

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-86865; File No. SR-NYSE-2019-46)

September 4, 2019

Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Filing of Proposed Rule Change to Amend the Exchange's Price List Related to Co-location Services

Pursuant to Section 19(b)(1)<sup>1</sup> of the Securities Exchange Act of 1934 (the "Act")<sup>2</sup> and Rule 19b-4 thereunder,<sup>3</sup> notice is hereby given that, on August 22, 2019, New York Stock Exchange LLC ("NYSE" or the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. 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 amend the Exchange's Price List related to co-location services to provide access to NMS feeds. The proposed rule change is available on the Exchange's website at [www.nyse.com](http://www.nyse.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 self-regulatory organization 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 those statements may be examined at the places

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

<sup>2</sup> 15 U.S.C. 78a.

<sup>3</sup> 17 CFR 240.19b-4.

specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

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

1. Purpose

The Exchange proposes to amend the Price List related to co-location<sup>4</sup> services offered by the Exchange to provide Users<sup>5</sup> with an alternate, dedicated network connection to access the NMS feeds for which the Securities Industry Automation Corporation (“SIAC”) is engaged as the securities information processor (“SIP”).<sup>6</sup>

As described below, today Users can connect to Regulation NMS equities and options feeds<sup>7</sup> disseminated by the SIP using either of the co-location local area networks. Users do not pay an additional charge to connect to the NMS feeds: it comes with their connection to the local area network.

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<sup>4</sup> The Exchange initially filed rule changes relating to its co-location services with the Commission in 2010. See Securities Exchange Act Release No. 62960 (September 21, 2010), 75 FR 59310 (September 27, 2010) (SR-NYSE-2010-56). The Exchange operates a data center in Mahwah, New Jersey (the “data center”) from which it provides co-location services to Users.

<sup>5</sup> For purposes of the Exchange’s co-location services, a “User” means any market participant that requests to receive co-location services directly from the Exchange. See Securities Exchange Act Release No. 76008 (September 29, 2015), 80 FR 60190 (October 5, 2015) (SR-NYSE-2015-40). As specified in the Price List, a User that incurs co-location fees for a particular co-location service pursuant thereto would not be subject to co-location fees for the same co-location service charged by the Exchange’s affiliates NYSE American LLC (“NYSE American”), NYSE Arca, Inc. (“NYSE Arca”), and NYSE National, Inc. (“NYSE National” and together, the “Affiliate SROs”). See Securities Exchange Act Release No. 70206 (August 15, 2013), 78 FR 51765 (August 21, 2013) (SR-NYSE-2013-59).

<sup>6</sup> See Securities Exchange Act Release No. 79730 (January 4, 2017), 82 FR 3045 (January 10, 2017) (SR-NYSE-2016-92).

<sup>7</sup> The NMS feeds include the Consolidated Tape System and Consolidated Quote System data streams, as well as Options Price Reporting Authority (“OPRA”) feeds. See id.

The Exchange has recently been authorized to build a new network in the Mahwah data center (the “NMS network”) that will only connect to the NMS feeds. The new network will connect to the NMS feeds faster than either of the existing local area networks. The Exchange believes that under most circumstances, none of the Users that currently connect to the NMS feeds will have to pay any additional fees to connect to the NMS network. As described in detail below, there are limited circumstances when a User may incur a unique fee to connect to the NMS network. However, the Exchange does not expect to earn net revenue from any such fees for connecting to the NMS network.

As explained in more detail below, the Exchange proposes to amend the General Notes to provide that:

- a. Users will have the option to use the NMS network or either of the existing local area networks to connect to the NMS feeds.
- b. For each connection a User and its Affiliates have to the local area networks, the User and its Affiliates, together, will get a free connection to the NMS network, subject to a maximum limit of eight, so long as the User meets the requirements set forth below.
- c. If a User wants to separately purchase an NMS network connection, it would pay the same fee as the same-sized 10 Gigabit (“Gb”) or 40 Gb internet protocol (“IP”) network circuit.

Subject to approval of this proposed rule change, the Exchange proposes to implement the rule change on the first day of the month after the NMS network is available. The Exchange will announce the implementation date through a customer notice.

#### Background

The Exchange’s affiliate, SIAC, is engaged as the SIP for three separate Regulation NMS

plans (collectively, the “NMS Plans”).<sup>8</sup> SIAC operates as the SIP for the NMS Plans in the same data center where the Exchange and its Affiliate SROs operate. In that data center, Users can access SIAC as the SIP over the same network connections through which they access other services. Specifically, a User can access the SIAC SIP environment via either the IP network or the Liquidity Center Network (“LCN”), which are the local area networks in the data center.<sup>9</sup>

The Exchange offers Users connectivity to the SIAC SIP environment at no additional charge when a User purchases access to the LCN or IP network.<sup>10</sup> On the Price List, the SIAC feeds are referred to as the “NMS feeds.” As described in General Note 4 of the Price List, when a User purchases access to the LCN or IP network, it receives connectivity to certain market data products (the “Included Data Products”) that it selects, subject to technical provisioning requirements and authorization from the provider of the data feed. The NMS feeds are included in the list of the Included Data Products that come with connections to the LCN or IP network. The remaining Included Data Products are proprietary feeds of the Exchange, its Affiliate SROs, and the Exchange’s affiliate NYSE Chicago, Inc. (“NYSE Chicago” and together with the

