

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-78887; File No. SR-NYSE-2016-45)

September 20, 2016

Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Filing of Amendment No. 1 to Proposed Rule Change Amending the Co-location Services Offered by the Exchange to Add Certain Access and Connectivity Fees

On July 29, 2016, the New York Stock Exchange LLC (“NYSE” or the “Exchange”) filed with the Securities and Exchange Commission (“Commission”), 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> a proposed rule change (1) to provide additional information regarding access to various trading and execution services; connectivity to market data feeds and testing and certification feeds; connectivity to third party systems; and connectivity to DTCC provided to Users using data center local area networks; and (2) to establish fees relating to a User’s access to various trading and execution services; connectivity to market data feeds and testing and certification feeds; connectivity to DTCC; and other services. The Exchange filed Amendment No. 1 to the proposed rule change on August 16, 2016. The proposed rule change was published for comment in the Federal Register on August 17, 2016 without Amendment No. 1.<sup>3</sup> The Commission received one comment letter in response to the proposed rule change.<sup>4</sup> Amendment No. 1 is described in Items I, II, and III below, which Items have been prepared by the Exchange.<sup>5</sup> The

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

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

<sup>3</sup> See Securities Exchange Act Release No. 34-78556 (August 11, 2016), 81 FR 54877 (“Notice”).

<sup>4</sup> See letter to Brent J. Fields, Secretary, Commission, from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC (IEX), dated September 9, 2016, available at <https://www.sec.gov/comments/sr-nyse-2016-45/nyse201645-2.pdf>.

<sup>5</sup> Amendment No. 1 more closely aligns the proposed rule change with companion proposals filed by the Exchange’s affiliates NYSE Arca and NYSE MKT. See Securities

Commission is publishing this notice to solicit comments on Amendment No. 1 to 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 co-location services offered by the Exchange as follows: (1) to provide additional information regarding the access to trading and execution services and connectivity to data provided to Users with local area networks available in the data center; and (2) to establish fees relating to User's access to trading and execution services; connectivity to data feeds and to testing and certification feeds; access to clearing; and other services. In addition, this proposed rule change reflects changes to the Exchange's Price List related to these co-location services. This Amendment No. 1 supersedes the original filing in its entirety. 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 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.

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Exchange Act Release No. 34-78628 (August 22, 2016), 81 FR 59004 (August 26, 2016) (SR-NYSEArca-2016-89); Securities Exchange Act Release No. 34-78629 (August 22, 2016), 81 FR 58992 (August 26, 2016) (SR-NYSEMKT-2016-63). Amendment No. 1 is also available at <https://www.sec.gov/comments/sr-nyse-2016-45/nyse201645-1.pdf>.

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 co-location<sup>6</sup> services offered by the Exchange as follows: (1) to provide additional information regarding the access to trading and execution services and connectivity to data provided to Users<sup>7</sup> with local area networks available in the data center; and (2) to establish fees relating to Users’ access to trading and execution services; connectivity to data feeds and to testing and certification feeds; access to clearing; and other services.

More specifically, the Exchange proposes to revise the Price List to include:

- a. a more detailed description of the access to the trading and execution systems of the Exchange and its Affiliate SROs (the “Exchange Systems”) and connectivity to certain market data products (the “Included Data Products”) that Users receive with connections to the Liquidity Center Network (“LCN”) and internet protocol (“IP”) network, local area networks available in the data center;
- b. fees for connectivity to:

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<sup>6</sup> The Exchange initially filed rule changes relating to its co-location services with the Securities and Exchange Commission (“Commission”) in 2010. See Securities Exchange Act Release No. 62960 (September 21, 2010), 75 FR 59310 (September 27, 2010) (SR-NYSE-2010-56) (the “Original Co-location Filing”). The Exchange operates a data center in Mahwah, New Jersey (the “data center”) from which it provides co-location services to Users.

<sup>7</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 MKT LLC (“NYSE MKT”) and NYSE Arca, Inc. (“NYSE Arca” and, together with NYSE MKT, the “Affiliate SROs”). See Securities Exchange Act Release No. 70206 (August 15, 2013), 78 FR 51765 (August 21, 2013) (SR-NYSE-2013-59).

- certain other market data products of the Exchange and its Affiliate SROs (the “Premium NYSE Data Products” and, together with the Included Data Products, the “NYSE Data Products”);
  - access to the execution systems of third party markets and other content service providers (“Third Party Systems”);
  - data feeds from third party markets and other content service providers (the “Third Party Data Feeds”);
  - third party testing and certification feeds;
  - Depository Trust & Clearing Corporation (“DTCC”) services; and
- c. fees for virtual control circuits (“VCCs”) between two Users. VCCs are unicast connections between two participants over dedicated bandwidth.<sup>8</sup>

The Exchange provides access to the Exchange Systems and Third Party Systems (together, “Access”) and connectivity to NYSE Data Products, Third Party Data Feeds, third party testing and certification feeds, and DTCC (collectively, “Connectivity”) as conveniences to Users. Use of Access or Connectivity is completely voluntary, and several other access and connectivity options are available to a User. As alternatives to using the Access and Connectivity provided by the Exchange, a User may access or connect to such services and products through another User or through a connection to an Exchange access center outside the data center, third party access center, or third party vendor. The User may make such connection through a third party telecommunication provider, third party wireless network, the Exchange’s Secure Financial

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<sup>8</sup> Information flows over existing network connections in two formats: “unicast” format, which is a format that allows one-to-one communication, similar to a phone line, in which information is sent to and from the Exchange; and “multicast” format, which is a format in which information is sent one-way from the Exchange to multiple recipients at once, like a radio broadcast.

Transaction Infrastructure (“SFTI”) network, or a combination thereof.

Similarly, the Exchange provides VCCs as a convenience to Users. Use of a VCC is completely voluntary. As an alternative to an Exchange-provided VCC, a User may connect to another User through a fiber connection (“cross connect”).<sup>9</sup>

#### Access to Exchange Systems and Connectivity to Included Data Products

As the Exchange has previously stated, a User’s connection to the LCN or IP network provides it access to the Exchange Systems and Exchange market data products.<sup>10</sup> More specifically, when a User purchases access to the LCN or IP network through purchase of a 1, 10, or 40 Gb LCN circuit, a 10 Gb LX Circuit, bundled network access, Partial Cabinet Solution bundle, or 1, 10 or 40 Gb IP network access,<sup>11</sup> as part of the purchase it receives access to the Exchange Systems and connectivity to any Included Data Products that it selects.<sup>12</sup> The Exchange proposes to revise the Price List to provide a more detailed description of the access to

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<sup>9</sup> See Original Co-location Filing, supra note 4, at 59311 and Securities Exchange Act Release No. 74222 (February 6, 2015), 80 FR 7888 (February 12, 2015) (SR-NYSE-2015-05) (notice of filing and immediate effectiveness of proposed rule change to include IP network connections and fiber cross connects between a User’s cabinet and non-User’s equipment as co-location services) (the “IP Network Release”).

