



SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-90209; File Nos. SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SR-NYSEENAT-2020-03, SR-NYSE-2020-11, SR-NYSEAMER-2020-10, SR-NYSEArca-2020-15, SR-NYSECHX-2020-05, SR-NYSEENAT-2020-08]

Self-Regulatory Organizations; New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc., and NYSE National, Inc.; Notice of Filings of Partial Amendment No. 3 and Order Granting Accelerated Approval to Proposed Rule Changes, each as Modified by Partial Amendment No. 3, to Establish a Wireless Fee Schedule Setting Forth Available Wireless Bandwidth Connections and Wireless Market Data Connections

October 15, 2020.

I. Introduction

On January 30, 2020, New York Stock Exchange LLC (“NYSE”), NYSE American LLC (“NYSE American”), NYSE Arca, Inc. (“NYSE Arca”), NYSE Chicago, Inc. (“NYSE Chicago”), and NYSE National, Inc. (“NYSE National”) (collectively, the “Exchanges”) each filed with the Securities and Exchange Commission (“Commission”), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Exchange Act” or “Act”)¹ and Rule 19b-4 thereunder,² a proposed rule change to establish a schedule of Wireless Connectivity Fees and

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

Charges (“Wireless Fee Schedule”) listing available wireless connections between the Mahwah, New Jersey data center (“Mahwah Data Center”) and other data centers. The proposed rule changes (collectively, “Wireless I”) were published for comment in the Federal Register on February 18, 2020.³ On April 1, 2020, pursuant to Section 19(b)(2) of the Act,⁴ the Commission designated a longer period within which to either approve the Wireless I proposed rule changes, disapprove the proposed rule changes, or institute proceedings to determine whether to disapprove the proposed rule changes.⁵

On February 11, 2020, NYSE, NYSE Arca, NYSE Chicago, and NYSE National each filed with the Commission, pursuant to Section 19(b)(1) of the Act⁶ and Rule 19b-4 thereunder,⁷ a proposed rule change to amend the proposed Wireless Fee Schedule to add wireless connections for the transport of certain market data of the Exchanges. NYSE American filed with the Commission a substantively identical filing on February 12, 2020. The proposed rule

³ See Securities Exchange Act Release Nos. 88168 (February 11, 2020), 85 FR 8938 (February 18, 2020) (SR-NYSE-2020-05) (“Wireless I Notice”); 88169 (February 11, 2020), 85 FR 8946 (February 18, 2020) (SR-NYSEAMER-2020-05); 88170 (February 11, 2020), 85 FR 8956 (February 18, 2020) (SR-NYSEArca-2020-08); 88172 (February 11, 2020), 85 FR 8923 (February 18, 2020) (SR-NYSECHX-2020-02); and 88171 (February 11, 2020), 85 FR 8930 (February 18, 2020) (SR-NYSESTAT-2020-03) (collectively, the “Wireless I Notices”). Comments received on the Wireless I Notices, including Exchange responses, are available on the Commission’s website at: <https://www.sec.gov/comments/sr-nyse-2020-05/srnyse202005.htm>. For ease of reference, citations to the Wireless I Notice(s) are to the Notice for SR-NYSE-2020-05.

⁴ 15 U.S.C. 78s(b)(2).

⁵ See Securities Exchange Act Release No. 88539 (April 1, 2020), 85 FR 19553 (April 7, 2020). The Commission designated May 18, 2020, as the date by which it should approve, disapprove, or institute proceedings to determine whether to disapprove the proposed rule changes.

⁶ 15 U.S.C. 78s(b)(1).

⁷ 17 CFR 240.19b-4.

changes (collectively, “Wireless II”) were published for comment in the Federal Register on February 25, 2020.⁸ On April 1, 2020, pursuant to Section 19(b)(2) of the Act,⁹ the Commission designated a longer period within which to either approve the Wireless II proposed rule changes, disapprove the proposed rule changes, or institute proceedings to determine whether to disapprove the proposed rule changes.¹⁰

On May 18, 2020, the Division of Trading and Markets, for the Commission pursuant to delegated authority, instituted proceedings to determine whether to approve or disapprove the Wireless I and Wireless II proposed rule changes.¹¹ On July 27, 2020, the Exchanges each filed Partial Amendment No. 1 to the Wireless I and Wireless II proposed rule changes, notices of which were published for comment in the Federal Register on August 7, 2020.¹² On August 12,

⁸ See Securities Exchange Act Release Nos. 88237 (February 19, 2020), 85 FR 10752 (February 25, 2020) (SR-NYSE-2020-11) (“Wireless II Notice”); 88238 (February 19, 2020), 85 FR 10776 (February 25, 2020) (SR-NYSEAMER-2020-10); 88239 (February 19, 2020), 85 FR 10786 (February 25, 2020) (SR-NYSEArca-2020-15); 88240 (February 19, 2020), 85 FR 10795 (February 25, 2020) (SR-NYSECHX-2020-05); and 88241 (February 19, 2020), 85 FR 10738 (February 25, 2020) (SR-NYSESTAT-2020-08) (collectively, the “Wireless II Notices”). Comments received on the Wireless II Notices, including Exchange responses, are available on the Commission’s website at: <https://www.sec.gov/comments/sr-nyse-2020-11/srnyse202011.htm>. For ease of reference, citations to the Wireless II Notice(s) are to the Notice for SR-NYSE-2020-11.

⁹ 15 U.S.C. 78s(b)(2).

¹⁰ See Securities Exchange Act Release No. 88540 (April 1, 2020), 85 FR 19562 (April 7, 2020). The Commission designated May 25, 2020, as the date by which it should approve, disapprove, or institute proceedings to determine whether to disapprove the proposed rule changes.

¹¹ See Securities Exchange Act Release No. 88901, 85 FR 31273 (May 22, 2020).

¹² See Securities Exchange Act Release Nos. 88168 (August 3, 2020), 85 FR 47992 (August 7, 2020) (SR-NYSE-2020-05); 89454 (August 3, 2020), 85 FR 48002 (August 7, 2020)

2020, pursuant to Section 19(b)(2) of the Act,¹³ the Commission designated a longer period for Commission action on proceedings to determine whether to approve or disapprove the Wireless I and Wireless II proposed rule changes, as amended.¹⁴

On September 10, 2020, the Exchanges each filed Partial Amendment No. 2 to the proposed rule changes.¹⁵ On September 29, 2020, the Exchanges each filed Partial Amendment No. 3 to the proposed rule changes.¹⁶

(SR-NYSEAMER-2020-05); 89455 (August 3, 2020), 85 FR 48035 (August 7, 2020) (SR-NYSEArca-2020-08); 89456 (August 3, 2020), 85 FR 48024 (August 7, 2020) (SR-NYSECHX-2020-02); and 89457 (August 3, 2020), 85 FR 47997 (August 7, 2020) (SR-NYSENAT-2020-03) (amending Wireless I). See Securities Exchange Act Release Nos. 89458 (August 3, 2020), 85 FR 48045 (August 7, 2020) (SR-NYSE-2020-11); 89459 (August 3, 2020), 85 FR 48052 (August 7, 2020) (SR-NYSEAMER-2020-10); 89460 (August 3, 2020), 85 FR 48017 (August 7, 2020) (SR-NYSEArca-2020-15); 89461 (August 3, 2020), 85 FR 48039 (August 7, 2020) (SR-NYSECHX-2020-05); and 89462 (August 3, 2020), 85 FR 48008 (August 7, 2020) (SR-NYSENAT-2020-08) (amending Wireless II).

¹³ 15 U.S.C. 78s(b)(2).

¹⁴ See Securities Exchange Act Release Nos. 89532 (August 12, 2020), 85 FR 50849 (August 18, 2020) (regarding Wireless I); Securities Exchange Act Release No. 89531 (August 12, 2020), 85 FR 50861 (August 18, 2020) (regarding Wireless II).

¹⁵ In filing Partial Amendment No. 2, the Exchanges withdrew Partial Amendment No. 1, replacing it in its entirety with Partial Amendment No. 2. Partial Amendment No. 2 to the Wireless I proposed rule changes (“Wireless I Partial Amendment No. 2”) is available on the Commission’s website at <https://www.sec.gov/comments/sr-nyse-2020-05/srnyse202005-7757518-223248.pdf>. For ease of reference, citations to Wireless I Partial Amendment No. 2 are to that for SR-NYSE-2020-05. Partial Amendment No. 2 to the Wireless II proposed rule changes (“Wireless II Partial Amendment No. 2”) is available on the Commission’s website at <https://www.sec.gov/comments/sr-nyse-2020-11/srnyse202011-7757532-223232.pdf>. For ease of reference, citations to Wireless II Partial Amendment No. 2 are to that for SR-NYSE-2020-11.

¹⁶ In filing Partial Amendment No. 3, the Exchanges withdrew Partial Amendment No. 2, replacing it in its entirety with Partial Amendment No. 3. In Partial Amendment No. 3 to

This order provides notice of the filing of Partial Amendment No. 3 to each of the proposed rule changes, and grants approval to the proposed rule changes, each as modified by Partial Amendment No. 3, on an accelerated basis.

II. Description of the Proposed Rule Changes, as Modified by Partial Amendment No. 3

A. Proposed Wireless Connectivity Services and Fees

The Exchanges propose wireless connectivity services (“Wireless Connections”) for specified fees that enable market participants purchasing one or more of the proposed services to establish low-latency connectivity between their equipment in the Mahwah Data Center (where the Exchanges house their electronic trading and execution systems and co-location facility),¹⁷ and data centers in Carteret, NJ, Secaucus, NJ, and Markham, Canada (“Third Party Data Centers”).¹⁸ As stated in the Wireless I and Wireless II Notices, Wireless Connections involve

the Wireless I proposed rule changes (“Wireless I Partial Amendment No. 3”), the Exchanges propose new rules to place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for wireless connections. Wireless I Partial Amendment No. 3 is available on the Commission’s website at <https://www.sec.gov/comments/sr-nyse-2020-05/srnyse202005-7860147-223930.pdf>. For ease of reference, citations to Wireless I Partial Amendment No. 3 are to that for SR-NYSE-2020-05. In Partial Amendment No. 3 to the Wireless II proposed rule changes (“Wireless II Partial Amendment No. 3”), the Exchanges propose new rules to place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for wireless connectivity services that transport the market data of certain of the Exchanges. Wireless II Partial Amendment No. 3 is available on the Commission’s website at <https://www.sec.gov/comments/sr-nyse-2020-11/srnyse202011-7860139-223920.pdf>. For ease of reference, citations to Wireless II Partial Amendment No. 3 are to that for SR-NYSE-2020-11. The substance of Wireless I Partial Amendment No. 3 and Wireless II Partial Amendment No. 3 (collectively, “Partial Amendment No. 3”) is discussed further in Sections II.A and III.B below.

