

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-73315; File No. SR-NASDAQ-2014-097)

October 7, 2014

Self-Regulatory Organizations; The NASDAQ Stock Market LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Relating to the Algo Test Facility

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 October 2, 2014, 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 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 Substance of the Proposed Rule Change

NASDAQ proposes to offer a new testing environment, The NASDAQ OMX Algo Test Facility (“Algo Test Facility”).

The text of the proposed rule change is available on the Exchange’s website at <http://www.nasdaq.cchwallstreet.com>, 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,

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

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

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

NASDAQ is proposing to amend NASDAQ Rule 7030 entitled "Other Services" to offer NASDAQ Testing Facility (NTF)<sup>3</sup> subscribers ("Subscriber") a new complement to the existing NTF. The Algo Test Facility is a sophisticated equity market simulation environment based on a detailed historical database which includes NASDAQ display orders and trades. During a simulation, Algo Test Facility customers are able to use their existing trading infrastructure to interact and trade against this virtualized Nasdaq historical market. By providing a historically accurate market simulation, the Algo Test Facility helps increase the safety and security of the market by mitigating aberrant trading behavior.

The Algo Test Facility provides electronic trading customers with: (i) a safe environment to rigorously test and calibrate their algorithmic strategies by replaying and interacting with real historical market data; (ii) significantly higher accuracy and determinism on the outcomes of individual orders versus conventional paper-trading systems, which are forced to make simple probabilistic assumptions about fill rates because they do not replicate and replay the market microstructure; (iii) a re-creation of the actual market's microstructure and real-world trading conditions, providing accurate views of adverse selection, time priority and fills versus misses;

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<sup>3</sup> The NASDAQ Testing Facilities provides firms with the ability to test their automated systems that integrate with Nasdaq services in a virtual trading environment. This service supplies firms with multiple venues to test upcoming Nasdaq releases and product enhancements. In addition, firms may use the NTF to test their new software development prior to implementation.

(iv) support for order entry allowing customers to interact via OUCH<sup>4</sup> protocols; and (v) interaction of customer activity with the actual historic orders of other market participants at the microstructure level.

The Algo Test Facility allows customers to prototype, backtest, and calibrate their strategies against a variety of different kinds of real-world market conditions and against real-world market participants and competition. The Algo Test Facility allows customers to observe, correct, and test a large range of potential unintended behaviors of their algorithmic strategies before committing real capital or impacting the Exchange and other market participants. Also, customers will be able to mitigate the risk of aberrant or potentially destabilizing behaviors, such as inadvertent spamming or other repetitive behaviors, or excessive risk in open orders.

Customers would connect via their existing trading infrastructure, including risk systems, OMS, and feed handlers currently housed in the NASDAQ OMX Data Center in Carteret, New Jersey. The Algo Testing Facility will allow up to a certain number of simulations to be run for all users to the Algo Test Facility per day. While the Algo Test Facility will be available to all NTF subscribers, the capacity of simulations is limited to a certain number of simulations per day, which is subject to change. The Algo Test Facility will be available on a first-come first-serve basis. This limitation will apply equally to all users and may increase depending on customer interest. The Exchange intends to evaluate the capacity as the product is utilized.

Customers consume market data in a format that is similar to ITCH from the Algo Test Facility and send their orders to the Algo Test Facility in response. Delays on the customer side are based uniquely on the customers' actual production trading infrastructure and its ability to keep up with the Algo Test Facility. Customer orders interact with the actual historical order

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<sup>4</sup> The Exchange plans to expand to other order entry protocols and order types and include latencies and intercollo latencies in future enhancements.

books. Both queue priority and time priority are preserved to the microsecond. For example, if a customer lifts an offer in the order book 100 microseconds before a competitor tried to lift that offer, the customer will get a fill and the competitor will either consume the additional liquidity on the book or form a new bid. Automated reports will allow customers to observe, correct, and test a large range of potential unintended behaviors of their algorithmic strategies before committing real capital or impacting the Exchange and other market participants. Through new NTF hand-offs in Carteret, customers will receive market data in a format similar to NASDAQ ITCH market data and have the ability to execute trades via the OUCH protocols.<sup>5</sup>

Customers desiring to utilize the Algo Test Facility would be required to be NTF Subscribers to access this environment through NTF hand-offs in Carteret. Currently, NTF Subscribers with connectivity to Carteret are assessed a fee of \$1,000 per hand-off, per month for connection to the NTF.<sup>6</sup> The fees related to the NTF in Rule 7030 will continue to be assessed to current NTF Subscribers. The Exchange intends to not assess any other fees to NTF Subscribers for use of the Algo Test Facility at this time. The Exchange will file a proposed rule change with the Commission prior to commencing any additional pricing specifically for this product at a later time.