<sup>10</sup> See Original Co-location Filing, supra note 4, at 59311 (“According to NYSE, SFTI and LCN both provide Users with access to the Exchange’s trading and execution systems and to the Exchange’s proprietary market data products.”) and IP Network Release, supra note 7, at 7889 (“Like the LCN, the IP network provides Users with access to the Exchange’s trading and execution systems and to the Exchanges’ proprietary market data products.”). The IP network was previously sometimes referred to as SFTI. See id.

<sup>11</sup> See Securities Exchange Act Release Nos. 70888 (November 15, 2013), 78 FR 69907 (November 21, 2013) (SR-NYSE-2013-73); 72721 (July 30, 2014), 79 FR 45562 (August 5, 2014) (SR-NYSE-2014-37); 76369 (November 5, 2015), 80 FR 70027 (November 12, 2015) (SR-NYSE-2015-54); and 77072 (February 5, 2016), 81 FR 7394 (February 11, 2016) (SR-NYSE-2015-53).

<sup>12</sup> As discussed below, in order to connect to an Included Data Product, a User must have entered into a contract with the provider of the data feed. Similarly, in order to access an Exchange System, the User must have authorization from the Exchange or the relevant Affiliate SRO.

the Exchange Systems and connectivity to Included Data Products that comes with connections to the LCN or IP network.<sup>13</sup>

Access to certification and testing feeds comes with the purchase of access to the Exchange Systems and connectivity to many of the NYSE Data Products. Such feeds, which are solely used for certification and testing and do not carry live production data, are only available over the IP network.<sup>14</sup> Certification feeds are used to certify that a User conforms to any relevant technical requirements for receipt of data or access to Exchange Systems. Test feeds provide Users an environment in which to conduct tests with non-live data, including testing for upcoming Exchange releases and product enhancements or the User's own software development.

The Exchange offers connectivity to NYSE Data Products in three forms: as a resilient feed, as "Feed A" or as "Feed B." Resilient feeds include two copies of the same feed, for redundancy purposes. Feed A and Feed B are identical feeds.<sup>15</sup>

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<sup>13</sup> Because each Included Data Product uses part of a User's bandwidth, a User may wish to limit the number of Included Data Products that it receives to those that it requires. The Exchange notes that connectivity to the LCN and IP network also includes connectivity to Exchange Systems, as discussed under "Connectivity to Exchange Systems," below. See also note 8, supra.

<sup>14</sup> A User that does not have an IP network connection may obtain an IP network circuit for purposes of testing and certification for free for three months. See IP Network Release, supra note 7, at 7889. A User that opted to obtain connectivity to NYSE Data Products through another User, a telecommunication provider, third party wireless network, or the SFTI network would receive the corresponding testing and certification feeds.

<sup>15</sup> A User that wants redundancy would connect to both Feed A and Feed B or two resilient feeds, using two different ports. A User may opt to connect both Feed A and Feed B to the same port, the effect of which would be the same as if the User had connected to a resilient feed. The form of feed that a User selects may affect the connection it requires. For example, a User connecting to the NYSE Arca Integrated Feed, NYSE Integrated Feed or NYSE MKT Integrated Feed would need at least a 1 Gb IP network connection in order to connect to either Feed A or Feed B. To connect to a resilient feed, the User would require an LCN or IP network connection of at least 10 Gb.

### *Connectivity to Exchange Systems*

As the Exchange has previously stated, Users' connections to the LCN or IP networks include access to Exchange Systems.<sup>16</sup> Accordingly, the Exchange proposes to add language to its Price List stating the following:

When a User purchases access to the LCN or IP network, it receives the ability to connect to the trading and execution systems of the NYSE, NYSE MKT and NYSE Arca (Exchange Systems), subject, in each case, to authorization by the NYSE, NYSE MKT or NYSE Arca, as applicable. Such connectivity includes access to the customer gateways that provide for order entry, order receipt (i.e. confirmation that an order has been received), receipt of drop copies and trade reporting (i.e. whether a trade is executed or cancelled), as well as for sending information to shared data services for clearing and settlement. A User can change the connections it receives at any time, subject to authorization. A User does not have to purchase access to the LCN or IP network in order to obtain connectivity to Exchange Systems.

### *Connectivity to Included Data Products*

Currently, there are three categories of data feeds for which the Exchange offers Users connectivity: Included Data Products; Premium NYSE Data Products; and Third Party Data.<sup>17</sup>

The Included Data Products include the data feeds disseminated by the Consolidated Tape Association ("CTA") (such data feeds, the "NMS feeds"). CTA is responsible for disseminating consolidated, real-time trade and quote information in NYSE listed securities (Network A) and NYSE MKT, NYSE Arca and other regional exchanges' listed securities (Network B) pursuant to a national market system plan.<sup>18</sup> The NMS feeds include the

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<sup>16</sup> See note 8, *supra*.

<sup>17</sup> The NYSE Data Products and Third Party Data Feeds do not provide access or order entry to the Exchange's execution system.

<sup>18</sup> The Included Data Products do not include connectivity to the data feeds disseminated pursuant to the "Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privilege Basis" (the "UTP Plan"). The UTP Plan is responsible for disseminating consolidated, real-time trade and quote information in Nasdaq Stock Exchange LLC listed securities (Network C).

Consolidated Tape System and Consolidated Quote System data streams, as well as Options Price Reporting Authority feeds.

In order to connect to an Included Data Product, a User enters into a contract with the provider of such data, pursuant to which the User is charged for the Included Data Product. After the User and data provider enter into the contract and the Exchange receives authorization from the provider of the data feed, the Exchange provides the User with connectivity to the Included Data Product over the User's LCN or IP network port. The Exchange does not charge the User separately for such connectivity to the Included Data Product, as it is included in the purchase of the access to the LCN or IP network.

The Included Data Products are available over both the LCN and IP network.<sup>19</sup> For a User that purchases access to the LCN and IP network, the Exchange works with such User to allocate its connectivity to Included Data Products between its LCN and IP network connections. Some Included Data Products require a network connection with a minimum gigabyte ("Gb") size in order to accommodate the feed.

Users may connect to an Included Data Product as a resilient feed or as individual Feeds A and B.

The Included Data Products are as follows:

NMS feeds
NYSE: NYSE Alerts NYSE BBO NYSE OpenBook NYSE Order Imbalances

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Connectivity to data disseminated pursuant to the UTP Plan is available as a Third Party Data Feed.