¹⁷ See Wireless I Notice, *supra* note 3, at 8939-40; Wireless II Notice, *supra* note 8, at 10753-54. The Exchanges state that a portion of the Mahwah Data Center houses their “SRO Systems,” which they define as Exchange trading and execution systems, as well as systems of communication from customer servers in co-location to the trading and execution systems of each Exchange or affiliate self-regulatory organizations. According

beaming signals through the air between antennas that are within sight of one another.¹⁹ Because the signals travel a straight, unimpeded line, and because light waves travel faster through air than through glass (fiber optics), wireless messages have lower latency than messages traveling through fiber optics.²⁰

The Exchanges are each an indirect subsidiary of Intercontinental Exchange, Inc. (“ICE”).²¹ The Exchanges state that the Wireless Connections are provided and maintained not by them, but by ICE Data Services (“IDS”), which operates through several affiliates of ICE, including an indirect subsidiary of NYSE.²²

The proposed Wireless Connections are of two types: (i) bandwidth connections (“Wireless Bandwidth Connections”) that enable market participants to send trading orders and relay market data between their equipment in the Mahwah Data Center and the Third Party Data

to the Exchanges, the Mahwah Data Center “is not owned or operated by any of the . . . Exchanges.” See Letter from Elizabeth K. King, Chief Regulatory Officer, ICE, General Counsel & Corporate Secretary, NYSE, to Vanessa Countryman, Secretary, Commission, dated May 8, 2020, responding to comments on Wireless I and Wireless II (“First NYSE Response”) at 9 n.37. The Exchanges describe the Mahwah Data Center as “grounds that ICE already leased and over which it had control for security purposes.” See *id.* at 10.

¹⁸ See Wireless I Notice, *supra* note 3, at 8939; Wireless II Notice, *supra* note 8, at 10753. The Exchanges state that the Third Party Data Centers are owned and operated by third parties unaffiliated with the Exchanges. See *id.*

¹⁹ See Wireless I Notice, *supra* note 3, at 8942-43; Wireless II Notice, *supra* note 8, at 10757.

²⁰ See *id.*

²¹ See Wireless I Notice, *supra* note 3, at 8939.

²² See Wireless I Notice, *supra* note 3, at 8939 n.11; Wireless II Notice, *supra* note 8, at 10753 n.12 (“The IDS business operates through several different ICE Affiliates, including NYSE Technologies Connectivity, Inc. an indirect subsidiary of the NYSE.”). The Exchanges further state all of the ICE affiliates are ultimately controlled by ICE. See Wireless I Notice, *supra* note 3, at 8939; Wireless II Notice, *supra* note 8, at 10753.

Centers;²³ and (ii) market data connections (“Wireless Market Data Connections”) that enable market participants in a Third Party Data Center to receive connectivity to certain NYSE, NYSE Arca and NYSE National market data feeds (collectively, the “Selected Market Data”).²⁴

For each Wireless Bandwidth Connection, the Exchanges propose a non-recurring initial charge of \$10,000 or \$15,000, and a monthly recurring charge that varies depending on bandwidth size and location of the connection.²⁵ For each Wireless Market Data Connection, the Exchanges likewise propose a non-recurring initial charge of \$5,000 and a monthly recurring charge that varies depending on the type of feed and location of the connection.²⁶ In addition, the Exchanges propose to waive the first month’s monthly recurring charge,²⁷ and specify (as they currently do regarding co-location fees) that a market participant obtaining and maintaining

²³ See Wireless I Notice, supra note 3, at 8939. At either end of a Wireless Bandwidth Connection, a market participant uses a cross connect or other cable to connect its equipment to the wireless equipment in the Mahwah Data Center and Third Party Data Center. Cross connects in the Mahwah Data Center lead to the market participant’s server in co-location. See id. at 8939 n.12.

²⁴ See Wireless II Notice, supra note 8, at 10753, 10757. Selected Market Data to Carteret and Secaucus includes the NYSE Integrated Feed, NYSE Arca Integrated Feed, and the NYSE National Integrated Feed. Selected Market Data to Markham includes the NYSE BBO and Trades data feeds and the NYSE Arca BBO and Trades data feeds.

²⁵ These fees range as follows: to and from Secaucus, from \$9,000 per month for a 10 Mb connection to \$44,000 per month for a 200 Mb connection; to and from Carteret, from \$10,000 per month for a 10 Mb connection to \$45,000 for a 200 Mb connection; to and from Secaucus and Carteret, \$22,000 per month for 50 Mb connection; and to and from Markham, from \$6,000 for a 1 Mb connection to \$23,000 for a 10 Mb connection. For additional detail on the proposed fees, see Wireless I Notice, supra note 3, at 8942.

²⁶ These fees range from \$5,250 to \$21,000 per month to transport Selected Market Data to Carteret and Secaucus, and are \$6,500 per month to transport Selected Market Data to Markham. For additional detail on the proposed fees, see Wireless II Notice, supra note 8, at 10756.

a Wireless Connection would not be charged more than once, irrespective of whether it is a member of one, some or none of the Exchanges.²⁸

Describing how the Wireless Connections are provided, the Exchanges state that IDS uses its own wireless network to provide Wireless Connections between the Markham Third Party Data Center and the Mahwah Data Center.²⁹ For Wireless Connections with the Carteret and Secaucus Third Party Data Centers, however, IDS contracts with a non-ICE entity (Anova Technologies, LLC, or “Anova”³⁰) to facilitate provision of the Wireless Connections, via a network traversing a series of towers with wireless equipment, including a pole on the grounds of the Mahwah Data Center property (the “Data Center Pole”), to which third parties do not have access.³¹

The Data Center Pole is where the Wireless Connections to the Carteret and Secaucus Third Party Data Centers begin and end, and convert to a fiber connection into the Mahwah Data Center co-location facility where market participants’ servers then connect to the Exchanges’

²⁷ See Wireless I Notice, supra note 3, at 8941-42; Wireless II Notice, supra note 8, at 10756.

²⁸ See Wireless I Notice, supra note 3, at 8942.

²⁹ See id. at 8939. According to the Exchanges, “[t]here is no commercial competitor” for the route connecting Mahwah with Markham. See First NYSE Response at 17. See also Wireless I Notice, supra note 3, at 8942; Wireless II Notice, supra note 8, at 10757.

³⁰ See Wireless I Partial Amendment No. 3, supra note 16, at 4.

³¹ See Wireless I Notice, supra note 3, at 8945; Wireless II Notice supra note 8, at 10759. Specifically, the Exchanges state, “[w]ith the exception of the non-ICE entity that owns the wireless network used for the Wireless Connections to Secaucus and Carteret, third parties do not have access to such pole, as the IDS wireless network has exclusive rights to operate wireless equipment on the Mahwah data center pole. IDS does not sell rights to third parties to operate wireless equipment on the pole, due to space limitations, security concerns, and the interference that would arise between equipment placed too closely together.” Id.

trading and execution systems.³² In response to comments (discussed below) that restricted access to the Data Center Pole gives a geographical and latency advantage to IDS arising from the Data Center Pole's proximity to the Exchanges' trading and execution systems that competitors cannot replicate, the Exchanges amended the proposals, initially filing Partial Amendment No. 1 and then replacing it with Partial Amendment No. 2, and then replacing Partial Amendment No. 2 with Partial Amendment No. 3.

In Partial Amendment No. 3, the Exchanges each propose to add rules placing restrictions on use of the Data Center Pole designed to address any advantage that the Wireless Connections have by virtue of a Data Center Pole, and thereby level the playing field for competitors offering similar wireless connectivity services between the Mahwah Data Center and Secaucus and Carteret Third Party Data Centers. Specifically, they propose fiber-length equalization measures so that the Wireless Connections, and future wireless connections that use a Data Center Pole (as defined below), would "operat[e] in the same manner as competitors do today without a latency subsidy or other advantage provided by the Exchanges"³³ In addition, the Exchanges

³² See Wireless I Partial Amendment No. 3, supra note 16, at 4; Wireless II Partial Amendment No. 3, supra note 16, at 4. The Wireless Connections between the Markham Third Party Data Center and the Mahwah Data Center do not use the Data Center Pole. See Wireless I Partial Amendment No. 3, supra note 15, at 7; Wireless II Partial Amendment No. 3, supra note 16, at 6.

³³ See Wireless I Partial Amendment No. 3, supra note 16, at 9 (internal citation and quotations omitted); Wireless II Partial Amendment No. 3, supra note 16, at 9 (internal citation and quotations omitted). See also Wireless I Partial Amendment No. 3, supra note 16, at 12 (stating that the proposed rule also would apply to the fiber path used for the previously filed wireless services that allow co-located users to receive market data feeds from third party markets through a wireless connection).

represent that if the rule is approved, once the required changes are implemented, they “commit to have the latency of the relevant fiber route measured.”³⁴

For the Wireless Bandwidth Connections, the Exchanges each propose rules requiring that, with respect to each Third Party Data Center,³⁵ the length of the fiber path between (a) the base of any Data Center Pole and (b) the Patch Panel Point³⁶ shall be no less than the sum of (x) the length of the fiber path between the base of the Closest Commercial Pole³⁷ and the Patch Panel Point, plus (y) the difference in length, if any, between (i) the geodesic distance³⁸ between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center. The proposed rules also require

³⁴ See Wireless I Partial Amendment No. 3, *supra* note 16, at 11. See also Wireless II Partial Amendment No. 3, *supra* note 16, at 11. The Exchanges state that because no known commercial provider (including ICE affiliates) has a network that follows the geodesic route, and because the routes they do follow are both changeable and not publicly available, the Exchanges cannot ensure that they would have access to the information required to measure what differences exist in the path followed between the Closest Commercial Pole and any Third Party Data Center. See Wireless I Partial Amendment No. 3, *supra* note 16, at 6; Wireless II Partial Amendment No. 3, *supra* note 16, at 6. See also *infra* notes 121-145, and accompanying text (discussing the evolution of Wireless I and Wireless II Partial Amendment No. 3).