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<sup>8</sup> SIAC has been engaged as the SIP to, among other things, receive, process, validate and disseminate: (1) last-sale price information in Tape A and Tape B-listed securities pursuant to the CTA Plan (“CTA Plan”), which is available here: <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CTA%20Plan%20-%20Composite%20as%20of%20August%202027,%202018.pdf>; (2) quotation information in Tape A and B-listed securities pursuant to the CQ Plan (“CQ Plan”), which is available here: [https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CQ\\_Plan\\_Composite\\_as\\_of\\_July\\_9\\_2018.pdf](https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CQ_Plan_Composite_as_of_July_9_2018.pdf); and (3) quotation and last-sale price information in all exchange options trading pursuant to the OPRA Plan (“OPRA Plan”), which is available here: [https://uploads-ssl.webflow.com/5ba40927ac854d8c97bc92d7/5bf419a6b7c4f5085340f9af\\_opra\\_plan.pdf](https://uploads-ssl.webflow.com/5ba40927ac854d8c97bc92d7/5bf419a6b7c4f5085340f9af_opra_plan.pdf).

<sup>9</sup> See 82 FR 3045, note 6, *supra*.

<sup>10</sup> As set forth on the Price List, the Exchange offers a range of LCN and IP network connectivity options at different rates depending on the bandwidth and latency profile of the applicable network.

Exchange and Affiliate SROs, the “NYSE Exchanges”).

A User that purchases access to the LCN or IP network also receives the ability to access the trading and execution systems of the NYSE Exchanges (the “Exchange Systems”) and the trading and execution systems of OTC Global, an alternative trading system (“ATS”), subject, in each case, to authorization by the relevant entity.<sup>11</sup>

Accordingly, without paying an additional connectivity fee, a User that purchases access to either the LCN or IP network can use such network to:

1. Access the trading and execution services of five registered exchanges (five equities markets, two options markets, and a fixed income market) and an ATS;
2. Connect to the market data of five registered exchanges (five equities exchanges, two options markets, and a fixed income market); and
3. Connect to the NMS feeds.

A User may connect to the NMS feeds through the IP network or LCN. Until recently the operating committee for the CTA and CQ Plans (“CTA/CQ Plans”) mandated use of the IP network to access the NMS feeds.<sup>12</sup> As a result, all LCN connections to the NMS feeds go through the IP network before reaching the NMS feeds,<sup>13</sup> and so using the LCN to connect to an

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<sup>11</sup> See 82 FR 3045, note 6, *supra*, and Securities Exchange Release No. 85952 (May 29, 2019), 84 FR 25884 (June 4, 2019) (SR-NYSE-2019-31). Information regarding the Included Data Products is currently set forth in the second paragraph of General Note 4. The Exchange proposes to split General Note 4 so that the discussion regarding Included Data Products will form General Note 5.

<sup>12</sup> The Operating Committee of the CTA/CQ Plans mandated the use of the IP network to access the NMS feeds because the IP network was built as a secure network designed for resiliency and redundancy.

<sup>13</sup> By contrast, the LCN does not connect to the IP network for access to the Exchange Systems or connectivity to the other Included Data Products.

NMS feed is slower than using the IP network.<sup>14</sup>

Alternate, Dedicated Network Connection for NMS Feeds

As the SIP for the NMS Plans, SIAC continually assesses the services it provides and has been working with the operating committees of the NMS Plans and the industry-based advisory committee to the CTA/CQ Plans to identify potential performance enhancements. Among other initiatives, this group identified that, because the IP network was not designed as a low-latency network, the requirement to use the IP network to access the NMS feeds introduces a layer of latency.

To reduce network latency, the Exchange sought and received approval from the operating committees for the CTA/CQ Plans to build an alternate to the LCN and IP network to connect to the NMS feeds.<sup>15</sup> As approved by the CTA/CQ Plans, the Exchange is building a low-latency network in the data center that will provide Users with dedicated access to the NMS feeds (the “NMS network”).<sup>16</sup>

The Exchange currently anticipates that the low-latency network will have a one-way reduction in latency to access the NMS feeds from the IP network and LCN of over 140 microseconds.

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<sup>14</sup> A User that uses the LCN to connect to an NMS feed does not need to separately purchase an IP network connection.

<sup>15</sup> The alternate network to access the NMS feeds will not be available outside of the data center.

<sup>16</sup> Because SIAC, as the SIP for the NMS Plans, is also responsible for collecting data from the participants of the CTA/CQ Plans and members of the OPRA Plan, Users that are participants of the applicable NMS Plans could use this alternate network connection for purposes of both transmitting and receiving data. Users that are not participants of the NMS Plans could use this alternate network connection for purposes of receiving data. This alternate network would not be available to connect to the other Included Data Products or to access the Exchange Systems or Global OTC.

Connections to the NMS network will be available in 10 Gb and 40 Gb circuits. Because the NMS network will be an alternate network to access the NMS feeds, once it is available, Users would have the choice between continuing to use the LCN or IP network to connect to NMS feeds or switching to the NMS network.