<sup>19</sup> As noted above, certification and testing feeds included with an Included Data Product are only available over the IP network.



NYSE Trades
NYSE Amex Options
NYSE Arca: NYSE ArcaBook NYSE Arca BBO NYSE Arca Order Imbalances NYSE Arca Trades
NYSE Arca Options
NYSE Bonds
NYSE MKT: NYSE MKT Alerts NYSE MKT BBO NYSE MKT OpenBook NYSE MKT Order Imbalances NYSE MKT Trades

In addition to the above list of Included Data Products, the Exchange proposes to add the following language to the Price List:

When a User purchases access to the LCN or IP network it receives connectivity to any of the Included Data Products that it selects, subject to any technical provisioning requirements and authorization from the provider of the data feed. Market data fees for the Included Data Products are charged by the provider of the data feed. A User can change the Included Data Products to which it receives connectivity at any time, subject to authorization from the provider of the data feed. The Exchange is not the exclusive method to connect to the Included Data Products.

Connectivity

*Connectivity to Premium NYSE Data Products*

The Exchange offers Users connectivity to Premium NYSE Data Products from the Exchange and its Affiliate SROs over Users' LCN and IP network connections. The Exchange proposes to revise the Price List to specify the connectivity fees for Premium NYSE Data Products.

The Premium NYSE Data Products are equity market data products that are variants of the equity Included Data Products. Each Premium NYSE Data Product integrates, or includes

data elements from, several Included Data Products.<sup>20</sup> For example, the NYSE Integrated Feed includes, among other things, information available from three of the equity Included Data Products: NYSE OpenBook, NYSE Trades, and NYSE Order Imbalances.<sup>21</sup> The NYSE BQT data feed includes, among other things, certain data elements from six of the equity Included Data Products: NYSE Trades, NYSE BBO, NYSE Arca Trades, NYSE Arca BBO, NYSE MKT Trades, and NYSE MKT BBO.<sup>22</sup>

By contrast, while some of the Included Data Products include data elements from other Included Data Products, no single Included Data Product includes as much data as a Premium NYSE Data Product. With the exception of NYSE Arca Order Imbalances, the equity Included Data Products were introduced before the Premium Data Products.<sup>23</sup>

There are no Premium NYSE Data Products for the NYSE Amex Options or NYSE Arca

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<sup>20</sup> The rule changes establishing the NYSE Integrated Feed and NYSE MKT Integrated Feed were immediately effective in 2015, and the rule change establishing the NYSE Arca Integrated Data Feed was immediately effective in 2011. The NYSE Best Quote & Trades (“NYSE BQT”) data feed was approved in 2014. See Securities Exchange Act Release Nos. 74128 (Jan. 23, 2015), 80 FR 4951 (Jan. 29, 2015) (SR-NYSE-2015-03) (establishing the NYSE Integrated Feed); 74127 (Jan. 23, 2015), 80 FR 4956 (Jan. 29, 2015) (SR-NYSEMKT-2015-06) (establishing the NYSE MKT Integrated Feed); 65669 (Nov. 2, 2011), 76 FR 69311 (Nov. 8, 2011) (SR-NYSEArca-2011-78) (establishing the NYSE Arca Integrated Feed); and 73553 (Nov. 6, 2014), 79 FR 67491 (Nov. 13, 2014) (SR-NYSE-2014-40) (establishing the NYSE Best Quote & Trades Data Feed).

<sup>21</sup> See SR-NYSE-2015-03, supra note 18, at 4952.

<sup>22</sup> See SR-NYSE-2014-40, supra note 18, at 67491.

<sup>23</sup> See Securities Exchange Act Release Nos. 44138 (December 7, 2001), 66 FR 64895 (December 14, 2001) (SR-NYSE-2001-42) (establishing fees for NYSE OpenBook); 50844 (December 13, 2004), 69 FR 76806 (December 22, 2004) (SR-NYSE-2004-53) (establishing fee for NYSE Alerts); 59543 (March 9, 2009), 74 FR 11159 (March 16, 2009) (establishing fee for NYSE Order Imbalances); 59290 (January 23, 2009) 74 FR 5707 (January 30, 2009) (SR-NYSE-2009-05) (establishing pilot program for NYSE Trades); and 62181 (May 26, 2010), 75 FR 31488 (June 3, 2010) (SR-NYSE-2010-30) (establishing NYSE BBO). See also Securities Exchange Act Release No. 76968 (January 22, 2016), 81 FR 4689 (January 27, 2016) (establishing NYSE Arca Order Imbalances). NYSE Arca Order Imbalances, NYSE Order Imbalances and NYSE MKT Order Imbalances are all Included Data Products.

Options markets, as there are no options data products that integrate, or include data elements from, other option data products in the same manner that the NYSE, NYSE MKT and NYSE Arca Integrated Feeds integrate, or include data elements from, equity Included Data Products.

In order to connect to a Premium NYSE Data Product, a User enters into a contract with the provider of such data, pursuant to which it is charged for the Premium NYSE Data Product for the same market. After the data provider and User enter into the contract and the Exchange receives authorization from the data provider, the Exchange provides the User with connectivity to the Premium NYSE Data Product over the User's LCN or IP network port. The Exchange charges the User for the connectivity to the Premium NYSE Data Product. A User only receives, and is only charged for, connectivity to the Premium NYSE Data Product feeds that it selects.

The Premium NYSE Data Products are available over both the LCN and IP network.<sup>24</sup> For a User that purchases access to the LCN and IP network, the Exchange works with such User to allocate its connectivity to Premium NYSE Data Products between its LCN and IP network connections. Some Premium NYSE Data Products require a network connection with a minimum Gb size in order to accommodate the feed.<sup>25</sup>

A User can opt to connect to a Premium NYSE Data Product as a resilient feed or as Feed A or Feed B. Connectivity to the two identical Feeds A and B is only available on the IP network.

The Exchange charges a monthly recurring fee for connectivity to Premium NYSE Data Products. The following table shows the Premium NYSE Data Products and corresponding monthly recurring connectivity fees.

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<sup>24</sup> As noted above, certification and testing feeds included with a Premium NYSE Data Product are only available over the IP network.

<sup>25</sup> See note 13, supra.