³⁵ “Third Party Data Center” means a service access point from which wireless connections to the Data Center using a Data Center Pole are made available. “Data Center” means the Mahwah, New Jersey data center where each Exchange’s matching engine is located, or its successor. “Data Center Pole” means a pole or other structure that (a) holds wireless equipment, and (b) is located within the grounds of the Data Center. See *id.* at 5.

³⁶ “Patch Panel Point” means the patch panel where fiber connections for wireless services connect to the network row in the space used for co-location in the Data Center. See *id.* at 5. The Exchanges represent that every provider of wireless connectivity to co-location customers, including IDS and each of its competitors, is connected to the Patch Panel

that the length of the fiber from the Patch Panel Point to each customer cabinet in the space used for co-location in the Data Center is the same.³⁹

Similarly, for the Wireless Market Data Connections, the Exchanges each propose rules requiring that, with respect to each Third Party Data Center, the length of the fiber path between (a) the base of any Data Center Pole and (b) the Production Point⁴⁰ shall be no less than the sum of (x) the length of the fiber path between the base of the Closest Commercial Pole and the Production Point, plus (y) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.⁴¹ The proposed rules also require that Exchange market data will be handed off in the Data Center in the same manner and method, including by using the same network path from the Production Point, to (a) any

Point, and the length of the fiber path from the Patch Panel Point to each customer cabinet in the space used for co-location in the data center (“Customer Cabinet”) is the same. See id. at 6.

³⁷ “Closest Commercial Pole” means the Commercial Pole that has the shortest fiber path between (a) the Patch Panel Point and (b) the base of the Commercial Pole. “Commercial Pole” means a pole or other structure (a) on which one or more third parties locate wireless equipment used to offer wireless connectivity to other third parties, and (b) from which a fiber connection extends between the Data Center and third party equipment located on the pole or other structure. See id. at 5.

³⁸ According to the Exchanges, “[g]eodesic measurements use above ground line measurements,” and “geodesic distances” are sometimes referred to as “over-the-air distances.” See id. at 6.

³⁹ See id. at 5.

⁴⁰ “Production Point” means the point inside the Data Center where Exchange market data is made available to the space used for co-location in the Data Center. See Wireless II Partial Amendment No. 3, supra note 16, at 5.

⁴¹ See id.

third party that utilizes a Commercial Pole to offer wireless connectivity to such market data to other third parties, and (b) any wireless network that utilizes the Data Center Pole.⁴²

The Exchanges state that these proposed rules are designed to provide that market participants using the Wireless Connections would not benefit from wireless equipment being on an ICE-controlled Data Center Pole that is closer to the Patch Panel Point or the Production Point than the Closest Commercial Pole.⁴³

B. Filing Requirement for Facilities of an Exchange

Although the Exchanges filed the Wireless I and Wireless II proposals for approval, they maintain that filing is not required because the Wireless Connections are not “facilities of an exchange,” within the meaning of Section 3(a)(1) of the Act (defining “exchange”) and Section 3(a)(2) of the Act (defining the term “facility” of an exchange).⁴⁴ They thus take the position that the proposed Wireless Connections and associated fees are not proposed rules of an exchange, and are not subject to review for determination of consistency with Exchange Act standards.⁴⁵

⁴² See id.

⁴³ See Wireless I Partial Amendment No. 3, supra note 16, at 11; Wireless II Partial Amendment No. 3, supra note 16, at 10-11.

⁴⁴ See Wireless I Notice, supra note 3 at 8939-41; Wireless II Notice, supra note 8, at 10754-56.

⁴⁵ See Wireless I Notice, supra note 3 at 8938-39; Wireless II Notice, supra note 8, at 10753. The Exchanges state that they seek approval of the proposed rule changes “solely because the Staff of the Commission” advised that filing is required. See id. In Partial Amendment No. 3, the Exchanges do not depart from this position and state, “All other representations in the Filing remain as stated therein and no other changes are being made.” See Wireless I Partial Amendment No. 3, supra note 16, at 17; Wireless II Partial Amendment No. 3, supra note 16, at 18.

In support of this argument, the Exchanges state that the definition of exchange “focuses on the exchange entity and what it does,” whereas the Wireless Connections are separately offered by IDS, a group of “non-exchange ICE Affiliates.”⁴⁶ They acknowledge that the Exchanges squarely fall within the Exchange Act’s definition of exchange, but argue that IDS and the ICE Affiliates do not, and that the Exchange Act does not “automatically collapse the ICE Affiliates into the Exchange[s].”⁴⁷

Turning to whether the Wireless Connections are facilities of the Exchanges within the meaning of the definition of “facility” of an exchange in Section 3(a)(2) of the Act,⁴⁸ the Exchanges state that the Wireless Connections are not the “premises” of the Exchanges, reasoning that the network that runs between IDS’s equipment in the Mahwah Data Center and IDS’s equipment in Third Party Data Centers, much of which is actually owned, operated, and maintained by a non-ICE entity, do not constitute “premises.”⁴⁹ They also state that the Wireless Connections are not the “property” of the Exchanges because they are “services,” and something

⁴⁶ See Wireless I Notice, supra note 3 at 8939-40; Wireless II Notice, supra note 8, at 10754.

⁴⁷ See Wireless I Notice, supra note 3 at 8940; Wireless II Notice, supra note 8, at 10755.

⁴⁸ Under Exchange Act Section 3(a)(2): “The term ‘facility’ when used with respect to an exchange includes “its premises, tangible or intangible property whether on the premises or not, any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticker or otherwise, maintained by or with the consent of the exchange), and any right of the exchange to the use of any property or service.” 15 U.S.C. 78c(a)(2).

⁴⁹ See Wireless I Notice, supra note 3, at 8940; Wireless II Notice, supra note 8, at 10755. The Exchanges state that the portion of the Mahwah Data Center where the “exchange” functions are performed (*i.e.*, the SRO Systems that bring together purchasers and sellers of securities and perform with respect to securities the functions commonly performed by a stock exchange) could be construed as the “premises” of the Exchange, but assert that a wireless network that is almost completely outside of the Mahwah Data Center should not be construed as the “premises.” See *id.*

owned by a non-exchange “ICE Affiliate” is not owned by the Exchanges.⁵⁰ They further maintain that the Exchanges have no right to the use of such premises, property, or services for the purpose of effecting or reporting a transaction on an exchange, and note that the Wireless Bandwidth Connections do not connect directly to the Exchanges’ trading and execution systems.⁵¹

III. Discussion and Commission Findings

A. The Wireless Connections are Facilities of the Exchanges and Thus the Proposed Rule Changes, as Modified by Partial Amendment No. 3, are Subject to Review for a Determination of the Consistency with the Exchange Act

The Exchanges filed the proposed rule changes with the Commission. As discussed below, the Wireless Connections are “facilities of an exchange.” Under Section 19(b), the Commission must approve or disapprove the proposed rule changes.⁵²

As summarized in Section II.B above, the Exchanges’ asserted position about the regulatory status of the Wireless Connections relies upon an analysis that focuses narrowly on the corporate subsidiaries that hold the exchange licenses, and not on the broader group that operates the “exchange” as defined under the Exchange Act. In essence, the Exchanges reason that only the entities that hold the exchange licenses are relevant to assessing what is a facility of an exchange and, since the Wireless Connections are offered by IDS, a separate group of

⁵⁰ See Wireless I Notice, supra note 3, at 8940; Wireless II Notice, supra note 8, at 10755. Id.

⁵¹ See Wireless I Notice, supra note 3, at 8939-41. The Exchanges state that these connections are not provided for “the purpose of effecting or reporting a transaction on” the Exchanges, but rather are provided to facilitate the customer’s interaction with itself. Id.

⁵² See 15 U.S.C 78s(b).

affiliated entities, they cannot be facilities of the Exchanges.⁵³ However, as discussed in detail below, the Commission finds the Wireless Connections constitute facilities of an exchange.

The definitions of “exchange” and “facility” of an exchange are set forth in Exchange Act Sections 3(a)(1) and 3(a)(2), respectively. Section 3(a)(1) of the Exchange Act defines an “exchange” to include an organization or group of persons, whether incorporated or unincorporated, that maintains a market place for bringing together purchasers and sellers of securities.⁵⁴ Under the statute, an “exchange” includes the market place and the market facilities maintained by such exchange. A particular function provided by a group of persons, whether incorporated or unincorporated, may fall within the statutory definition of “exchange” when business activities performed across the group constitute part of that market place for bringing together purchasers and sellers.⁵⁵ Thus, the application of the “exchange” definition does not

⁵³ See supra notes 46-47, 50 and accompanying text (arguing that IDS is a distinct group of corporate entities and that assets of IDS are not assets of the Exchanges), and note 49 and accompanying text (noting that the Exchanges’ focus on “SRO Systems,” which they define as the Exchanges’ trading and execution systems).

⁵⁴ Specifically, Section 3(a)(1) of the Exchange Act defines “exchange” as “any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange.” 15 U.S.C. 78c(a)(1). See also 15 U.S.C. 78c(a)(9) (“The term ‘person’ means a natural person, company, government, or political subdivision, agency, or instrumentality of a government.”). In addition, Exchange Act Rule 3b-16 defines certain terms used in Section 3(a)(1). See 17 CFR 240.3b-16. Among other things, Rule 3b-16 provides that: “[a]n organization, association, or group of persons shall be considered to constitute, maintain, or provide ‘a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange’ . . . if [it]: (1) [b]rings together the orders for securities of multiple buyers and sellers; and (2) [u]ses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under

turn on which particular entity directly holds a particular asset, including the exchange license.⁵⁶

What is relevant for purposes of this analysis, instead, is determining which functions are part of the relevant market place.

Section 3(a)(2) of the Exchange Act defines a “facility” of an exchange to include the exchange’s premises, tangible or intangible property, or any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange.⁵⁷ Section 3(a)(2) specifically includes services such as systems of communication to or from the exchange.⁵⁸ The Commission also has observed that the term facility of an exchange

which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of a trade.”

⁵⁵ See 15 U.S.C. 78c(a)(1). For examples of how the Commission has assessed whether particular functions are commonly performed by a stock exchange that could result in regulation as a facility of an exchange, see, e.g., Securities Exchange Act Release Nos. 44983 (October 25, 2001), 66 FR 55225, 55233-34 (November 1, 2001) (SR-PCX-00-25) (“PCX Order”) (assessing different functions provided by an exchange-affiliated broker-dealer); and 63241 (November 3, 2010), 75 FR 69792 (November 15, 2010) (stating that, in general, the outbound order routing service provided to exchanges by broker-dealers is regulated as a facility of the exchange).