#### Proposed Amendments to the Price List

The proposed fee structure for the NMS network has been designed so that, in most cases, a User would not have any new or different charges if it opts to connect to the NMS network compared to what it would be charged if it chooses to continue to use its LCN or IP network circuit to connect to the NMS feeds. At the same time, the proposed fees are designed to promote the efficient use of the NMS network so that Users do not subscribe to more NMS network connections than are necessary.

#### *Options to Connect to the NMS Feeds*

As noted above, Users that purchase access to the LCN or IP Network currently can use such networks to connect to the NMS feeds. The Exchange proposes to add text to the General Notes stating that a User authorized to receive connectivity to one or more NMS feeds may request to connect to the NMS feeds via the NMS network.

#### *No Fee NMS Network Connections*

The Exchange proposes to amend the Price List to state that if a User purchases access to the LCN or IP network and requests a connection to the NMS network, that User and its Affiliates, taken together, would not be charged for up to eight corresponding NMS network connections (each, a “No Fee NMS Network Connection”) if such User, together with its Affiliates, purchases access to an LCN or IP network and:

1. designates no more than four No Fee NMS Network Connections as corresponding to

- the LCN connections of the User, together with its Affiliates, on a one-to-one basis;
2. designates no more than four No Fee NMS Network Connections as corresponding to the IP network connections of the User, together with its Affiliates, on a one-to-one basis;
  3. does not use the LCN or IP network connections that correspond to No Fee NMS Network Connections to access the NMS feeds; and
  4. each of the No Fee NMS Network Connections is of equal size or smaller than the associated LCN or IP network connection purchased by it or its Affiliates.<sup>17</sup>

For example, if a User that has no Affiliates currently purchases three 40 Gb LCN circuits and two 10 Gb IP network circuits, and is authorized to access the NMS feeds through all five of these circuits, under the proposal, such User would not be charged any additional fees for up to three 40 Gb NMS network circuits and two 10 Gb NMS network circuits. If such User chooses to use all five corresponding NMS network connections, it would no longer be provided access to the NMS feeds over the three 40 Gb LCN circuits and the two 10 Gb IP network circuits.

Because the Exchange proposes that the number of No Fee NMS Network Connections would be applicable to both a User and its Affiliates, the Exchange proposes to amend the Price List to specify how a User must certify whether any other Users or Hosted Customers are Affiliates of the certifying User. As proposed, the certifying User would be required to

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<sup>17</sup> An “Affiliate” of a User would be any other User or Hosted Customer that has 50% or greater common ownership or control of the first User. A “Hosted Customer” means a customer of a Hosting User that is hosted in a Hosting User’s co-location space, and a “Hosting User” means a User of co-location services that hosts a Hosted Customer in the User’s co-location space. Such definitions are set forth in the Price List under “Definitions.” See Securities Exchange Act Release No. 77072 (February 5, 2016), 81 FR 7394 (February 11, 2016) (SR-NYSE-2015-53).

inform the Exchange immediately of any event that causes another User or Hosted Customer to become an Affiliate. The Exchange would review available information regarding the entities and may request additional information to verify the Affiliate status of a User or Hosted Customer. The Exchange would provide No Fee NMS Network Connections to the certifying User unless it determines that the certification is not accurate.

In addition, a User that has one or more NMS network connections may become affiliated with one or more other Users or Hosted Customers such that the User and its Affiliates would together exceed the limit of No Fee NMS Network Connections. In such case, for each NMS network connection that exceeds the limit of No Fee NMS Network Connections, the Exchange would charge the User for each NMS network connection at the same rate as it charges for an IP network connection of the same size. Such change would be effective as of the date that the User became affiliated with the other Users or Hosted Customers, as applicable.

This proposed rule text relating to how a User and its Affiliates would be charged in connection with the No Fee NMS Network Connections is based on text in General Note 2 relating to how a User must certify Affiliates in connection with the Partial Cabinet Solution bundle.<sup>18</sup>

#### *Purchasing NMS Network Connections*

In addition to the No Fee NMS Network Connections, the Exchange proposes that a User may purchase an NMS network connection. Accordingly, the Exchange proposes to add text to

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<sup>18</sup> See id.

the Price List stating that a User may purchase an NMS network connection at the same fee as the same-sized 10 Gb or 40 Gb IP network circuits.<sup>19</sup>

Circumstances when a User would have to separately purchase an NMS network connection could include if such User:

1. has not purchased access to the LCN or IP network and would like to connect to the NMS network;
2. has purchased access to the LCN or IP network and would like NMS network connections in excess of the number of No Fee NMS Network Connections that correspond to its LCN or IP network connections<sup>20</sup>; or
3. would like to use its LCN or IP network connections to continue to access the NMS feeds.

#### Expected Application of the Proposed Change

Currently, 48 Users connect to NMS feeds through connections to the LCN and IP networks (the “Current Users”). The Exchange expects the number of Users connecting to the NMS feeds in the future to remain relatively constant with the number of Current Users, although it could increase or decrease with time. The fee will apply in the same manner to all Users, irrespective of what type or size of market participant they are.

#### *The Range of Potential Fees*

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<sup>19</sup> As set forth on the Price List, IP network access is: (1) \$10,000 per connection initial charge and a \$11,000 monthly recurring charge (“MRC”) per connection for a 10 Gb Circuit; and (2) \$10,000 per connection initial charge and a \$18,000 MRC for a 40 Gb Circuit.