<b>Premium NYSE Data Product</b>	<b>Feed</b>	<b>Monthly Recurring Connectivity Fee per Feed</b>
NYSE Arca Integrated Feed	Feed A, IP network only	\$1,500
	Feed B, IP network only	\$1,500
	Resilient, IP network only	\$3,000
	Resilient, LCN only	\$1,500
NYSE Best Quote and Trades (BQT)	Feed A, IP network only	\$500
	Feed B, IP network only	\$500
	Resilient, IP network only	\$1,000
	Resilient, LCN only	\$500
NYSE Integrated Feed	Feed A, IP network only	\$1,500
	Feed B, IP network only	\$1,500
	Resilient, IP network only	\$3,000
	Resilient, LCN only	\$1,500
NYSE MKT Integrated Feed	Feed A, IP network only	\$300
	Feed B, IP network only	\$300
	Resilient, IP network only	\$600
	Resilient, LCN only	\$300

In addition to the connectivity fees, the Exchange proposes to add the following language to its Price List:

Pricing for Premium NYSE Data Products is for connectivity only. Connectivity to Premium NYSE Data Products is subject to any technical provisioning requirements and authorization from the provider of the data feed. Market data fees for the Premium NYSE Data Products are charged by the provider of the data feed. The Exchange is not the exclusive method to connect to Premium NYSE Data Products.

*Connectivity to Third Party Systems*

The Exchange proposes to revise the Price List to provide that Users may obtain connectivity to Third Party Systems of multiple third party markets and other content service providers for a fee. Users connect to Third Party Systems over the IP network.<sup>26</sup> The Exchange selects what connectivity to Third Party Systems to offer in the data center based on User demand.

<sup>26</sup> See IP Network Release, supra note 7, at 7889.

In order to obtain access to a Third Party System, a User enters into an agreement with the relevant third party content service provider, pursuant to which the third party content service provider charges the User for access to the Third Party System. The Exchange then establishes a unicast connection between the User and the relevant third party content service provider over the IP network. The Exchange charges the User for the connectivity to the Third Party System. A User only receives, and is only charged for, access to Third Party Systems for which it enters into agreements with the third party content service provider.

With the exception of the ICE feed,<sup>27</sup> the Exchange has no ownership interest in the Third Party Systems. Establishing a User's access to a Third Party System does not give the Exchange any right to use the Third Party Systems. Connectivity to a Third Party System does not provide access or order entry to the Exchange's execution system, and a User's connection to a Third Party System is not through the Exchange's execution system.<sup>28</sup>

The Exchange charges a monthly recurring fee for connectivity to a Third Party System. Specifically, when a User requests access to a Third Party System, it identifies the applicable third party market or other content service provider and what bandwidth connection it requires.

The monthly recurring fee the Exchange charges Users for unicast connectivity to each Third Party System varies by the bandwidth of the connection, as follows:

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<sup>27</sup> ICE is owned by the Exchange's ultimate parent, Intercontinental Exchange, Inc., and so the Exchange has an indirect interest in the ICE feeds. The ICE feeds include both market data and trading and clearing services, but the Exchange includes it as a Third Party Data Feed. In order for a User to receive an ICE feed, ICE must provide authorization for the User to receive both data and trading and clearing services.

<sup>28</sup> The Exchange has a dedicated network connection to each of the Third Party Systems.

<b>Bandwidth of connection to Third Party System</b>	<b>Monthly recurring fee per connection to Third Party System</b>
1Mb	\$200
3Mb	\$400
5Mb	\$500
10Mb	\$800
25Mb	\$1,200
50Mb	\$1,800
100Mb	\$2,500
200 Mb	\$3,000
1 Gb	\$3,500

The Exchange provides connectivity to the following Third Party Systems:

Americas Trading Group (ATG)
BATS
Boston Options Exchange (BOX)
Chicago Board Options Exchange (CBOE)
Credit Suisse
International Securities Exchange (ISE)
Nasdaq
National Stock Exchange
NYFIX Marketplace

In addition to the connectivity fees, the Exchange proposes to add language to its Price

List stating the following:

Pricing for access to the execution systems of third party markets and other service providers (Third Party Systems) is for connectivity only. Connectivity to Third Party Systems is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to Third Party Systems is over the IP network. Any applicable fees are charged independently by the relevant third party content service provider. The Exchange is not the exclusive method to connect to Third Party Systems.

*Connectivity to Third Party Data Feeds*

The Exchange proposes to revise the Price List to provide that Users may obtain connectivity to Third Party Data Feeds for a fee. The Exchange receives Third Party Data Feeds from multiple national securities exchanges and other content service providers at its data center.

It then provides connectivity to that data to Users for a fee. With the exceptions of Global OTC and NYSE Global Index, Users connect to Third Party Data Feeds over the IP network.<sup>29</sup>

The Exchange notes that charging Users a monthly fee for connectivity to Third Party Data Feeds is consistent with the monthly fee Nasdaq charges its co-location customers for connectivity to third party data. For instance, Nasdaq charges its co-location customers monthly fees of \$1,500 and \$4,000 for connectivity to BATS Y and BATS, respectively, and of \$2,500 for connectivity to EDGA or EDGX.<sup>30</sup>

In order to connect to a Third Party Data Feed, a User enters into a contract with the relevant third party market or other content service provider, pursuant to which the content service provider charges the User for the Third Party Data Feed. The Exchange receives the Third Party Data Feed over its fiber optic network and, after the data provider and User enter into the contract and the Exchange receives authorization from the data provider, the Exchange re-transmits the data to the User over the User's port. The Exchange charges the User for the connectivity to the Third Party Data Feed. A User only receives, and is only charged for, connectivity to the Third Party Data Feeds for which it enters into contracts.

With the exception of the Intercontinental Exchange ("ICE"), Global OTC and NYSE Global Index feeds,<sup>31</sup> the Exchange has no affiliation with the sellers of the Third Party Data

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<sup>29</sup> See IP Network Release, *supra* note 7, at 7889 ("The IP network also provides Users with access to away market data products."). Users can connect to Global OTC and NYSE Global Index over the IP network or LCN.

<sup>30</sup> See Nasdaq Stock Market Rule 7034.

<sup>31</sup> ICE and the Global OTC alternative trading system are both owned by the Exchange's ultimate parent, Intercontinental Exchange, Inc., and so the Exchange has an indirect interest in the ICE and Global OTC feeds. The NYSE Global Index feed includes index and exchange traded product valuations data, with data drawn from the Exchange, the Affiliate SROs, and third party exchanges. Because it includes third party data, the NYSE Global Index feed is considered a Third Party Data Feed. As with all Third Party Data Feeds, the Exchange is not the exclusive method to connect to the ICE, Global OTC or

Feeds. It has no right to use the Third Party Data Feeds other than as a redistributor of the data. The Third Party Data Feeds do not provide access or order entry to the Exchange’s execution system. With the exception of the ICE feeds, the Third Party Data Feeds do not provide access or order entry to the execution systems of the third party generating the feed.<sup>32</sup> The Exchange receives Third Party Data Feeds via arms-length agreements and it has no inherent advantage over any other distributor of such data.