⁵⁶ Cf. Securities Exchange Act Release No. 40760 (December 8, 1998), 63 FR 70844, 70852 (December 22, 1998) (“Regulation ATS Adopting Release”) (stating, in the context of entities providing trading systems that function as ATSS, that “[t]he Commission will attribute the activities of a trading facility to a system if that facility is offered by the system directly or indirectly (such as where a system arranges for a third party or parties to offer the trading facility). . . . In addition, if an organization arranges for separate entities to provide different pieces of a trading system . . . , the organization

is defined “very broadly,”⁵⁹ and that whether a service is a facility of an exchange requires an analysis of the particular facts and circumstances.⁶⁰

In this case, the Wireless Connections are provided by IDS which, like the Exchanges, is part of the group operating the exchange. As discussed above, in the case of a group such as ICE and its controlled subsidiaries that are operating the exchange market places, it is not important which corporate entity within the group directly holds a particular asset, so long as that asset is provided as part of the relevant exchange market place. Accordingly, the Wireless Connections

responsible for arranging the collective efforts will be deemed to have established a trading facility.”).

⁵⁷ As noted above, under Section 3(a)(2) of the Exchange Act, “[t]he term ‘facility’ when used with respect to an exchange includes its premises, tangible or intangible property whether on the premises or not, any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticker or otherwise, maintained by or with the consent of the exchange), and any right of the exchange to the use of any property or service.” 15 U.S.C. 78c(a)(2).

⁵⁸ The Commission has found that where a system of communication occupies a “special position” with respect to the exchange, such that it is “uniquely linked to and endorsed by” that exchange to provide such function, then that function will constitute a “facility” of an exchange under the Act. See, e.g., PCX Order, supra note 55, at 55233-34 (considering an introducing broker function, order routing function, and electronic communications network (“ECN”) for trading securities ineligible for trading on ArcaEx, each provided by Wave, a broker-dealer in which the PCX exchange had an indirect ownership interest and that was affiliated with PCX’s ArcaEx electronic trading facility, and determining that the optional order-routing function was a facility of PCX, but the introducing broker and ECN functions were not).

⁵⁹ See Securities Exchange Act Release No. 44201 (April 18, 2001), 66 FR 21025, 21029 (April 26, 2001) (File No. 79-9) (Order Granting Application for a Conditional Exemption by the National Association of Securities Dealers, Inc. Relating to the Acquisition and Operation of a Software Development Company by the Nasdaq Stock Market, Inc.).

⁶⁰ See Securities Exchange Act Release No. 76127 (October 9, 2015), 80 FR 62584, 62586 n.9 (October 16, 2015) (SR-NYSE-2015-36) (Order Approving Proposed Rule Change amending Section 907.00 of the Listed Company Manual). See also supra note 58.

are facilities of the Exchanges because they are services, in the form of a system of communication, offered by a group of persons providing a market place for bringing together purchasers and sellers of securities, and such services are for the purpose of effecting or reporting transactions on the Exchanges. In addition, the Wireless Connections are facilities of the Exchanges because they use the premises (i.e., grounds of the Mahwah Data Center) and property (e.g., the Data Center Pole or IDS network) of the group of persons providing a market place for bringing together purchasers and sellers of securities for such purposes. The Exchanges' arguments that they do not have the right to use premises and property provided by IDS or other ICE affiliates that contribute to the maintenance of this market place do not address the fact that the group operating the exchange market place has the right to use it.

The Exchanges take the position that the Wireless Connections are not facilities of the Exchanges by focusing on the ICE subsidiaries that hold the exchange licenses, and not on the broader operation of the exchange. Specifically, the Exchanges contend that the definition of "exchange" focuses on "the exchange entity and what it does."⁶¹ The Exchanges suggest that "exchange functions" are performed only by the Exchanges' SRO Systems housed in the Mahwah Data Center. For example, the Exchanges state that the Wireless Connections are not the "premises" of the Exchanges, reasoning that they consist of equipment owned by IDS and not the Exchanges.⁶² Similarly, the Exchanges state that the Wireless Connections are not "property" or "services" of the Exchanges because the underlying wireless network is owned by, or provided through rights of, other ICE affiliates.⁶³ The Exchanges also take the position that

⁶¹ See supra note 46 and accompanying text.

⁶² See supra note 49 and accompanying text.

⁶³ See supra notes 50-51 and accompanying text.

the Wireless Connections do not fall within the definition of “facility” of an exchange because they simply connect a customer’s equipment in one data center to that customer’s equipment in another data center, and do not connect directly to the Exchanges’ trading and execution systems.⁶⁴

As discussed above, the statutory definition of an “exchange” includes any group of persons that maintains a market place for bringing together purchasers and sellers of securities, and the definition of “facility” (applicable to an exchange) references that exchange definition. Acknowledging that the functions performed by a group of persons can constitute an exchange does not mean that all of the assets or services of all of the ICE affiliates are “automatically collapsed” into the Exchanges.⁶⁵ Rather, with respect to national securities exchanges such as the Exchanges, only facilities “for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood” would be facilities of those exchanges.⁶⁶

Several commenters addressed the purpose of the Wireless Connections, stating that the Wireless Connections are services purchased by market participants for the purpose of effecting and reporting transactions on, or communicating to or from, the Exchanges,⁶⁷ and are in fact used

⁶⁴ See supra note 51 and accompanying text.

⁶⁵ See supra note 47 and accompanying text.

⁶⁶ See 15 U.S.C. 78c(a)(1).

⁶⁷ Specifically, commenters state that the reason market participants pay fees for the Wireless Connections is to effect transactions on the Exchanges. See, e.g., Letter from Thomas M. Merritt, Deputy General Counsel, Virtu Financial to Vanessa Countryman, Secretary, Commission, dated March 10, 2020 (“Virtu Letter I”) at 4-6, 7 (“NYSE’s argument ignores the reality of market connectivity,” and “[a]s a useful analogy, no one would spend the money to buy a seat on an exchange floor just to sit in it.”); Letter from Stephen John Berger, Managing Director, Global Head of Government & Regulatory Policy, Citadel Securities to Vanessa Countryman, Secretary, Commission, dated June

to send trading orders and receive market data for that purpose.⁶⁸ The Commission finds these comments persuasive, and agrees that market participants purchase the Wireless Bandwidth Connections offered by the Exchanges for the purpose of minimizing the latency of communications between the Mahwah co-location facility that houses the matching engines of the Exchanges and the Third Party Data Centers that house the matching engines of other exchanges trading the same securities, in order to enhance the efficiency of their trading strategies on the Exchanges and elsewhere.⁶⁹ The Commission similarly agrees that market participants purchase the Wireless Market Data Connections for the purpose of minimizing the latency of market data produced by the Exchanges and transmitted to them at the Third Party Data Centers, to enhance the efficiency of their trading strategies on the Exchanges and

12, 2020 (“Citadel Letter”) at 1-2 (“When it is understood that the very purpose of the Services is to provide specific content (exchange market data), without which the offering makes no economic sense, the only conclusion is that the Services include, as a central component, the property of the exchange being distributed for the purposes of effecting transactions.”).

⁶⁸ See e.g., Virtu Letter I at 7 (stating that while NYSE may not know the exact content of the data that is being sent, the purpose of the data being sent over the Wireless Bandwidth Connections is to facilitate competitive transactions being effected on the Exchanges); Letter from McKay Brothers, LLC to Vanessa Countryman, Secretary, Commission, dated March 10, 2020 (“McKay Letter I”) at 6 (stating that the Wireless Connections are facilities of the Exchange because they may be used to effect transactions on the Exchange and report transactions or other market data disseminated from the Exchange using Exchange property (the “NYSE Private Pole”), and that the fact that orders and market data have to traverse a cross connect at the Mahwah Data Center before reaching the Exchanges’ trading execution systems is an insufficient basis on which to conclude the Wireless Connections are not used for the purposes of effecting or reporting a transaction on the exchange); Letter from Tyler Gellasch, Executive Director, Healthy Markets Association to Vanessa Countryman, Secretary, Commission, dated March 9, 2020 (“Healthy Markets Letter I”) at 3 (stating that the Exchanges have sought to defeat

elsewhere.⁷⁰ Although the Exchanges take the position that the Wireless Connections cannot be facilities of the Exchanges because they do not connect directly to the Exchanges' trading and execution systems, the definition of facility of an exchange contains no such requirement. What is required for an exchange service to be a facility is that it be provided "for the purpose of" effecting or reporting a transaction on the Exchange which, as discussed above, is in fact the case.⁷¹

For the reasons discussed above, the Commission also agrees that the Wireless Connections are facilities of the Exchanges because they represent premises and property of the Exchanges. These premises and property include the Mahwah Data Center grounds, the Data Center Pole and equipment thereon used as a point of access to the Mahwah Data Center, and the underlying IDS network uniquely connecting the Markham and Mahwah Data Centers.⁷² In this

the operation of Exchange Act filing requirements by "interpositioning" an affiliate to provide exchange connectivity to customers indirectly instead of providing it directly); Letter from Gregory Babyak, Global Head of Regulatory Affairs, Bloomberg L.P. to Vanessa Countryman, Secretary, Commission, dated March 10, 2020 ("Bloomberg Letter I") at 4 (addressing Wireless I and stating, "it is clear that this is a system of communication to or from the exchange for 'effecting or reporting a transaction of the exchange.'"); Letter from Matt Haraburda, President, XR Securities LLC to Vanessa Countryman, Secretary, Commission, dated March 18, 2020 ("XRS Letter") at 3 (addressing Wireless I, and stating "[n]othing is more critical in trading than timely access to exchange systems to submit orders and receive market data, and the Wireless Connections . . . being faster even if only by a microsecond can make a competitive difference); Letter from Joanna Mallers, Secretary, FIA Principal Traders Group, to Vanessa Countryman, Secretary, Commission, dated May 8, 2020 ("FIA Letter") at 3 (stating similarly that nothing is more critical in trading than timely access to exchange systems to submit orders and receive market data).

⁶⁹ The Exchanges themselves state that these and similar services are offered "as a means to facilitate the trading and other market activities of market participants." See Wireless I Notice, supra note 3, at 8945.