<sup>20</sup> For example, if a User had four connections to the LCN and three connections to the IP network, those connections would correspond to seven No Fee NMS Network Connections. If the User wanted ten NMS network connections, it would receive seven at no fee and would pay for three.

Depending on how a User chooses to connect, a User would pay for a connection to the NMS network between \$0 and \$18,000 per connection per month. More specifically, a User that utilizes a No Fee NMS Network Connection to connect to the NMS network would pay no initial fee or MRC. A User that does not utilize a No Fee NMS Network Connection would pay the same fee as the same-sized 10 Gb or 40 Gb IP network circuit. For the 10 Gb option, that would be a \$10,000 initial charge and a \$11,000 MRC per connection. For the 40 Gb option, that would be a \$10,000 initial charge and a \$18,000 MRC per connection.

As noted above, the Exchange believes that none of the Current Users will have to pay to connect to the NMS network, and so the \$11,000 and \$18,000 MRCs are largely theoretical. Based on a review of the Current Users' LCN and IP network connections, with two exceptions, the number of No Fee NMS Network Connections will be more than sufficient for such Users to maintain their current connections to the NMS network at no additional cost. Accordingly, the majority of Current Users would be able to opt to connect to the NMS network without any additional charges.

The exceptions are two Current Users that use more than four connections to the IP network and/or four connections to the LCN to connect to the NMS feeds. If these Users obtain an equal number of connections to the NMS network, the number of their connections to the NMS network would exceed their number of No Fee NMS Network Connections. As a result, they would have to pay for the excess NMS network connections. However, based on conversations with these two Users, the Exchange understands that they intend to optimize their connections by only using their No Fee NMS Network Connections to connect to the NMS feeds and would not need to purchase any additional NMS network connections. Accordingly, since they do not anticipate requiring NMS network connections in excess of the No Fee NMS

Network Connections, the Exchange believes that they will not incur any additional cost. For this reason, the Exchange believes that providing up to eight free connections to the NMS network, each corresponding to a purchased connection of equal or larger size to the LCN or IP network, would meet the needs of the Current Users.

Based on the Exchange's review of Users' current numbers of connections to the LCN and IP network, the Exchange believes that the majority of Users that want access to the NMS feeds in the future would be able to meet their bandwidth needs for the NMS network with the proposed No Fee NMS Network Connections, and so are unlikely to incur any cost above their costs for accessing the LCN or IP network.

The Exchange's proposal to require a User to purchase access to the NMS network if it does not also purchase access to the LCN or IP network, or if it has connections to the LCN and IP network but wants a number of NMS network connections in excess of its No Fee NMS Network Connections, would not impose any new or different charges for such User. For example:

- Currently, if a User needs to connect to only the NMS feeds (and does not need that network connection to access the Exchange Systems or to connect to the other Included Market Data), such User must purchase access to either the LCN or IP network at the published rates on the Price List.
- As proposed, once the NMS network becomes available, such User would still need to purchase a network connection to connect to the NMS feeds, but will have a greater choice because it could opt to connect via the low-latency, dedicated NMS network instead of using the IP network. Access to the NMS network would be charged at the same rate as published rates for access to the IP network.

As another example:

- Currently, if a User needs (a) two connections to the LCN to meet its bandwidth needs to access the Exchange Systems and connect to Included Market Data, including the NMS feeds, and (b) an additional connection to the LCN or IP network to meet additional bandwidth needs to connect to NMS feeds, it would purchase a total of three network connections: two LCN connections (to provide access to the Exchange Systems and connect to the Included Market Data) and one IP network connection (to provide connectivity only to the NMS feeds).
- As proposed, once the NMS network is available, such User could still purchase two connections to the LCN for its non-NMS feed needs, and could opt to use two No Fee NMS Network Connections of the same or smaller bandwidth that correlate to such LCN connections. To meet its additional bandwidth needs to connect to the NMS feeds, such User could now opt to purchase a connection to either the NMS network or the IP network at the same price. In either case, the User would be purchasing a total of three network connections (but receiving five connections) and would be charged at the same rates as are currently charged under the Price List.

In both of the above examples, a User that opts to purchase access to the NMS network instead of to the IP network to connect to the NMS feeds would receive a lower-latency connection than the IP network connection, for the same charge. The Exchange therefore believes that in the above-described circumstances, the proposed fees would be cost-neutral as compared to the current Price List, with the additional benefit that the User would have the option to select a lower-latency, dedicated network connection.

*The Limitation on the Number of No Fee NMS Network Connections*

As described above, the Exchange believes that the majority of Users would be able to meet their bandwidth needs for the NMS network with the proposed No Fee NMS Network Connections. The Exchange further believes that without the proposed limit on number of No Fee NMS Network Connections, Users may opt to connect to NMS network connections on a one-for-one basis for each LCN or IP network connection that they have purchased, even if such LCN or IP network connections are not currently used to access the NMS feeds. In such case, the Exchange does not believe that more than eight NMS network connections would be necessary or in furtherance of the User's needs to connect to the NMS feeds. To discourage Users from requesting more NMS network connections than they need, the Exchange proposes to charge for any NMS network connections in excess of the proposed limit of No Fee NMS Network Connections.