Currently, the NTF allows users to test connectivity to the Exchange. As discussed, the Algo Test Facility is a complement to the NTF, and will be available for testing algorithms, but not for purposes of rule compliance or validation.

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<sup>5</sup> Nasdaq historical data will be available on a rolling T+1 through six months basis. Only OUCH order entry will be available in the initial launch.

<sup>6</sup> The hand-off fee includes either a 1Gb or 10Gb switch port and a cross connect to the NTF. NTF Subscribers also pay a one-time installation fee of \$1,000 per handoff.

## 2. Statutory Basis

NASDAQ believes that its proposal is consistent with Section 6(b) of the Act<sup>7</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act<sup>8</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. The Exchange believes that by offering this product without charge at this time, NTF subscribers will have the opportunity to test the product and utilize the benefits the product offers. The product will assist NTF subscribers to protect investors and the public interest by utilizing the simulations to increase the safety and security of the market by mitigating aberrant trading behavior. Customers will be able to mitigate the risk of aberrant or potentially destabilizing behaviors, such as inadvertent spamming or other repetitive behaviors, or excessive risk in open orders. The Algo Test Facility allows customers to observe, correct, and test a large range of potential unintended behaviors of their algorithmic strategies before committing real capital.

NASDAQ believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,<sup>9</sup> in general, and with Sections 6(b)(4) and 6(b)(5) of the Act,<sup>10</sup> in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among members and issuers and other persons using any facility or system which NASDAQ operates or controls, and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers. This proposal is consistent with an equitable allocation of fees and is not unfairly

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<sup>7</sup> 15 U.S.C. 78f(b).

<sup>8</sup> 15 U.S.C. 78f(b)(5).

<sup>9</sup> 15 U.S.C. 78f.

<sup>10</sup> 15 U.S.C. 78f(b)(4) and (5).

discriminatory because it offers NTF Subscribers a sophisticated equity market simulation environment based on a detailed historical database of NASDAQ market data. Customers are offered a safe environment to rigorously test and calibrate their algorithmic strategies by replaying and interacting with real historical market data. Also, the proposal is consistent with an equitable allocation of fees and is not unfairly discriminatory because the Exchange operates in a highly competitive market in which exchanges offer various connectivity services as a means to facilitate the trading activities of customers.

The Exchange intends to offer this product free of charge at this time to NTF Subscribers at this time, so that NTF Subscribers have the opportunity to utilize the Algo Test Facility at no cost in addition to the current NTF Subscription fees set forth in Rule 7030(d)(1)(C). Moreover, the Exchange's fees for this service are equitably allocated and non-discriminatory in that all NTF Subscribers will receive the service free of cost. Non-NTF Subscribers would be required to become NTF Subscribers and incur the fees borne by these customers today in order to receive the Algo Test Facility services at no additional cost.

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

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act, as amended.<sup>11</sup> The Exchange does not intend to assess fees to NTF Subscribers at this time to utilize the Algo Test Facility. While non-NTF Subscribers would be required to become NTF Subscribers in order to receive this service, the Exchange does not believe this requirement imposes an undue burden on competition because NTF Subscribers today pay costs for the service they receive and the hand-offs are necessary for use of the Algo Test Facility. All

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<sup>11</sup> 15 U.S.C. 78f(b)(8).

customers are being treated in the same manner and the Exchange is offering the Algo Test Facility for free to those NTF Subscribers incurring costs today. Also, while there is a limit on the number simulations per day for this product, this limitation on the number of simulations applies equally to all users per day. Therefore, the Exchange believes that the proposed rule change enhances, rather than burdens, competition by providing customers an opportunity to utilize the product for free.

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

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act<sup>12</sup> and subparagraph (f)(6) of Rule 19b-4 thereunder.<sup>13</sup>

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is: (i) necessary or appropriate in the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved. The Exchange has provided the Commission written notice of its

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<sup>12</sup> 15 U.S.C. 78s(b)(3)(a)(ii).

<sup>13</sup> 17 CFR 240.19b-4(f)(6).

intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change.

#### 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-2014-097 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-2014-097. 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 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-2014-097 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>14</sup>

Kevin M. O'Neill  
Deputy Secretary

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<sup>14</sup> 17 CFR 200.30-3(a)(12).