⁷⁰ See, e.g., XRS Letter at 3 ("Nothing is more critical in trading than timely access to exchange systems to submit orders and receive market data, and the Wireless Connections have the fastest means of access to the Exchange via the on-premises private pole."); FIA Letter at 3; SIFMA Letter at 3 ("For regulatory and competitive reasons,

instance, IDS operates the Wireless Connections to and from Carteret and Secaucus via its exclusive access to the Data Center Pole.⁷³ IDS also operates the Wireless Connections between Markham and Mahwah via its own proprietary wireless network. Each of these assets, irrespective of which member of the group holds title to it, is provided as part of the market place for bringing together purchasers and sellers of securities.

Accordingly, the Commission finds the proposed Wireless Connections are facilities of the Exchanges.

B. The Proposed Rule Changes, as Modified by Partial Amendment No. 3, are Consistent with the Act

1. The Applicable Standard for Review

The Commission has historically applied a “market-based” test in its assessment of market data fees, which has also been applied in the context of connectivity fees, such as those

most broker-dealers feel they must purchase the fastest connectivity services to remain in business.”).

⁷¹ In this regard, the Wireless Connections are analogous to co-location services. The purpose of co-location is to provide a service to use an exchange’s premises or property (in this case, placing servers in its data center) for the purpose of effecting transactions on that exchange. To guide this inquiry, the Commission has in the past examined whether such services facilitate “physical proximity” to an exchange’s trading systems—not direct connectivity. See Securities Exchange Act Release No. 61358 (January 14, 2010), 75 FR 3594, 3610 (January 21, 2010) (“Concept Release on Equity Market Structure”) (emphasis added) (describing co-location as a service enabling market participants to place their servers in close physical proximity to a trading center’s matching engine, and thereby minimize network and other types of latencies between the matching engine of trading centers and the servers of market participants). The Wireless Connections are part of this same effort to facilitate access to and trading activity on the Exchanges using exchange premises and property. See also McKay Letter I at 6 (stating that to reasonably determine where the facilities of the Exchange begin, one must consider where and how one connects to the ‘last mile’ cable connection,” and, therefore that connections to Exchange trading systems that originate or terminate on the Mahwah Data Center grounds, whether they are direct or indirect, are not materially different from connections to Exchange trading systems from market participant servers in co-location).

proposed here.⁷⁴ Under that test, the Commission considers “whether the exchange was subject to significant competitive forces in setting the terms of its proposal . . . , including the level of any fees.”⁷⁵ If an exchange meets this burden, the Commission will find that its proposal is consistent with the Act unless “there is a substantial countervailing basis to find that the terms” of the proposal violate the Act or the rules thereunder.⁷⁶ If an exchange cannot demonstrate that it was subject to significant competitive forces, it must “provide a substantial basis, other than competitive forces, . . . demonstrating that the terms of the proposal are equitable, fair, reasonable, and not unreasonably discriminatory.”⁷⁷

After careful consideration of the proposed rule changes, as modified by Partial Amendment No. 3, comments received, and the Exchanges’ responses thereto, the Commission

⁷² See First NYSE Response at 10 (“[T]he pole was built on grounds that ICE already leased and over which it had control for security purposes.”); *id.* at 15 (“IDS, not the Exchanges, controls and maintains the Wireless Connections”).

⁷³ The Exchanges propose in Partial Amendment No. 3 to make these Wireless Connections subject to fiber-length equalization measures, which, as discussed below, support a finding that such Wireless Connections are offered on terms that are not unfairly discriminatory and do not impose an unnecessary burden on competition; but such measures do not alter the conclusion that the Wireless Connections are facilities of the Exchanges. See also PCX Order, *supra* note 55, 66 FR 55225, 55233 (exchanges offering “advantages, such as greater access to information, improved speed of execution, or enhanced operational capabilities in dealing with the exchange might constitute unfair discrimination under the [Exchange] Act.”).

⁷⁴ See Securities Exchange Act Release Nos. 85459 (March 29, 2019), 84 FR 13363, 13367 (April 4, 2019) (File Nos. SR-BOX-2018-24; SR-BOX-2018-37; and SR-BOX-2019-04) (Order Disapproving Proposed Rule Changes To Amend the Fee Schedule on the BOX Market LLC Options Facility To Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network); and 88493 (March 27, 2020) 85 FR 18617 (April 2, 2020) (File Nos. SR-BOX-2018-24; SR-BOX-2018-37; and SR-BOX-2019-04) (Order Affirming Action by Delegated Authority and Disapproving Proposed Rule Changes Related to Connectivity and Port Fee) (“BOX Order”).

⁷⁵ Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74781 (December 9, 2008) (“2008 ArcaBook Approval Order”).

finds that the proposed rule changes, each as modified by Partial Amendment No. 3, are consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange.⁷⁸ Specifically, the Commission finds that the proposed rule changes, as amended, are consistent with: (1) Section 6(b)(4) of the Act,⁷⁹ which requires that the rules of a national securities exchange provide for the equitable allocation of reasonable dues, fees, and other charges among its members and issuers and other persons using its facilities; (2) Section 6(b)(5) of the Act,⁸⁰ which requires that the rules of a national securities exchange be designed, among other things, to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest, and not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers; and (3) Section 6(b)(8) of the Act,⁸¹ which requires that the rules of a national securities exchange do not impose any burden on competition not

⁷⁶ Id. See also In the Matter of the Application of SIFMA, Securities Exchange Act Release No. 84432, 22 (October 16, 2018), available at <https://www.sec.gov/litigation/opinions/2018/34-84432.pdf> (“SIFMA Decision”), vacated on other grounds, NASDAQ Stock Mkt., LLC v. SEC, 961 F.3d 421 (D.C. Cir. 2020).

⁷⁷ 2008 ArcaBook Approval Order, supra note 75, at 74781. See also SIFMA Decision, supra note 76, at 22. See also BOX Order, supra note 74, at 18622-24 (noting that the exchange had failed to demonstrate significant competitive forces, and therefore did not establish a basis on which to conclude that the proposed fees were equitable and reasonable.)

⁷⁸ In approving the proposed rule change, the Commission has considered the proposed rule’s impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

⁷⁹ 15 U.S.C. 78f(b)(4).

⁸⁰ 15 U.S.C. 78f(b)(5).

⁸¹ 15 U.S.C. 78f(b)(8).

necessary or appropriate in furtherance of the purposes of the Act.

In support of the proposals, as amended, the Exchanges argue principally that the Wireless Connections are subject to significant competitive forces because they are offered in a competitive environment where substitutes are available.⁸² As discussed further below, the Commission believes that Partial Amendment No. 3, in which the Exchanges propose fiber length equalization measures to substantially mitigate the unique proximity advantage of the Data Center Pole, particularly strengthens the Exchanges' argument by establishing a basis upon which to find that there are substantially similar substitutes for the Wireless Connections offered by third party vendors who have not been placed at a meaningful competitive disadvantage created by the Exchange. Therefore, after considering the current competitive landscape, comments received, and Partial Amendment No. 3, the Commission finds that the Exchanges are subject to significant competitive forces in setting the terms on which they offer the Wireless Connections.

2. Review of Competitive Forces Applicable to the Wireless Connections

a. Competitive Environment

In the Wireless I and Wireless II Notices, the Exchanges state that the Wireless Connections are offered on terms that are reasonable, equitable, and not unfairly discriminatory and do not impose a burden on competition that is not necessary or appropriate because use of the Wireless Connections is voluntary and they are offered in a competitive environment where alternatives are available.⁸³ Describing this competitive environment, the Exchanges state that

⁸² See infra Section III.B.2.

⁸³ See Wireless I Notice, supra note 3, at 8943-44; Wireless II Notice, supra note 8, at 10757-59.

there are at least three other vendors that offer market participants wireless network connections between the Mahwah Data Center and the Secaucus and Carteret Third Party Access Centers using wireless equipment installed on towers and buildings near the Mahwah Data Center.⁸⁴ With respect to the Wireless Market Data Connections specifically, they state that other providers offer connectivity to Selected Market Data in the Third Party Data Centers, and believe that a market participant in the Carteret or Secaucus Third Party Data Center may purchase a wireless connection to the NYSE and NYSE Arca Integrated Feed data feeds from at least two other providers of wireless connectivity.⁸⁵ The Exchanges also state that they believe competing wireless connections offered by non-ICE entities provide connectivity at the “same or similar speed” as the Wireless Connections, and at the “same or similar cost.”⁸⁶ The Exchanges acknowledge that the Wireless Connections between the Mahwah Data Center and the Markham Third Party Data Center are the first public, commercially available wireless connections between the two points, creating a new connectivity option for customers in Markham.⁸⁷ With respect to all of the Wireless Connections, however, the Exchanges state that some market participants have their own proprietary wireless networks, and that market participants may create a new proprietary wireless connection, connect through another market participant, or use fiber connections offered by the Exchanges, ICE affiliates, other service providers, and third party telecommunications providers.⁸⁸

⁸⁴ See Wireless I Notice, supra note 3, at 8942.

⁸⁵ See Wireless II Notice, supra note 8, at 10757.

⁸⁶ See Wireless I Notice, supra note 3, at 8943; Wireless II Notice, supra note 8, at 10757.

⁸⁷ See id. Notably, the proposed Markham services do not rely upon the Data Center Pole. See supra note 32.

⁸⁸ See Wireless I Notice, supra note 3, at 8943; Wireless II Notice, supra note 8, at 10757.

The Exchanges acknowledge that the Wireless Connections between the Mahwah Data Center and Carteret and Secaucus currently rely upon the Data Center Pole, to which access is restricted,⁸⁹ but state that the access to such pole is not required for third parties to compete,⁹⁰ because (i) proximity to a data center is not the only determinant of a wireless network's speed;⁹¹ (ii) latency is not the only consideration that a market participant may have in selecting a wireless network;⁹² and (iii) fiber network connections may sometimes be more attractive since they are more reliable and less susceptible to weather conditions.⁹³ In the Exchanges' view, the location of the Data Center Pole to which ICE affiliates have exclusive access should not be determinative of whether third-party wireless connectivity providers can compete with IDS.⁹⁴

The Exchanges state that the proposed pricing is reasonable because the services are voluntary, market participants may select the connectivity options that best suit their needs, and the fees reflect the benefit received by customers in terms of lower latency over the fiber optics

⁸⁹ See Wireless I Notice, supra note 3, at 8943; Wireless II Notice, supra note 8, at 10759. The Exchanges state that IDS does not sell rights to third parties to operate wireless equipment on the pole due to space limitations, security concerns, and the interference that would arise between equipment placed too closely together. See Wireless I Notice, supra note 3, at 8945; Wireless II Notice, supra note 8, at 10759.