Similarly, the Exchange believes that if a User chooses to connect to the NMS feeds via both an LCN or IP network connection and an associated NMS network connection, that User would be receiving two separate network connections to access the NMS feeds. This would double its bandwidth available to access the NMS feeds and the Exchange believes that such User should be charged accordingly. The Exchange further believes it would promote efficient use of resources to charge for the NMS network connection in these circumstances because there would be operational costs for the Exchange to support access to both the NMS network and the LCN or IP networks at the same time. Stated otherwise, the Exchange is concerned that if the NMS network connections are free without any limits, Users may seek so many connections that it would increase both capital and operational expenses for the Exchange.

*Defraying the Cost of Building the NMS Network*

In addition to promoting the efficient use of NMS network connections, charging for NMS network connections under the limited circumstances described above may also defray the costs associated with implementing the NMS network. As described above, SIAC is the SIP for the NMS plans and is reimbursed for specified direct costs by the participants to the NMS Plans.<sup>21</sup> Even though the NMS network would connect only to the NMS feeds, the Exchange has agreed not to seek reimbursement of the costs to build the NMS network from the participants of the respective NMS Plans.

The one-time capital expenditure for the implementation of the NMS network will be approximately \$3.8 million, which includes procurement of new low-latency network switches, network devices, and analytics tools and the one-time operational expenditures to build this new network. The estimate is based on the hardware that would be necessary to support the Current Users' present configurations if they replaced their LCN or IP network connections to the NMS feeds with NMS network connections, with some room for additional growth. If Users were to request NMS network connections in excess of the estimated number of connections, the Exchange would have to procure additional hardware, which would be an additional cost. In addition to these one-time implementation costs, the Exchange estimates that the ongoing cost to maintain and operate the dedicated NMS network will be approximately \$215,000 annually.

The Exchange cannot predict with certainty what User behavior will be once the NMS network is available. As discussed above, based on current usage of the LCN and IP network, the Exchange anticipates that all Current Users will be able to connect to the NMS feeds without any new or different charges. The Exchange expects that some Users may even reduce the total

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<sup>21</sup> SIAC is reimbursed either directly (under the CTA/CQ Plans, participants reimburse SIAC directly) or indirectly (under the OPRA Plan, OPRA LLC reimburses SIAC).

number of circuits that they purchase because they will be able to obtain up to eight connections to the NMS network at no charge. Those No Fee NMS Network Connections will free up bandwidth over their LCN or IP network connections, allowing them to reduce the total number of LCN or IP network connections that they purchase.

Although the Exchange believes that none of the Current Users will have to pay additional fees to connect to the NMS network, the Exchange cannot fully anticipate User behavior once the NMS network is available. Some Current Users, or new Users, may elect to purchase NMS network connections in excess of the proposed limit on the number of No Fee NMS Network Connections, for which they would pay a charge. Given that, the Exchange has done an analysis of what would occur if Users request five unique new NMS network connections that are not No Fee NMS Network Connections. Assuming that such Users purchase 40 Gb NMS network circuits, these five new connections would result in \$1,130,000 in revenue: \$50,000 in initial charges and \$1,080,000 in MRC. This revenue would likely be offset either in part or in whole by Users, including Current Users, reducing the total number of LCN or IP network circuits that they purchase. The Exchange could even experience a net decline in revenue as a result of the proposed commercial terms for the NMS network.

#### General

As is the case with all Exchange co-location arrangements, (i) neither a User nor any of the User's customers would be permitted to submit orders directly to the Exchange unless such User or customer is a member organization, a Sponsored Participant or an agent thereof (e.g., a service bureau providing order entry services); (ii) use of the co-location services proposed

herein would be completely voluntary and available to all Users on a non-discriminatory basis;<sup>22</sup> and (iii) a User would only incur one charge for the particular co-location service described herein, regardless of whether the User connects only to the Exchange or to the Exchange and one or more of the Affiliate SROs.<sup>23</sup>

## 2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,<sup>24</sup> in general, and furthers the objectives of Sections 6(b)(5) of the Act,<sup>25</sup> in particular, because it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to, and perfect the mechanisms of, a free and open market and a national market system and, in general, to protect investors and the public interest and because it is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers. The Exchange also believes that the proposed fee change is consistent with Section

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<sup>22</sup> As is currently the case, Users that receive co-location services from the Exchange will not receive any means of access to the Exchange's trading and execution systems that is separate from, or superior to, that of other Users. In this regard, all orders sent to the Exchange enter the Exchange's trading and execution systems through the same order gateway, regardless of whether the sender is co-located in the data center or not. In addition, co-located Users do not receive any market data or data service product that is not available to all Users, although Users that receive co-location services normally would expect reduced latencies in sending orders to, and receiving market data from, the Exchange.

<sup>23</sup> See 78 FR 51765, supra note 5, at 51766. NYSE American, NYSE Arca and NYSE National have submitted substantially the same proposed rule change to propose the changes described herein. See SR-NYSEAmer-2019-34, SR-NYSEArca-2019-61, and SR-NYSENat-2019-19.

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

<sup>25</sup> 15 U.S.C. 78f(b)(5).

