH, QIX, or FIX but not assigned a Pegging Attribute or Routing Attribute, or (iii) treated as an Opening Imbalance Only Order and cancelled after the Nasdaq Opening Cross if entered through OUCH or FLITE. An Opening Cross/Market Hours Order entered through RASH or FIX after the time of the Nasdaq Opening Cross will be accepted but the Nasdaq Opening Cross flag will be ignored. [A Routable Order flagged to participate in the Nasdaq Opening Cross with a Time-in-Force other than IOC and entered at or after 9:28 a.m. will be held and entered into the System after the Nasdaq Opening Cross.] All other[ LOO Orders and] Opening Cross/Market Hours Orders entered at or after 9:28 a.m. will be rejected with the exception of certain LOO Orders discussed in subparagraph (A) above.

- Participation in the Nasdaq Opening Cross is required for this Order Type.

(10) (A) 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 9:2[8]5 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. Thus, for example, if an OIO Order to buy was entered with a price of \$11 and the current highest bid on the Nasdaq Book was \$10.99, the OIO Order would be priced at \$10.99. If the highest bid subsequently became \$10.98, the OIO Order would again be repriced. However, if the highest bid moved to \$11.01, the OIO Order would not be repriced.

(B) The following Order Attributes may be assigned to an Opening Imbalance Only Order:

- Price.
- Size.
- Time-in-Force. An OIO Order may execute only in the Nasdaq Opening Cross. An OIO Order entered after the time of the execution of the Nasdaq Opening Cross will be rejected.
- Participation in the Nasdaq Opening Cross is required for this Order Type.

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#### **4752. Opening Process**

(a) **Definitions.** For the purposes of this rule the term:

(1) “Early Opening Order Imbalance Indicator” shall mean a message disseminated by electronic means containing the same information as the Order Imbalance Indicator, except that it will exclude information about indicative prices, as set forth in subparagraph (a)(3)(E) herein.

([1]2) "Imbalance" shall mean the number of shares of buy or sell MOO, LOO or Early Market Hours orders that may not be matched with other MOO, LOO, Early Market Hours, or OIO order shares at a particular price at any given time.

([2]3) “Order Imbalance Indicator” shall mean a message disseminated by electronic means containing information about MOO, LOO, OIO, and Early Market Hours orders and the price at which those orders would execute at the time of dissemination. The Order Imbalance Indicator shall disseminate the following information:

(A) “Current Reference Price” shall mean:

- (i) The single price that is at or within the current Nasdaq Market Center best bid and offer at which the maximum number of shares of MOO, LOO, OIO, and Early Market Hours orders can be paired.
- (ii) If more than one price exists under subparagraph (i), the Current Reference Price shall mean the price that minimizes any Imbalance.
- (iii) If more than one price exists under subparagraph (ii), the Current Reference Price shall mean the entered price at which shares will remain unexecuted in the cross.

(iv) If more than one price exists under subparagraph (iii), the Current Reference Price shall mean the price that minimizes the distance from the bid-ask midpoint of the inside quotation prevailing at the time of the order imbalance indicator dissemination.

(B) the number of shares represented by MOO, LOO, OIO, and Early Market Hours orders that are paired at the Current Reference Price;

(C) the size of any Imbalance;

(D) the buy/sell direction of any Imbalance; and

(E) indicative prices at which the Nasdaq Opening Cross would occur if the Nasdaq Opening Cross were to occur at that time and the percent by which the indicative prices are outside the then current Nasdaq Market Center best bid or best offer, whichever is closer. The indicative prices shall be:

(i) “Near Clearing Price” which shall mean the price at which [both] the MOO, LOO, OIO, and Early Market Hours orders and Open Eligible Interest in the Nasdaq Market Center would execute, and

(ii) “Far Clearing Price” which shall mean the price at which the MOO, LOO, OIO, and Early Market Hours orders in the Nasdaq Opening Book would execute.

(iii) If marketable buy (sell) shares would remain unexecuted above (below) the Near Clearing Price or Far Clearing Price, Nasdaq shall disseminate an indicator for “market buy” or “market sell”.

([3]4) “Limit On Open Order” or “LOO” shall have the meaning provided in Rule 4702.

([4]5) “Market on Open Order” or “MOO” shall have the meaning provided in Rule 4702.

([5]6) “Nasdaq Opening Cross” shall mean the process for determining the price at which orders shall be executed at the open and for executing those orders.

([6]7) “Opening Imbalance Only Order” or “OIO” shall have the meaning provided in Rule 4702.

(8) “First Opening Reference Price” shall mean the previous day’s Nasdaq Official Closing Price of the security for Nasdaq-listed securities or the consolidated closing price otherwise. For new Exchange Traded Products that do not have a Nasdaq Official Closing Price or a consolidated closing price, the First Opening Reference Price will be the offering price.

(9) “Second Opening Reference Price” shall mean the Current Reference Price in the Order Imbalance Indicator disseminated at 9:28 a.m. ET.

([7]10) “Market Hours Orders” shall mean any order that may be entered into the [s]System and designated with a time-in-force of MIOC, MDAY, MGTC. Market Hours Orders shall be designated as “Early Market Hours Orders” if entered into the [s]System prior to 9:28 a.m. and shall be treated as MOO[market-on-open] and LOO[limit-on-open orders], as appropriate, for the purposes of the Nasdaq Opening Cross. Orders entered into the [s]System at 9:[28]29:30 a.m. ET or after with a Time-in-Force other than an IOC shall be designated as “Late Market Hours Orders” and shall be treated as imbalance-only orders for the purposes of the cross. Beginning at 9:2[8]5 a.m., requests to cancel or modify Market Hours Orders shall be suspended until after completion of the Opening Cross at which time such requests shall be processed, to the extent that such orders remain available within the System.

([8]11) “Open Eligible Interest” shall mean any quotation or any order that may be entered into the system and designated with a time-in-force of SDAY, SGTC, SHEX, or GTMC.

([9]12) “Nasdaq Order Imbalance Snapshot” shall mean a message disseminated by electronic means containing a subset of information contained in the Order Imbalance Indicator using a format optimized for newswire services.

(b) – (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) Early Order Imbalance Indicator and Order Imbalance Indicator.

(A) Beginning at 9:25 a.m., Nasdaq shall disseminate by electronic means an early Order Imbalance Indicator every 10 seconds until the Order Imbalance Indicator begins to disseminate.

[(1)](B) Beginning at 9:28 a.m., Nasdaq shall disseminate by electronic means an Order Imbalance Indicator every second until market open.

(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 the number of shares of buy or sell



MOO, LOO or Early Market Hours orders that may not be matched with other MOO, LOO, Early Market Hours, Open Eligible Interest, or OIO order shares.

(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. For securities subject to a corporate action where the Exchange can calculate a derived price based on the terms of the corporate action, the Opening Cross price range for Test A is established by

adding and subtracting the Opening Cross Price Test A threshold from such derived 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, offering price, or derived price, as applicable, 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 price used under subparagraph (i) above) or Nasdaq best offer (for Opening Cross prices that would be lower than the 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 for the previous trading day, offering price, or derived price, as applicable, 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.

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