The Exchange charges a monthly recurring fee for connectivity to each Third Party Data Feed. The monthly recurring fee is per Third Party Data Feed, with the exception that the monthly recurring feed for SuperFeed and MSCI varies by the bandwidth of the connection. Depending on its needs and bandwidth, a User may opt to receive all or some of the feeds or services included in a Third Party Data Feed.

The following table shows the feeds that connectivity to each Third Party Data Feed provides, together with the applicable monthly recurring fee.

<b>Third Party Data Feed</b>	<b>Monthly Recurring Connectivity Fee per Third Party Data Feed</b>
Bats BZX Exchange (BZX) and Bats BYX Exchange (BYX)	\$2,000
Bats EDGX Exchange (EDGX) and Bats EDGA Exchange (EDGA)	\$2,000
Chicago Board Options Exchange (CBOE)	\$2,000
Chicago Stock Exchange (CHX)	\$400
Euronext	\$600
Financial Industry Regulatory Authority (FINRA)	\$500

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NYSE Global Index feeds.

<sup>32</sup> Unlike other Third Party Data Feeds, the ICE feeds include both market data and trading and clearing services. In order to receive the ICE feeds, a User must receive authorization from ICE to receive both market data and trading and clearing services.



<b>Third Party Data Feed</b>	<b>Monthly Recurring Connectivity Fee per Third Party Data Feed</b>
Global OTC	\$100
Intercontinental Exchange (ICE)	\$1,500
Montréal Exchange (MX)	\$1,000
MSCI 5 Mb	\$500
MSCI 25 Mb	\$1,200
NASDAQ Stock Market	\$2,000
NASDAQ OMX Global Index Data Service	\$100
NASDAQ OMDF	\$100
NASDAQ UQDF & UTDF	\$500
NYSE Global Index	\$100
OTC Markets Group	\$1,000
SR Labs - SuperFeed $\leq$ 500 Mb	\$250
SR Labs – SuperFeed >500 Mb to $\leq$ 1.25 Gb	\$800
SR Labs – SuperFeed >1.25 Gb	\$1,000
TMX Group	\$2,500

In addition to the above connectivity fees, the Exchange proposes to add the following language to its Price List:

Pricing for data feeds from third party markets and other content service providers (Third Party Data Feeds) is for connectivity only. Connectivity to Third Party Data Feeds is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to Third Party Data Feeds is over the IP network, with the exception that Users can connect to Global OTC and NYSE Global Index over the IP network or LCN. Market data fees are charged independently by the relevant third party market or content service provider. The Exchange is not the exclusive method to connect to Third Party Data Feeds.

Third Party Data Feed providers may charge redistribution fees, such as Nasdaq’s Extranet Access Fees and OTC Markets Group’s Access Fees.<sup>33</sup> When the Exchange receives a

<sup>33</sup> See NASDAQ Stock Market LLC Rule 7025, “Extranet Access Fee”, and OTC Markets Market Data Distribution Agreement Appendix B, “Fees” at <http://www.otcmarkets.com/content/doc/market-data-fees-2016.pdf>. See also Securities Exchange Act Release No. 74040 (January 13, 2015), 80 FR 2460 (January 16, 2015) (SR-NASDAQ-2015-003).

redistribution fee, it passes through the charge to the User, without change to the fee. The fee is labeled as a pass-through of a redistribution fee on the User's invoice. The Exchange proposes to add language to the Price List accordingly.

The Exchange provides third party markets or content providers that are also Users connectivity to their own Third Party Data Feeds. The Exchange does not charge Users that are third party markets or content providers for connectivity to their own feeds, as in the Exchange's experience such parties generally receive their own feeds for purposes of diagnostics and testing. The Exchange proposes to add language to the Price List accordingly.

#### *Connectivity to Third Party Testing and Certification Feeds*

The Exchange offers Users connectivity to third party certification and testing feeds. Certification feeds are used to certify that a User conforms to any of the relevant content service provider's requirements for accessing Third Party Systems or receiving Third Party Data, while testing feeds provide Users an environment in which to conduct tests with non-live data.<sup>34</sup> Such feeds, which are solely used for certification and testing and do not carry live production data, are available over the IP network.

The Exchange proposes to revise the Price List to include connectivity to third party certification and testing feeds. The Exchange charges a connectivity fee of \$100 per month per feed.

The Exchange proposes to add the following connectivity fees and language to its Price List:

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<sup>34</sup> For example, a User that trades on a third party exchange may wish to test the exchange's upcoming releases and product releases or may wish to test a new algorithm in a testing environment prior to making it live.

Connectivity to third party certification and testing feeds	\$100 monthly recurring fee per feed
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The Exchange provides connectivity to third party testing and certification feeds provided by third party markets and other content service providers. Pricing for third party testing and certification feeds is for connectivity only. Connectivity to third party testing and certification feeds is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to third party testing and certification feeds is over the IP network. Any applicable fees are charged independently by the relevant third party market or content service provider. The Exchange is not the exclusive method to connect to third party testing and certification feeds.

*Connectivity to DTCC*

The Exchange provides Users connectivity to DTCC for clearing, fund transfer, insurance, and settlement services.<sup>35</sup> The Exchange proposes to revise the Price List to include connectivity to DTCC. The Exchange charges a connectivity fee of \$500 per month for connections to DTCC of 5 Mb and \$2,500 for connections of 50 Mb. Connectivity to DTCC is available over the IP network.

In order to connect to DTCC, a User enters into a contract with DTCC, pursuant to which DTCC charges the User for the services provided. The Exchange receives the DTCC feed over its fiber optic network and, after DTCC and the User enter into the services contract and the Exchange receives authorization from DTCC, the Exchange provides connectivity to DTCC to the User over the User's IP network port. The Exchange charges the User for the connectivity to DTCC.

Connectivity to DTCC does not provide access or order entry to the Exchange's execution system, and a User's connection to DTCC is not through the Exchange's execution

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<sup>35</sup> Such connectivity to DTCC is distinct from the access to shared data services for clearing and settlement services that a User receives when it purchases access to the LCN or IP network. The shared data services allow Users and other entities with access to the Trading Systems to post files for settlement and clearing services to access.

system.

The Exchange proposes to add the following connectivity fees and language to its Price

List:

5 Mb connection to DTCC	\$500 monthly recurring fee
50 Mb connection to DTCC	\$2,500 monthly recurring fee

Pricing for connectivity to DTCC feeds is for connectivity only. Connectivity to DTCC feeds is subject to any technical provisioning requirements and authorization from DTCC. Connectivity to DTCC feeds is over the IP network. Any applicable fees are charged independently by DTCC. The Exchange is not the exclusive method to connect to DTCC feeds.

#### Virtual Control Circuits

Finally, the Exchange proposes to revise the Price List to offer VCCs between two Users.