6(b)(4) of the Act,<sup>26</sup> in particular, because it provides for the equitable allocation of reasonable dues, fees, and other charges among its members, issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

The Proposed Rule Change Would Remove Impediments to and Perfect the Mechanism of a Free and Open Market and a National Market System.

The Exchange believes that the proposed change to establish access to the NMS network as a service available in co-location would remove impediments to, and perfect the mechanisms of, a free and open market and a national market system and, in general, protect investors and the public interest because, by offering access to the dedicated, low-latency NMS network, the Exchange will be providing Users with an additional option to connect to the NMS feeds. Until recently, SIAC was required to provide connectivity to the NMS feeds via only the IP network. As recently approved by the operating committees for the CTA/CQ Plans, SIAC is now authorized to offer connectivity to the NMS feeds in the data center via an alternate, dedicated, low-latency NMS network. The proposed NMS network has been designed consistent with this directive and will provide greater choice to Users that are seeking a low-latency network to connect to the NMS feeds.

The Proposed Rule Change is Reasonable

As an initial matter, as required by Rule 603(b) of Regulation NMS, SIAC disseminates quotation and transaction information as the single plan processor for all Tape A and Tape B-listed securities and is also the single plan processor for all options exchanges. As the single plan processor, the pricing decisions relating to the dedicated NMS network are not constrained by competitive market forces.

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<sup>26</sup> 15 U.S.C. 78f(b)(4).

Instead, as described above, the Exchange is funding the capital and operational expenses to build and operate the NMS network. Those implementation costs are applicable only to the NMS network, which will be used for the sole purpose of providing access to the NMS feeds. Simply put, none of the implementation costs are applicable to any other Exchange services. The Exchange has based its procurement needs - which correlate to the Exchange's estimated costs to build the NMS network - based on the Current Users' usage of the LCN or IP networks to connect to the NMS feeds, with some room for additional growth.

The Exchange believes that the proposed charges would be reasonable because such charges would defray the estimated costs the Exchange will incur to build and operate the NMS network. As described above, the proposed NMS network will be a dedicated, low-latency network that will provide access only to the NMS feeds. Because LCN and IP network fees on the Price List relate to charges for services either other than or in addition to connectivity to the NMS feeds, the Exchange currently does not assess any fees that are specific to connectivity to the NMS feeds. The proposed charges for access to the NMS network are designed to defray the specific costs that the Exchange will incur to build and maintain the infrastructure for the NMS network. As described above, the Exchange's capital expenditure costs for the build are estimated to be \$3.8 million, which includes procurement of new low-latency network switches, network devices, and analytics tools and the one-time operational expenditures to build this new network. The estimate is based on the hardware that would be necessary to support the Current Users' present configurations if they replaced their LCN or IP network connections to the NMS feeds with NMS network connections, with some room for additional growth. If Users were to request NMS network connections in excess of the estimated number of connections, the Exchange would have to procure additional hardware, which would be an additional cost. In

addition to this initial estimated approximately \$3.8 million outlay, the Exchange anticipates that the ongoing costs to maintain and operate the NMS network will be approximately \$215,000 annually.

The Exchange further believes that these proposed fees would be reasonable because unnecessary connections would impose a burden on the infrastructure that would be shared by all Users.

As stated above, the Exchange believes that the Current Users will use No Fee NMS Network Connections for the NMS network, and as a consequence, none of the Current Users will have to pay to connect to the NMS network. However, the Exchange cannot fully anticipate User behavior once the NMS network is available. Some Current Users, or new Users, may elect to purchase NMS network connections in excess of the proposed limit on number of No Fee NMS Network Connections, for which they would pay a charge. Given that, the Exchange has done an analysis of what would occur if Users request five unique NMS network connections that are not No Fee NMS Network Connections. Assuming that such connections were the larger size of 40 Gb, these five new connections would result in \$1,130,000 in revenue: \$50,000 in initial charges and \$1,080,000 in MRC. But new revenue does not necessarily translate into net revenue gain.

First, the Exchange anticipates that once the NMS network is available, Users may lower the number of LCN or IP network connections that they purchase, offsetting any unique new charges and possibly leading to a net decline in revenues. Second, even if the Exchange assumes new revenue of \$1,130,000 per year, such revenue would not fully offset the cost of building and maintaining the NMS network. Rather, the proposed charges, to the extent they would correlate to new revenue, would merely defray the costs that the Exchange will incur to build and support

additional capacity for the NMS network. Assuming revenue equal to the MRCs, i.e. \$1,080,000 per year, it would take four years before such revenue would fully offset the initial fixed costs to build the NMS network. The Exchange generally refreshes network hardware after three or four years, as such hardware has a limited life. Accordingly, the Exchange expects that it will incur substantial new costs to refresh the NMS network after three or four years. As a result, even after the initial fixed costs are offset, the MRC revenue will not necessarily cover the variable, ongoing costs to maintain and refresh the NMS network. If the revenue were to be a net gain, the Exchange does not believe such revenues would cover all the fixed costs that the Exchange would incur to refresh the network hardware or add additional infrastructure to meet Users' needs. Any revenue would assist with defraying the sizable investment needed to create the NMS network, but in the end the Exchange does not expect additional net revenues.

The Proposed Rule Change is an Equitable Allocation of Fees

The Exchange believes that the proposed fee change is equitably allocated for multiple reasons.