⁹⁰ See id.

⁹¹ See id. According to the Exchanges, other relevant variables include the wireless equipment utilized; the route of, and number of towers or buildings in, the network; and the fiber equipment used at either end of the connection. See id.

⁹² See id. According to the Exchanges, other considerations may include the bandwidth of the offered connection; amount of network uptime; the equipment that the network uses; the cost of the connection; and the applicable contractual provisions. See id.

⁹³ See Wireless I Notice, supra note 3, at 8943; Wireless II Notice, supra note 8, at 10757.

⁹⁴ See Wireless I Notice, supra note 3, at 8944-45; Wireless II Notice, supra note 8, at 10759.

options.⁹⁵ The Exchanges believe that the proposals involve an equitable allocation of fees among market participants because such fees would apply to all market participants equally and would not apply differently to distinct types or sizes of market participants.⁹⁶ In addition, the various options proposed offer market participants additional choices that they can select to best suit their needs.⁹⁷ For similar reasons, the Exchanges argue that the proposals are not unfairly discriminatory.⁹⁸

The Exchanges also state that, because substitute connectivity providers are available, the proposals do not impose an unnecessary or inappropriate burden on competition.⁹⁹ According to the Exchanges, the proposals do not affect competition among national securities exchanges or among members of the Exchanges.¹⁰⁰ Rather the Exchanges state that their filing of the proposals puts IDS at a competitive disadvantage relative to its commercial competitors that are not subject to filing requirements of Section 19(b) of the Act.¹⁰¹

Commenters on the original proposals disagreed. Because the Wireless Connections to the Secaucus and Carteret Third Party Data Centers begin and end at the Data Center Pole which is closer to the Exchanges' trading and execution systems than all other poles, commenters

⁹⁵ See Wireless I Notice, supra note 3, at 8943-44; Wireless II Notice, supra note 8, at 10757-58.

⁹⁶ See Wireless I Notice, supra note 3, at 8944; Wireless II Notice, supra note 8, at 10758.

⁹⁷ See id.

⁹⁸ See Wireless I Notice, supra note 3, at 8944; Wireless II Notice, supra note 8, at 10758-59.

⁹⁹ See Wireless I Notice, supra note 3, at 8944-45; Wireless II Notice, supra note 8, at 10759.

¹⁰⁰ See id.

¹⁰¹ See id.

objected that IDS's exclusive access to the Data Center Pole would make fair competition in the relevant market impossible.¹⁰² In short, commenters stated that the disparity in access to the Data Center Pole would give IDS an exclusive geographic latency advantage enabling IDS to provide the fastest possible means of communication to the Exchanges that competitors could not overcome.¹⁰³

One of these commenters estimated the Data Center Pole to be "approximately 700 feet closer to the NYSE matching engine" than the closest commercial poles available to all other wireless connectivity vendors.¹⁰⁴ This commenter stated that "timely receipt of market data is essential to trading competitively in today's markets,"¹⁰⁵ and while it may not seem like a significant distance, "the delay of data through 700 feet of fiber is meaningful in today's markets."¹⁰⁶ This commenter and others believed that the Wireless Connections, as originally proposed, were designed with a structural geographic latency advantage rendering the

¹⁰² See generally McKay Letter I; Bloomberg Letter I; Virtu Letter I; XRS Letter; FIA Letter; SIFMA Letter I, Letter from Jim Considine, Chief Financial Officer, McKay Brothers, LLC to Vanessa Countryman, Secretary, Commission, dated March 17, 2020 ("McKay Letter II"); Letter from Andrew Stevens, General Counsel, IMC Financial Markets to Vanessa Countryman, Secretary, Commission, dated March 12, 2020 ("IMC Letter"). See also Citadel Letter (stating its view that rigorous regulatory oversight over the "modern version of the door of the exchange" is necessary).

¹⁰³ See, e.g., McKay Letter I at 8-10; ("McKay Letter II") at 3; Bloomberg Letter I at 4; IMC Letter at 2; XRS Letter at 1-2; Virtu Letter I at 3, 8-10; FIA Letter at 3; SIFMA Letter I at 3.

¹⁰⁴ See McKay Letter I at 8-11 (noting that its distance estimate is a good-faith, educated guess, but that additional transparency on the matter is needed). This commenter also states that distribution of Selected Market Data via the Wireless Market Data Connections is discriminatory because it is distributed in a different manner than Selected Market Data obtained otherwise than via the Wireless Connections. See McKay Letter II at 2-3.

¹⁰⁵ Id. at 3.

¹⁰⁶ See McKay Letter I at 8.

availability of true substitutes impossible, and therefore that the Wireless Connections were in fact proposed to be offered on terms that were unfairly discriminatory and would impose an inappropriate burden on competition, inconsistent with the Exchange Act.¹⁰⁷

Relatedly, some commenters stated that restricted access to the Data Center Pole would enable the Exchanges to charge unreasonable or unfairly discriminatory fees.¹⁰⁸ One commenter stated that connecting to the Exchanges through another means, such as through fiber-optic cables or another connectivity service rather than through the Wireless Connections, results in a slower connection that harms a broker-dealer's ability to provide best execution to clients.¹⁰⁹ The commenter further stated that for regulatory and competitive reasons, most broker-dealers feel they must purchase the fastest connectivity services to remain in business—without regard to the price of the Exchanges' connectivity service offerings compared to alternatives.¹¹⁰

¹⁰⁷ See McKay Letter I at 2, 8-12; McKay Letter II at 2-3. See also IMC Letter at 2 (“In a market where equidistant cabling is required for connections between a participant’s co-located customer equipment to the Exchange’s matching engine, NYSE’s suggestion that the 700 foot difference between the NYSE Pole and others outside their premises is immaterial is ludicrous.”); FIA Letter at 2; McKay Letter I at 11; XRS Letter at 2-3. An additional commenter states that the contention that there is competition for exchange connectivity, and that other providers can offer the same or similar access and latency is “simply false.” See Virtu Letter I at 9. This commenter also contrasts exclusive access to the private pole with the Exchanges offering third-party firms the option to co-locate on their premises through other means. See *id.* at 2.

¹⁰⁸ See, e.g., Bloomberg Letter I at 5 (adding that the “little to no attempt” is made to discuss the implications of the exclusive privilege afforded to IDS to operate the Wireless Connections that are on the Mahwah Data Center property); Virtu Letter I at 2; SIFMA Letter I at 3 (addressing the Wireless Market Data Connections specifically).

¹⁰⁹ See SIFMA Letter I at 3.

¹¹⁰ See *id.*

The Exchanges submitted a response to these comments defending their view that the Wireless Connections were subject to competition.¹¹¹ “While having a pole 700 feet closer to a facility is a positive factor for latency,” they stated, “it is just one of a list of factors that determine the network’s latency levels.”¹¹² According to the Exchanges, the fact that the Wireless Connections and Data Center are not new and competition has “continued to develop” since 2016 demonstrates that use of the Data Center Pole is not required for third parties to compete with the Wireless Connections.¹¹³ The Exchanges further defended the choice to limit access to the Data Center Pole, noting that it is smaller than commercial poles and that space limitations, security concerns, and interference are practical factors that are a “real concern.”¹¹⁴ They also stated that IDS does not believe that its wireless network offers the fastest commercial option, and market participants “often choose not to use IDS.”¹¹⁵

Several commenters responded that these arguments were unpersuasive,¹¹⁶ with one commenter in particular emphasizing that the key issue was not whether competition exists, but

¹¹¹ See generally First NYSE Response (stating that approval of the Wireless I and Wireless II proposals would enhance competition, while disapproval would reduce the number of competitors offering wireless connectivity services).

¹¹² See *id.* at 6. The Exchanges state that contrary to the suggestion of some commenters, the Wireless Connections do not use the Mahwah Data Center roof, nor does IDS expect to put any equipment on the roof for any services it offers or allow others to do so. See *id.* at 5.

¹¹³ See *id.* at 6.

¹¹⁴ See *id.* at 7.

¹¹⁵ See *id.* at 5-6.

¹¹⁶ See Letter from McKay Brothers, LLC to Vanessa Countryman, Secretary, Commission, dated June 12, 2020 (“McKay Letter III” at 2; Letter from Gregory Babyak, Global Head of Regulatory Affairs, Bloomberg L.P. to Vanessa Countryman, Secretary, Commission, dated June 12, 2020 (“Bloomberg Letter II”) at 4.

whether that competition is fair.¹¹⁷ This commenter stated that space limitations, security concerns, and interference on the Data Center Pole were not a justification for the exclusive latency advantage for which the Exchanges were seeking approval, nor an explanation for why that advantage did not constitute unfair discrimination or a burden on competition not necessary or appropriate in furtherance of the Act.¹¹⁸ Estimating the apparent geographic latency advantage to be approximately 700 feet (or approximately 1 microsecond), this commenter also expressed concern about the potential for less obvious ways that an exchange or its preferred provider might benefit from undisclosed latency advantages.¹¹⁹ The commenter urged that the relevant inquiry with respect to the Wireless Connections is a comparison of (i) the length and latency of the connection between the matching engine and Mahwah Data Center Pole relative to (ii) the length and latency of the connection between the matching engine and the nearest public pole.¹²⁰

Following the submission of these comments, the Exchanges filed Partial Amendment No. 1, and a second response letter, proposing to add new rules to “negate proximity differences and articulate a connectivity policy that requires the length of the connection into the data center from the Data Center Pole to be no less than the connection from the closest commercial pole to the same point.”¹²¹ Commenters on Partial Amendment No. 1 generally commended the

¹¹⁷ See McKay Letter III at 4-7, 9, 9 n.33 (stating that its focus was on the segment closest to the Exchanges’ data center that “no competitor can replicate.”).

¹¹⁸ Id. at 1-2.

¹¹⁹ See id. at 9 (noting that some connections may have a longer fiber route than others within a data center or may have to go through various equipment or meet me rooms that an affiliate or preferred provider of an exchange does not).

¹²⁰ Id.