VCCs are connections between two points over dedicated bandwidth using the IP network. A VCC (previously called a “peer to peer” connection) is a two-way connection which the two participants can use for any purpose.

The Exchange bills the User requesting the VCC, but will not set up a VCC until the other User confirms that it wishes to have the VCC set up.

The Exchange proposes to revise the Price List to include VCCs between two Users. The fee for VCCs is based on the bandwidth utilized, as follows:

Type of Service	Description	Amount of Charge
Virtual Control Circuit between two Users	1Mb	\$200 monthly charge
	3Mb	\$400 monthly charge
	5Mb	\$500 monthly charge
	10Mb	\$800 monthly charge
	25Mb	\$1,200 monthly charge
	50Mb	\$1,800 monthly charge
	100Mb	\$2,500 monthly charge

## 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>36</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 both of its Affiliate SROs.<sup>37</sup>

The proposed change is not otherwise intended to address any other issues relating to co-location services and/or related fees, and the Exchange is not aware of any problems that Users would have in complying with the proposed change.

## 2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,<sup>38</sup> in general, and furthers the objectives of Sections 6(b)(5) of the Act,<sup>39</sup> in particular,

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<sup>36</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>37</sup> See SR-NYSE-2013-59, supra note 5 at 51766. The Affiliate SROs have also submitted substantially the same proposed rule change to propose the changes described herein. See SR-NYSEMKT-2016-63 and SR-NYSEArca-2016-89.

<sup>38</sup> 15 U.S.C. 78f(b).

<sup>39</sup> 15 U.S.C. 78f(b)(5).

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 believes that the proposed changes 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 and Connectivity, the Exchange gives each User additional options for addressing its access and connectivity needs, responding to User demand for access and connectivity options. Providing Access and Connectivity helps each User tailor its data center operations to the requirements of its business operations by allowing it to select the form and latency of access and connectivity that best suits its needs. The Exchange provides Access and Connectivity as conveniences to Users. Use of Access or Connectivity is completely voluntary, and each User has several other access and connectivity options available to it. As alternatives to using the Access and Connectivity provided by the Exchange, a User may access or connect to such services and products through another User or through a connection to an Exchange access center outside the data center, third party access center, or third party vendor. The User may make such connection through a third party telecommunication provider, third party wireless network, the SFTI network, or a combination thereof.

Co-location was created to permit Users “to rent space on premises controlled by the Exchange in order that they may locate their electronic servers in close physical proximity to the Exchange’s trading and execution systems.”<sup>40</sup> The Exchange believes that providing Users access to the Exchange Systems and connectivity to Included Data Products to Users with their purchase of access to the LCN or IP network, as well as revising the Price List to provide a more detailed description of such access and connectivity , 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 such access and connectivity is directly related to the purpose of co-location. In addition, the proposed changes would make the descriptions of access to the LCN and IP network more accessible and transparent, thereby providing market participants with clarity as to what connectivity is included in the purchase of access to the LCN and IP network.

The Exchange believes that providing access to Third Party Systems and connectivity to Premium NYSE Data Products, Third Party Data Feeds, third party testing and certification feeds and DTCC, as well as revising the Price List to describe such services, 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 the proposed changes would make the descriptions of market participants’ access and connectivity options and the related fees more accessible and transparent, thereby providing market participants with clarity as to what options for connectivity are available to them and what the related costs are.

In addition, the Exchange believes that providing connectivity to third party testing and certification feeds removes impediments to, and perfects the mechanisms of, a free and open

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<sup>40</sup> Original Co-Location Filing, supra note 4, at 59310.

market and a national market system and, in general, protects investors and the public interest because such feeds provide Users an environment in which to conduct tests with non-live data, including testing for upcoming releases and product enhancements or the User's own software development, and allow Users to certify conformance to any applicable technical requirements.

Similarly, the Exchange believes that providing connectivity to DTCC removes impediments to, and perfects the mechanisms of, a free and open market and a national market system and, in general, protects investors and the public interest because it provides efficient connection to clearing, fund transfer, insurance, and settlement services.

The Exchange believes that providing Users with VCCs removes impediments to, and perfects the mechanisms of, a free and open market and a national market system because VCCs provide each User with an additional option for connectivity to another User, helping it tailor its data center operations to the requirements of its business operations by allowing it to select the form of connectivity that best suits its needs. The Exchange provides VCCs as a convenience to Users. Use of a VCC is completely voluntary. As an alternative to an Exchange-provided VCC, a User may connect to another User through a cross connect.

The Exchange also believes that the proposed rule change is consistent with Section 6(b)(4) of the Act,<sup>41</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 Exchange believes that the proposed fees changes are consistent with Section 6(b)(4) of the Act for multiple reasons. The Exchange operates in a highly competitive market in which exchanges offer co-location services as a means to facilitate the trading and other

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<sup>41</sup> 15 U.S.C. 78f(b)(4).



market activities of those market participants who believe that co-location enhances the efficiency of their operations. Accordingly, fees charged for co-location services are constrained by the active competition for the order flow of, and other business from, such market participants. If a particular exchange charges excessive fees for co-location services, affected market participants will opt to terminate their co-location arrangements with that exchange, and adopt a possible range of alternative strategies, including placing their servers in a physically proximate location outside the exchange's data center (which could be a competing exchange), or pursuing strategies less dependent upon the lower exchange-to-participant latency associated with co-location. Accordingly, the exchange charging excessive fees would stand to lose not only co-location revenues but also the liquidity of the formerly co-located trading firms, which could have additional follow-on effects on the market share and revenue of the affected exchange.

The Exchange believes that the services and fees proposed herein are equitably allocated and not unfairly discriminatory because, in addition to the services being completely voluntary, they are available to all Users on an equal basis (i.e., the same products and services are available to all Users). All Users that voluntarily select to access the Exchange Systems or connect to Included Data Products would not be subject to a charge above and beyond the fee paid for the relevant LCN or IP network access. All Users that voluntarily select to receive access to Third Party Systems, connectivity to Premium NYSE Data Products, Third Party Data Feeds, third party testing and certification feeds and DTCC, or a VCC between Users would be charged the same amount for the same services.

The Exchange believes that the services and fees proposed herein are reasonable, equitably allocated and not unfairly discriminatory because the Exchange provides Access and

Connectivity as conveniences to Users. Use of Access or Connectivity is completely voluntary, and each User has several other access and connectivity options available to it. As alternatives to using the Access and Connectivity provided by the Exchange, a User may access or connect to such services and products through another User or through a connection to an Exchange access center outside the data center, third party access center, or third party vendor. The User may make such connection through a third party telecommunication provider, third party wireless network, the SFTI network, or a combination thereof. Users that opt to use Access or Connectivity would not receive access or connectivity that is not available to all Users, as all market participants that contract with the relevant market or content provider may receive access or connectivity. Similarly, the Exchange provides VCCs between Users as a convenience to Users. Use of a VCC is completely voluntary. As an alternative to an Exchange-provided VCC, a User may connect to another User through a cross connect.