*The No Fee NMS Network Connection is an Equitable Allocation of Fees*

As described above, the proposed fee structure for the NMS network has been designed so that the majority of Users would not have any new or different charges if they opt to connect to the NMS network. Rather, Users will have a choice whether to use an IP network, LCN or NMS network connection to connect to the NMS feeds. The cost to purchase a NMS network connection would be the same as an IP network connection of the same size. A User that voluntarily chooses to exercise the choice to connect with the NMS network would receive the benefit of a low-latency connection without any additional charges.

More specifically, the Exchange proposes that if a User purchases access to the LCN or

IP network and requests a connection to the NMS network, it, together with its Affiliates, will not be charged for up to eight corresponding No Fee NMS Network Connections. Such User, together with its Affiliates, will be entitled to a No Fee NMS Network Connection for each of the first four LCN or IP network connections that it purchases, so long as they meet the requirements sets forth above. A User that utilizes its No Fee NMS Network Connections to connect to the NMS network would have no or different charges.

The Exchange believes that the proposed limit on the number of No Fee NMS Network Connections would be equitably allocated because it is based on the number of LCN or IP network connections that Users currently purchase to connect to the NMS feeds. As noted above, based on a review of the Current Users' LCN and IP network connections and conversations with two of the Current Users, the Exchange believes that none of the Current Users will have to pay more to connect to the NMS network, and Users that want access to the NMS feeds in the future are unlikely to have to pay for their NMS network connections.

*The Application of the Proposed Rule Change to Affiliates is an Equitable Allocation of Fees.*

The Exchange likewise believes it would be equitable to apply the proposed limit on the number of No Fee NMS Network Connections to Users taken together with their Affiliates because all Users seeking to connect to NMS feeds using NMS network connections would be subject to the same parameters. The proposal avoids disparate treatment of Users that have divided their various business activities between separate corporate entities, as compared to Users that operate those business activities within a single corporate entity. It would discourage any User from taking deliberate advantage of the proposed connections to the NMS network by setting up separate corporate entities to act as Users, thereby obtaining more connections than allowed by the proposed limit on No Fee NMS Network Connections. The Exchange believes

that using the existing definitions of Affiliate, Hosted Customer, and Hosting User is an equitable allocation of fees because it would promote consistency and clarity for Users.

*The Proposed Charge for NMS Networks is an Equitable Allocation of Fees*

The Exchange believes that charging the same rate for accessing the NMS network as is currently charged for accessing a same-sized IP network connection for Users who do not also purchase an LCN or IP network connection or who have connections to the LCN and IP network but want a number of NMS network connections in excess of its No Fee NMS Network Connections, would be equitably allocated because a User that currently seeks to connect to the NMS feeds must pay, at a minimum, the charges for access to the IP network. With the addition of the NMS network, Users will have a choice to either continue using an IP network connection or instead connect via the NMS network to connect to the NMS feeds. Users that choose to connect via the NMS network will receive the benefit of a low-latency network as compared to access to the IP network at the same price as the access to the IP network.

To the extent a User may be subject to charges in addition to what they would be paying under the current Price List, e.g., if a User needed more access to the NMS network than their allocated number of No Fee NMS Network Connections or if they wanted to continue to use the LCN or IP network to connect to the NMS feeds, the Exchange believes that the proposed charges would be equitably allocated because such charges would encourage efficient use of the NMS network and discourage Users to subscribe to more NMS network connections.

Current Users do not necessarily use all of their connections to the IP network and LCN to connect to the NMS feeds. If the Exchange were to provide them with an equal number of No Fee NMS Network Connections without any limitations on the number, the Current Users would have no incentive to make efficient decisions regarding the number of NMS network connections

they had, and the Exchange would need to incur additional costs to support the infrastructure necessary to support those additional NMS network connections. In addition, Users would bear the burden of any unnecessary connections because of the strain on the infrastructure shared by all Users that access the NMS network. The Exchange believes that by charging for any connections to the NMS network in excess of the allocated number of No Fee NMS Network Connections, it will motivate Users to make rational decisions based on how many NMS network connections they need, rather than because they are simply available. These fees are therefore reasonable and not unfairly discriminatory because they will reduce the burden on all Users accessing the NMS network.

Finally, the Exchange believes that access to the proposed NMS network and related commercial terms would be equitably allocated because, in addition to access to the NMS network being completely voluntary, it would be available to all Users on an equal basis (i.e., the same access would be available to all Users). All Users that voluntarily selected to receive access to the NMS network would be charged the same amount for the same service.

#### The Proposed Rule Change is Not Unfairly Discriminatory

The Exchange believes that the proposed fee change is not unfairly discriminatory for multiple reasons.

#### *The No Fee NMS Network Connection is Not Unfairly Discriminatory*

As described above, the proposed fee structure for the NMS network has been designed so that the majority of Users would not have any new or different charges if they opt to connect to the NMS network. Rather, all Users will have a choice whether to use an IP network, LCN or NMS network connection to connect to the NMS feeds. The proposed fee therefore does not propose to impose any meaningful differences to different types of Users. Rather, the cost to

purchase a NMS network connection would be the same as an IP network connection of the same size, which would be available to all Users on the same terms. Any User that voluntarily chooses to exercise the choice to connect with the NMS network would receive the benefit of a low-latency connection without any additional charges.