¹²¹ See Letter from Elizabeth K. King, Chief Regulatory Officer, ICE, General Counsel & Corporate Secretary, NYSE, to Vanessa Countryman, Secretary, Commission, dated July

Exchanges' efforts to eliminate any unfair competitive advantage enjoyed by the Wireless Connections,¹²² but some expressed concern that Partial Amendment No. 1 lacked a firm commitment and sufficient detail to establish that the Exchanges were in fact proposing a level playing field for competitors.¹²³ One commenter, however, stated that limiting IDS's geographic advantage "should provide other wireless connectivity service providers with the opportunity to compete with [IDS]," and that despite the Exchanges proposing to charge market participants a significant initial fee and recurring monthly fees per wireless connection, "the fact that competitors can offer the same level of wireless connectivity services should constrain the price for NYSE's wireless connectivity services."¹²⁴ This commenter urged the Commission to continue to monitor for other restrictions or conditions that would give IDS an advantage over

31, 2020, responding to comments on Wireless I and Wireless II and describing Partial Amendment No. 1 ("Second NYSE Response") at 4. Subsequently, IDS also submitted a comment letter stating that it "strongly supports and agrees with" the First NYSE Response and Second NYSE Response. See letter from Doris Choi, Co-General Counsel, ICE Data Services, to Vanessa Countryman, Secretary, Commission, dated September 14, 2020 at 2.

¹²² See Letter from Jim Considine, Chief Financial Officer, McKay Brothers, LLC to Vanessa Countryman, Secretary, Commission, dated August 28, 2020 ("McKay Letter IV") at 1-2; Letter from Thomas M. Merritt, Deputy General Counsel, Virtu Financial to Vanessa Countryman, Secretary, Commission, dated August 28, 2020 ("Virtu Letter II") at 2; Letter from Ellen Greene, Managing Director, Securities Industry and Financial Markets Association, to Vanessa Countryman, Secretary, Commission, dated September 2, 2020 ("SIFMA Letter II") at 3.

¹²³ See, e.g., McKay Letter IV at 2-4, 6-8 (stating that the Exchanges should commit to retiring the exclusive Data Center Pole in the long term, but expressing support in the short term for a latency neutralization policy with additional detail and a firmer commitment to achieve latency neutralization (e.g., with a revised definition of Data Center Pole to prevent the Exchanges from circumventing latency restrictions by opening the Data Center Pole to a limited number of affiliates or third parties without providing fair and equal access to all), and a commitment to equalize the length of the public fiber path to a customer's cabinet in co-location (as opposed to the more general "length of the

competitors and consequently affect the ability for market participants to choose competing wireless connectivity services.¹²⁵

Following the submission of these comments, the Exchanges withdrew Partial Amendment No. 1 and replaced it in its entirety with Partial Amendment No. 2.¹²⁶ In response to commenters' concerns, the Exchanges represented that they are "committed to the principal of having no measurable latency differential due to [their] use of a Data Center Pole,"¹²⁷ and made several changes to the measures proposed in Partial Amendment No. 1. Specifically, the Exchanges revised their proposed definition of "Data Center Pole" to define it by reference to its location on the grounds of the Mahwah Data Center, instead of defining it by which entities have access to it.¹²⁸ The Exchanges also added further specificity to their proposed measures, such as by describing the relevant length of equalization as the "fiber path," and clarifying that the "Data

connection to the network row"), and account for the air path to each Third Party Data Center); Virtu Letter II at 2 (arguing similarly for additional details and a firmer commitment to achieve latency neutralization); Letter from Tyler Gellasch, Executive Director, Healthy Markets Association to Vanessa Countryman, Secretary, Commission, dated September 11, 2020 ("Healthy Markets Letter II") at 5 ("To what extent does Amendment No. 1 re-level the playing field between third-party providers and ICE Data Services?"). See also Letter from Gregory Babyak, Global Head of Regulatory Affairs, Bloomberg L.P. to Vanessa Countryman, Secretary, Commission, dated August 28, 2020 ("Bloomberg Letter III") at 3 (arguing that the Exchanges still had not justified adequately the proposed fees or provided information that would allow the Commission to determine their consistency with the Act); Healthy Markets Letter II at 4-5 (similarly arguing that the Exchanges' proposals, as modified by Partial Amendment No. 1, did not provide adequate information to establish that the proposals are not unfairly discriminatory, impose reasonable and equitably allocated fees, and do not impose undue burdens on competition).

¹²⁴ See SIFMA Letter II at 3.

¹²⁵ See id. at 4 (adding that SIFMA would not support "practices that cannot be copied by competitors."). See also Virtu Letter at 3 ("[W]e encourage NYSE and other exchanges be vigilant in ensuring that such offerings continue to be made available on fair and reasonable terms.").

¹²⁶ See supra note 15 and accompanying text.

Center Pole” or “Commercial Pole” includes “a pole or other structure” holding wireless equipment.¹²⁹ In addition, with respect to the Wireless Bandwidth Connections specifically, the Exchanges proposed to use the “Patch Panel Point” as the “end point” for the fiber length measurements.¹³⁰ Partial Amendment No. 2 did not incorporate the commenter suggestion that the Exchanges account for “over-the-air” latency differentials between the Data Center Pole and the Closest Commercial Pole with respect to each Third Party Data Center, arguing that any measurements of over-the-air distances to the Third Party Data Centers would be “arbitrary at best.”¹³¹

In addition, the Exchanges made several additional representations in Partial Amendment No. 2. Among them, the Exchanges represented that they would monitor their own compliance

¹²⁷ See Wireless I Partial Amendment No. 2, supra note 15, at 10; Wireless II Partial Amendment No. 2, supra note 15, at 10.

¹²⁸ See Wireless I Partial Amendment No. 2, supra note 15, at 5; Wireless II Partial Amendment No. 2, supra note 15, at 5.

¹²⁹ See id. (emphasis added).

¹³⁰ The Exchanges represent that every provider of wireless connectivity to co-location customers, including IDS and each of its competitors, is connected to the Patch Panel Point, and that the length of the fiber path from the Patch Panel Point to each Customer Cabinet is the same. The proposed rules would therefore account for distances within the Mahwah Data Center by measuring to and from the Patch Panel Point, after which end point the fiber path length to each Customer Cabinet is already equalized. See Wireless I Partial Amendment No. 2, supra note 15, at 6.

¹³¹ See Wireless I Partial Amendment No. 2, supra note 15, at 6; Wireless II Partial Amendment No. 2, supra note 15, at 5-6. The Exchanges also explain that they did not incorporate this suggestion since the proposed rule addresses the distance between any Data Center Pole and the Patch Panel Point, not the distance between a Data Center Pole and Third Party Data Centers. The Exchanges believe their proposed approach is reasonable, citing as support McKay Letter III, which stated that “the relevant

with the proposed rules.¹³² In response to commenter requests that the proposed rules address what would happen if the Exchanges or an ICE affiliate used a wireless pole on private property off the grounds of the Mahwah Data Center, each of the Exchanges represented that “the Exchange and IDS would have no special access or exclusive rights with respect to any commercial pole off the grounds of the Mahwah data center,” and that “[t]hey would compete for the use of such grounds or any pole built on them, just like IDS does for the other poles in its wireless network.”¹³³ In addition, the Exchanges represented that “if the rule is approved, once the required changes are implemented, the Exchange[s] commit[] to have the latency of the fiber route between the Data Center Pole and Patch Panel Point measured.”¹³⁴

The Commission received two comment letters on Partial Amendment No. 2 before it was withdrawn. One commenter commended the Exchanges’ additional measures, but objected that the Exchanges’ efforts to neutralize the advantages enjoyed by the Wireless Connections are

comparison is (a) the length and latency of the connection between the matching engine and the NYSE Private Pole relative to (b) the length and latency of the connection between the matching engine and the nearest public pole.” See id. See also supra note 120 and accompanying text.

¹³² See Wireless I Partial Amendment No. 2, supra note 15, at 11 (“The Exchange will monitor its compliance with the proposed rule.”); Wireless II Partial Amendment No. 2, supra note 15, at 10.

¹³³ See Wireless I Partial Amendment No. 2, supra note 15, at 6-7; Wireless II Partial Amendment No. 2, supra note 15, at 6.

¹³⁴ Specifically, “[i]f a third party that uses the closest Commercial Pole allows the Exchange or its ICE Affiliate to measure the latency of its fiber route between the closest Commercial Pole and the Patch Panel Point, the Exchange undertakes to ensure that its latency is no less than that third party’s latency, so long as (a) the third party equipment is the same or substantially similar to the equipment that the Exchange or its ICE Affiliate uses, and (b) the third party allows the Exchange or its ICE Affiliate to make latency measurements at least annually.” See Wireless I Partial Amendment No. 2, supra note 15, at 6-7. See also Wireless II Partial Amendment No. 2, supra note 15, at 10-11 (committing similarly to have the latency of the fiber route between the Data Center Pole and the Production Point measured).

incomplete without, at a minimum, accounting for over-the-air geographic differences in connecting to Third Party Data Centers.¹³⁵ This commenter previously argued that, after accounting for “over-the-air latency differentials” between the Data Center Pole and the “closest” commercial pole with respect to each Third Party Data Center, a single “closest” commercial pole may be the closest for a connection to one Third Party Data Center but not another.¹³⁶ The other commenter concurred and further opined that the “fairest configuration would be to have all equipment located together.”¹³⁷

Following the submission of these comments, the Exchanges withdrew Partial Amendment No. 2 and replaced it in its entirety with Partial Amendment No. 3.¹³⁸ In Partial Amendment No. 3, the Exchanges propose the same measures as those proposed in Partial Amendment No. 2, but now further propose to account for “over-the-air” distances in connecting to Third Party Data Centers.¹³⁹ Specifically, as described in more detail above,¹⁴⁰ and as

¹³⁵ See Letter from Jim Considine, Chief Financial Officer, McKay Brothers, LLC to Vanessa Countryman, Secretary, Commission, dated September 21, 2020 (“McKay Letter V”) at 1-2. This commenter also questions whether the Exchanges’ statement that the length of the fiber path from the Patch Panel Point to each customer cabinet in the space used for co-location in the Mahwah Data Center is the same as committing to equalize latency between those two points. See *id.* at 5.

¹³⁶ See McKay Letter IV at 6 (commenting on Partial Amendment No. 1). For example, according to this commenter, the closest commercial pole for a connection from the Mahwah Data Center to the Third Party Data Center in Carteret (south of the Mahwah Data Center) may be different than for a connection from the Third Party Data Center in Markham (north of the Mahwah Data Center). See *id.*

¹³⁷ See Letter from Joanna Mallers, Secretary, FIA Principal Traders Group, to Vanessa Countryman, Secretary, Commission, dated September 25, 2020 at 2.