Overall, the Exchange believes that the proposed charges are reasonable, equitably allocated and not unfairly discriminatory because the Exchange offers Access, Connectivity, and VCCs as conveniences to Users, and in doing so incurs certain costs. The expenses incurred and resources expended by the Exchange to provide these services generally include costs related to the data center facility hardware and technology infrastructure; maintenance and operational costs, such as the costs of responding to any production issues; and the costs related to the personnel required for initial installation and administration, monitoring, support and maintenance of such services. Since the inception of co-location, the Exchange has made numerous improvements to the network hardware and technology infrastructure and has established additional administrative controls. The Exchange has expanded the network infrastructure to keep pace with the increased number of services available to Users, including

the increasing bandwidth required for Access and Connectivity, including resilient and redundant feeds. For example, the Exchange must ensure that the network infrastructure has the necessary bandwidth for connectivity to the Premium NYSE Data Products as well as the Included Data Products, as on a typical trading day no single Included Data Product will require as much bandwidth as a Premium NYSE Data Product for the same market. In addition, the Exchange incurs certain costs specific to providing connectivity to Third Party Data Feeds, Third Party Systems, third party testing and certification feeds and DTCC, including the costs of maintaining multiple connections to each Third Party Data Feed, Third Party System, and DTCC, allowing the Exchange to provide resilient and redundant connections; adapting to any changes made by the relevant third party; and covering any applicable fees (other than redistribution fees) charged by the relevant third party, such as port fees.

As noted above, co-location was created to permit Users “to rent space on premises controlled by the Exchange in order that they may locate their electronic servers in close physical proximity to the Exchange’s trading and execution systems.”<sup>42</sup> The expectation was that normally Users “would expect reduced latencies in sending orders to the Exchange and in receiving market data from the Exchange.”<sup>43</sup> Accordingly, the Exchange believes that including access to the Exchange Systems and connectivity to Included Data Products with the purchase of access to the LCN or IP network is reasonable because such access and connectivity is directly related to the purpose of co-location.

In addition, the Exchange believes that including access to the Exchange Systems and connectivity to the Included Data Products with the purchase of access to the LCN or IP network is reasonable and not unfairly discriminatory because Users are not required to use any of their

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<sup>42</sup> Original Co-Location Filing, supra note 4, at 59299.

<sup>43</sup> Id.

bandwidth to access Exchange Systems or connect to an Included Data Product unless they wish to do so. Rather, a User only receives access to the Exchange Systems and connectivity to the Included Data Products that it selects, and a User can change which of such access or connections it receives at any time, subject to authorization from the data provider or relevant Exchange or Affiliate SRO. Including access to the Exchange Systems and connectivity to the Included Data Products with the purchase of access to the LCN or IP network is a decision based on an assessment of the competitive landscape. As noted above, the Exchange operates in a highly competitive market. If a particular exchange charges excessive fees for co-location services—such as excessive fees for access to the local area network within the exchange’s colocation space—affected market participants will opt to terminate their co-location arrangements with that exchange, and adopt a possible range of alternative strategies. The Exchange believes that including connectivity to Included Data Products with the purchase of access to the LCN or IP network is consistent with Nasdaq’s colocation service, which, apart from an installation fee, does not charge its co-located customers for connectivity to Nasdaq data.<sup>44</sup>

The Premium NYSE Data Products are equity market data products that are variants of the equity Included Data Products. Each Premium NYSE Data Product integrates, or includes data elements from, several Included Data Products. Charging separate fees for connectivity to Premium NYSE Data Products, as opposed to Included Data Products, is a decision based on an assessment of the competitive landscape. The Exchange believes that it is reasonable and not unfairly discriminatory to charge Users for connectivity to Premium NYSE Data Products because Users are not required to use any of their bandwidth to connect to a Premium NYSE

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<sup>44</sup> See Nasdaq Stock Market Rule 7034.

Data product unless they wish to do, and each User has several other connectivity options available to it. The expenses incurred and resources expended by the Exchange to offer connectivity to the Premium NYSE Data Products include costs related to the data center facility hardware and technology infrastructure, such as the cost of ensuring that the network infrastructure has the necessary bandwidth for the Premium NYSE Data Products; maintenance and operational costs, such as the costs of responding to any production issues; and the costs related to the personnel required for initial installation and administration, monitoring, support and maintenance of the connectivity. By charging only those Users that receive connectivity to a Premium NYSE Data Product, only the Users that directly benefit from such connectivity support its cost.

The Exchange believes that its fees for connectivity to Premium NYSE Data Products are reasonable because they allow the Exchange to defray or cover the costs associated with offering Users connectivity to Premium NYSE Data Products while providing Users the benefit of reduced latency when connecting to data feeds that integrate, or include data elements from, several Included Data Products. Charging separate connectivity fees for Premium NYSE Data Products is a decision based on an assessment of the competitive landscape. As noted above, the Exchange operates in a highly competitive market. If a particular exchange charges excessive fees for co-location services—such as excessive fees for connectivity to the exchange’s market data—affected market participants will opt to terminate their co-location arrangements with that exchange, and adopt a possible range of alternative strategies. Although Nasdaq does not include connectivity to any of the Premium NYSE Data Products in its co-location services, the Exchange believes that the proposed fees are generally consistent with the fees that a Nasdaq co-location customer would pay for connectivity to the individual feeds included in a Premium

NYSE Data Product. For example, the NYSE Integrated Feed includes, among other things, information available from three of the Included Data Products: NYSE OpenBook, NYSE Trades, and NYSE Order Imbalances. Nasdaq offers connectivity to two of those feeds, OpenBook Ultra and NYSE Trades, for which it would charge a co-located customer a combined monthly fee of \$2,600.<sup>45</sup> The Exchange believes that it is reasonable to charge less for connectivity to the resilient Premium NYSE Data Products on the LCN than over the IP network, because Users do not have the option to connect to Feed A or Feed B over the LCN.

The Exchange believes that charging separate connectivity fees for Third Party Data Feeds and access to Third Party Systems, third party testing and certification feeds and connectivity to DTCC is reasonable and not unfairly discriminatory because, in the Exchange's experience, not all Users connect to Third Party Data Feeds, Third Party Systems, third party testing and certification feeds or DTCC. By charging only those Users that receive such connectivity, only the Users that directly benefit from it support its cost. In addition, Users are not required to use any of their bandwidth to connect to Third Party Data Feeds, third party testing and certification feeds or DTCC, or to access Third Party Systems, unless they wish to do so.