More specifically, the Exchange proposes that if a User purchases access to the LCN or IP network and requests a connection to the NMS network, it, together with its Affiliates, will not be charged for up to eight corresponding No Fee NMS Network Connections. Such User, together with its Affiliates, will be entitled to a No Fee Connection for each of the first four LCN or IP network connections that it purchases, so long as they meet the requirements sets forth above. A User that utilizes its No Fee NMS Network Connections to connect to the NMS network would have no new or different charges.

The Exchange believes that the proposed limit on the number of No Fee NMS Network Connections would not be unfairly discriminatory because it is based on the number of LCN or IP network connections that Users currently purchase to connect to the NMS feeds. As noted above, based on a review of the Current Users' LCN and IP network connections and conversations with two of the Current Users, the Exchange believes that none of the Current Users will have to pay more to connect to the NMS network, and Users that want access to the NMS feeds in the future are unlikely to have to pay for their NMS network connections.

*The Application of the Proposed Rule Change to Affiliates is Not Unfairly Discriminatory*

The Exchange likewise believes it would not be unfairly discriminatory to apply the proposed limit on the number of No Fee NMS Network Connections to Users taken together with their Affiliates because all Users seeking to connect to NMS feeds using NMS network connections would be subject to the same parameters. The proposal avoids disparate treatment

of Users that have divided their various business activities between separate corporate entities, as compared to Users that operate those business activities within a single corporate entity. It would discourage any User from taking deliberate advantage of the proposed connections to the NMS network by setting up separate corporate entities to act as Users, thereby obtaining more connections than allowed by the proposed limit on No Fee NMS Network Connections. The Exchange believes that using the existing definitions of Affiliate, Hosted Customer, and Hosting User would not be unfairly discriminatory because it would promote consistency and clarity for Users.

*The Proposed Charge for NMS Networks is Not Unfairly Discriminatory*

The Exchange believes that charging the same rate for accessing the NMS network as is currently charged for accessing a same-sized IP network connection for Users who do not also purchase an LCN or IP network connection or who have connections to the LCN and IP network but want a number of NMS network connections in excess of its No Fee NMS Network Connections, would not be unfairly discriminatory because a User that currently seeks to connect to the NMS feeds must pay, at a minimum, the charges for access to the IP network. With the addition of the NMS network, all Users will have a choice to either continue using an IP network connection or instead connect via the NMS network to connect to the NMS feeds. Users that choose to connect via the NMS network will receive the benefit of a low-latency network as compared to access to the IP network at the same price as the access to the IP network.

To the extent a User may be subject to charges in addition to what they would be paying under the current Price List, e.g., if a User needed more access to the NMS network than their allocated number of No Fee NMS Network Connections or if they wanted to continue to use the LCN or IP network to connect to the NMS feeds, the Exchange believes that the proposed

charges would not be unfairly discriminatory because such charges would encourage efficient use of the NMS network and discourage Users to subscribe to more NMS network connections.

Current Users do not necessarily use all of their connections to the IP network and LCN to connect to the NMS feeds. If the Exchange were to provide them with an equal number of No Fee NMS Network Connections without any limitations on the number, the Current Users would have no incentive to make efficient decisions regarding the number of NMS network connections they had, and the Exchange would need to incur additional costs to support the infrastructure necessary to support those additional NMS network connections. In addition, Users would bear the burden of any unnecessary connections because of the strain on the infrastructure shared by all Users that access the NMS network. The Exchange believes that by charging for any connections to the NMS network in excess of the allocated number of No Fee NMS Network Connections, it will motivate Users to make rational decisions based on how many NMS network connections they need, rather than because they are simply available. These fees are therefore not unfairly discriminatory because they will reduce the burden on all Users accessing the NMS network.

Finally, the Exchange believes that access to the proposed NMS network and related commercial terms would not be unfairly discriminatory because, in addition to access to the NMS network being completely voluntary, it would be available to all Users on an equal basis (i.e., the same access would be available to all Users). All Users that voluntarily selected to receive access to the NMS network would be charged the same amount for the same service.

For the reasons above, the proposed changes would not unfairly discriminate between or among market participants that are otherwise capable of satisfying any applicable co-location fees, requirements, terms and conditions established from time to time by the Exchange.

For these reasons, the Exchange believes that the proposal is consistent with the Act.

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 that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange believes that the proposed rule change would not impose any burden on competition because it is not designed to address any competitive issues. As described above, SIAC is the single plan processor for Tape A and B equities securities and all options securities and does not currently compete with any other providers for these processor services. The proposed fee structure for the NMS network would be applied equally among all Users and it is their choice of whether and at what level to subscribe to such services, including whether to connect to the proposed NMS network. Accordingly, the Exchange does not believe that the proposed fee structure would place any Users at a relative disadvantage compared to other Users.

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

No written comments were solicited or received with respect to the proposed rule change.

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-NYSE-2019-46 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-NYSE-2019-46. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change.

Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to

make available publicly. All submissions should refer to File Number SR-NYSE-2019-46, 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>27</sup>

Jill M. Peterson  
Assistant Secretary

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<sup>27</sup> 17 CFR 200.30-3(a)(12).