The Exchange believes the fees for connectivity to Third Party Data Feeds are reasonable because they allow the Exchange to defray or cover the costs associated with offering Users connectivity to Third Party Data Feeds while providing Users the convenience of receiving such Third Party Data Feeds within co-location, helping them tailor their data center operations to the requirements of their business operations by allowing them to select the form and latency of connectivity that best suits their needs. The Exchange believes that its proposed charges for

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<sup>45</sup> Id.

connectivity to Third Party Data Feeds are similar to the connectivity fees Nasdaq imposes on its co-location customers. For instance, Nasdaq charges its co-location customers monthly fees of \$1,500 and \$4,000 for connectivity to BATS Y and BATS, respectively, and of \$2,500 for connectivity to EDGA or EDGX.<sup>46</sup>

The Exchange believes that its connectivity fees for access to Third Party Systems are reasonable because they allow the Exchange to defray or cover the costs associated with offering such access while providing Users the convenience of being able to access such Third Party Systems, helping them tailor their data center operations to the requirements of their business operations by allowing them to select the form and latency of connectivity that best suits their needs. Similarly, the Exchange believes that its fees for connectivity to DTCC are reasonable because they allow the Exchange to defray or cover the costs associated with offering such access while providing Users the benefit of an efficient connection to clearing, fund transfer, insurance, and settlement services.

The monthly recurring fees the Exchange charges Users for connectivity to Third Party Systems, the MSCI and SuperFeed Third Party Data Feeds, and DTCC, as well as for VCCs between Users, vary by the bandwidth of the connection. The Exchange also believes such fees are reasonable because the monthly recurring fee varies by the bandwidth of the connection, and so is generally proportional to the bandwidth required. The Exchange notes that some of the monthly recurring fees for connectivity to SuperFeed and DTCC differ from the fees for the other connections of the same bandwidth. The Exchange believes that such difference in pricing is reasonable, equitably allocated and not unfairly discriminatory because, although the bandwidth may be the same, the competitive considerations and the costs the Exchange incurs in

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<sup>46</sup> See Nasdaq Stock Market Rule 7034.

providing such connections and VCCs may differ.

The Exchange also believes that its connectivity fees for access to third party testing and certification feeds are reasonable because they allow the Exchange to defray or cover the costs associated with offering such access while providing Users the benefit of having an environment in which to conduct tests with non-live data, including testing for upcoming releases and product enhancements or the User's own software development, and to certify conformance to any applicable technical requirements.

The Exchange believes it is reasonable that redistribution fees charged by providers of Third Party Data Feeds are passed through to the User, without change to the fee. If not passed through, the cost of the re-distribution fees would be factored into the proposed fees for connectivity to Third Party Data Feeds. The Exchange believes that passing through the fees makes them more transparent to the User, allowing the User to better assess the cost of the connectivity to a Third Party Data Feed by seeing the individual components of the cost, i.e. the Exchange's fee and the redistribution fee.

The Exchange believes that it is reasonable that it does not charge third party markets or content providers for connectivity to their own Third Party Data Feeds, as in the Exchange's experience such parties generally receive their own feeds for purposes of diagnostics and testing. The Exchange believes that it removes impediments to, and perfects the mechanisms of, a free and open market and a national market system and, in general, protects investors and the public interest to facilitate such diagnostics and testing.

Finally, the Exchange also believes that its fees for VCCs between two Users are reasonable because they allow the Exchange to defray or cover the costs associated with offering such VCCs while providing Users the benefit of an additional option for connectivity to another



User, helping them tailor their data center operations to the requirements of their business operations by allowing them to select the form of connectivity that best suits their needs. As an alternative to an Exchange-provided VCC, a User may connect to another User through a cross connect.

For the reasons above, the proposed changes do 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**

In accordance with Section 6(b)(8) of the Act,<sup>47</sup> the Exchange believes that the proposed rule change will not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act because, in addition to the proposed services being completely voluntary, they are available to all Users on an equal basis (i.e. the same products and services are available to all Users).

The Exchange believes that providing Users with access to the Exchange Systems and Third Party Systems and connectivity to NYSE Data Products, Third Party Data Feeds, third party testing and certification feeds, and DTCC does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act because such Access and Connectivity satisfies User demand for access and connectivity options, and each User has several other access and connectivity options available to it. As alternatives to using the Access and Connectivity provided by the Exchange, a User may access or connect to such services and products through another User or through a connection to an Exchange access center outside the

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<sup>47</sup> 15 U.S.C. 78f(b)(8).

data center, third party access center, or third party vendor. The User may make such connection through a third party telecommunication provider, third party wireless network, the SFTI network, or a combination thereof. Users that opt to use Access or Connectivity would not receive access or connectivity that is not available to all Users, as all market participants that contract with the relevant market or content provider may receive access or connectivity. In this way, the proposed changes would enhance competition by helping Users tailor their Access and Connectivity to the needs of their business operations by allowing them to select the form and latency of access and connectivity that best suits their needs.

Similarly, the Exchange believes that providing VCCs between Users does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act because providing VCCs satisfies User demand for an alternative to cross connects.

The Exchange believes that revising the Price List to provide a more detailed description of the Access and Connectivity available to Users would make such descriptions more accessible and transparent, thereby providing market participants with clarity as to what Access and Connectivity is available to them and what the related costs are, thereby enhancing competition by ensuring that all Users have access to the same information regarding Access and Connectivity.

Finally, the Exchange operates in a highly competitive market in which exchanges offer co-location services as a means to facilitate the trading and other market activities of those market participants who believe that co-location enhances the efficiency of their operations. Accordingly, fees charged for co-location services are constrained by the active competition for the order flow of, and other business from, such market participants. If a particular exchange charges excessive fees for co-location services, affected market participants will opt to terminate

their co-location arrangements with that exchange, and adopt a possible range of alternative strategies, including placing their servers in a physically proximate location outside the exchange's data center (which could be a competing exchange), or pursuing strategies less dependent upon the lower exchange-to-participant latency associated with co-location. Accordingly, the exchange charging excessive fees would stand to lose not only co-location revenues but also the liquidity of the formerly co-located trading firms, which could have additional follow-on effects on the market share and revenue of the affected exchange. For the reasons described above, the Exchange believes that the proposed rule change reflects this competitive environment.

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 up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

- (A) by order approve or disapprove the 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 Amendment No. 1, 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 No. SR-NYSE-2016-45 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 No. SR-NYSE-2016-45. 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, D.C. 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; 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 No. SR-NYSE-2016-45, 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>48</sup>

Robert W. Errett  
Deputy Secretary

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<sup>48</sup> 17 CFR 200.30-3(a)(12).