¹³⁸ See *supra* note 16 and accompanying text.

¹³⁹ See Wireless I Partial Amendment No. 3, *supra* note 16, at 6; Wireless II Partial Amendment No. 3, *supra* note 16, at 6.

¹⁴⁰ See also *supra* Section III.A (describing the measures proposed in Partial Amendment No. 3).

suggested by commenters, the Exchanges propose to use geodesic distances in comparing the distances between the Data Center Pole and the Closest Commercial Pole in relation to the relevant Third Party Data Center.¹⁴¹ The Exchanges believe that these measures take into account commenter concern that “irrespective of the route taken from Nasdaq Inc.’s . . . data center in Carteret to the Mahwah Data Center, the minimum distance that must be traveled is shorter via the Data Center Pole than via the closest commercial pole.”¹⁴² In addition, the Exchanges again represent they that would each monitor their own compliance with the proposed rules.¹⁴³ They also again represent that if the Exchanges or an ICE affiliate used a wireless pole on private property off the grounds of the Mahwah Data Center, then “the Exchange and IDS would have no special access or exclusive rights with respect to any commercial pole off the grounds of the Mahwah data center,” and “[t]hey would compete for the use of such grounds or any pole built on them, just like IDS does for the other poles in its wireless network.”¹⁴⁴ Further, the Exchanges again represent that “if the rule is approved, once the required changes are

¹⁴¹ See Wireless I Partial Amendment No. 3, supra note 16, at 6; Wireless II Partial Amendment No. 3, supra note 16, at 6. The Exchanges state that “[t]his approach is consistent with comments received.” See id. (footnote omitted) (citing McKay Letter IV at 6-7). See also McKay Letter IV at 6-7 (footnote omitted) (emphasis added) (proposing that, for each Third Party Data Center, the Exchanges’ rules require that latency be equalized between the Data Center Pole and the Closest Commercial Pole based on “the sum of (i) the fiber length from each pole into the Data Center; and (ii) any differential (positive or negative) in geodesic distance between the pole and the third party data center.”).

¹⁴² See Wireless I Partial Amendment No. 3, supra note 16, at 6 (quoting McKay Letter V at 4); Wireless II Partial Amendment No. 3, supra note 16, at 6. See also supra note 136 and accompanying text.

¹⁴³ See Wireless I Partial Amendment No. 3, supra note 16, at 11 (“The Exchange will monitor its compliance with the proposed rule.”); Wireless II Partial Amendment No. 3, supra note 16, at 11.

¹⁴⁴ See Wireless I Partial Amendment No. 3, supra note 16, at 6; Wireless II Partial Amendment No. 3, supra note 16, at 6.

implemented, the Exchange[s] commit[] to have the latency of the fiber route between the Data Center Pole and Patch Panel Point measured.”¹⁴⁵

b. Application of the Market Based Test

As discussed above,¹⁴⁶ the Commission’s market-based test considers “whether the exchange was subject to significant competitive forces in setting the terms of its proposal . . . , including the level of any fees.”¹⁴⁷ If an exchange meets this burden, then the Commission will find that its proposal is consistent with the Act unless “there is a substantial countervailing basis to find that the terms” of the proposal violate the Act or the rules thereunder,¹⁴⁸ as discussed further below.

¹⁴⁵ Specifically, “[i]f a third party that uses the closest Commercial Pole allows the Exchange or its ICE Affiliate to measure the latency of its fiber route between the closest Commercial Pole and the Patch Panel Point, the Exchange undertakes to ensure that its latency is no less than that third party’s latency, so long as (a) the third party equipment is the same or substantially similar to the equipment that the Exchange or its ICE Affiliate uses, and (b) the third party allows the Exchange or its ICE Affiliate to make latency measurements at least annually.” See Wireless I Partial Amendment No. 3, supra note 16, at 11. See also Wireless II Partial Amendment No. 3, supra note 16, at 11 (committing similarly to have the latency of the fiber route between the Data Center Pole and the Production Point measured). The Exchanges state that because no known commercial provider (including ICE affiliates) has a network that follows the geodesic route, and because the routes they do follow are both changeable and not publicly available, the Exchanges cannot ensure that they would have access to the information required to measure what differences exist in the path followed between the Closest Commercial Pole and any Third Party Data Center. See Wireless I Partial Amendment No. 3, supra note 16, at 6; Wireless II Partial Amendment No. 3, supra note 16, at 6.

¹⁴⁶ See supra Section III.B.1.

¹⁴⁷ See ArcaBook Approval Order, supra note 75, at 74781 (emphasis added). If an exchange cannot demonstrate that it was subject to significant competitive forces, it must “provide a substantial basis, other than competitive forces, . . . demonstrating that the terms of the proposal are equitable, fair, reasonable, and not unreasonably discriminatory.” Id.

¹⁴⁸ Id. (emphasis added).

The Commission believes the Exchanges have demonstrated that they are subject to significant competitive forces in setting the terms on which they offer Wireless Connections through the Data Center Pole, in particular because substantially similar substitutes are available.¹⁴⁹ The Commission has indicated that the availability of alternatives can impose competitive restraints to ensure that the Exchanges act equitably, fairly, and reasonably.¹⁵⁰

The Exchanges describe several competing wireless connections offered by non-ICE entities that they state provide connectivity at the “same or similar speed” as the Wireless Connections, and at the “same or similar cost,”¹⁵¹ and state that some market participants have their own proprietary wireless networks, as well as that market participants may create a new proprietary wireless connection, connect through another market participant, or use fiber connections offered by the Exchanges, ICE affiliates, other service providers, and third party telecommunications providers.¹⁵² With respect to the Wireless Connections with Carteret and Secaucus, which make use of the Data Center Pole, commenters (including competitors to IDS as well as market participants choosing among competitors) objected that IDS’s exclusive access to the Data Center Pole and its associated geographic latency advantage would essentially make the availability of true substitutes impossible. In Partial Amendment No. 3, however, the Exchanges substantially mitigate the geographic latency advantage by adding rules requiring fiber-length equalization measures on the segment closest to the Exchanges’ data center over which they have

¹⁴⁹ See ArcaBook Approval Order, supra note 75, at 74785; SIFMA Decision, supra note 76, at 43-44 (citation omitted) (“We recognize that products need not be identical to be substitutable.”).

¹⁵⁰ See ArcaBook Approval Order, supra note 75, at 74785.

¹⁵¹ See supra note 86 and accompanying text.

¹⁵² See supra note 88 and accompanying text.

control and which take into account the geodesic (or “over-the-air”) distance of each Third Party Data Center. As such, the measures proposed in Partial Amendment No. 3 allow competitors to offer a more similar service than they otherwise could in the absence of these measures.

Some commenters stated that the Exchanges should also commit to providing competitors with full access to the Data Center Pole to level the playing field completely. While doing so may further reduce the potential for differences between competing services, as previously stated, services need not be identical to be substitutable.¹⁵³ Separately, the Wireless Connections with Markham do not use the Data Center Pole,¹⁵⁴ and one commenter states that “there appears to be a level playing field for all market participants choosing to access NYSE’s offering in Markham.”¹⁵⁵

Based on the record, the Commission believes that there are alternatives to the Wireless Connections and Partial Amendment No. 3 is designed to further ensure that competitors can offer wireless connectivity services sufficiently comparable to those offered by the Exchanges. Thus, the Commission finds that the Exchanges are subject to significant competitive forces that constrain the terms on which the Wireless Connections are offered, and will approve the proposals, as amended, because there is no substantial countervailing basis to find that the terms of the proposals, as amended, violate the Act or the rules thereunder.¹⁵⁶

As discussed above, commenters on the original proposals argued that the Exchanges had not met their burden of demonstrating that the Wireless Connections are consistent with the Act

¹⁵³ See supra notes 146-150 and accompanying text.

¹⁵⁴ See supra note 32.

¹⁵⁵ Virtu Letter II at 3.

¹⁵⁶ See BOX Order, supra note 74, at 18620-21 (applying the Commission’s market-based test).

because the proximity of the Data Center Pole to the Mahwah Data Center and IDS's exclusive access to it conferred an insurmountable geographic latency advantage to IDS that was unfairly discriminatory and an inappropriate burden on competition.¹⁵⁷ In response to these comments and others, the Exchanges have proposed new rules to substantially mitigate the geographic latency advantage associated with the Data Center Pole, thereby ensuring that competing wireless connectivity service providers will have the opportunity to compete without the measurable and ostensible geographic latency advantage the Wireless Connections would otherwise have by virtue of the location of a Data Center Pole, and offer wireless connectivity services sufficiently comparable to the Wireless Connections.¹⁵⁸ Accordingly, the Commission finds that the Wireless Connections are not offered on terms that are unfairly discriminatory or would impose an inappropriate burden on competition, and otherwise finds no substantial countervailing basis on which to disapprove the proposals, as amended.¹⁵⁹

Based on its finding that there are substantially similar substitutes to the Wireless Connections that bring significant competitive forces to bear on the equitableness and reasonableness of fees, the Commission finds the proposed rule changes, as modified by Partial Amendment No. 3, to be consistent with Section 6(b)(4) of the Act,¹⁶⁰ which requires that the

¹⁵⁷ See supra notes 103, 107, 122-125 and accompanying text.

¹⁵⁸ See supra notes 122-125 and accompanying text (referencing comments that the originally proposed unfair competitive advantage could be addressed).

¹⁵⁹ The Exchanges argue that their filing of the proposals puts IDS at a competitive disadvantage relative to its commercial competitors that are not subject to the filing requirements of Section 19(b) of the Act. Because the Wireless Connections are facilities of the Exchanges, however, the Commission must assess whether the terms on which they are offered are consistent with the Exchange Act.

¹⁶⁰ 15 U.S.C. 78f(b)(4).

rules of a national securities exchange provide for the equitable allocation of reasonable dues, fees, and other charges among its members and issuers and other persons using its facilities.

Further, because the Wireless Connections are designed to offer market participants a means to minimize the latency of their communications and receipt of Selected Market Data and thereby enhance the efficiency of their trading strategies on the Exchanges and elsewhere, and competitors may offer a similar level of services as a result of the fiber-length equalization measures, the Commission finds the proposals to be consistent with the Section 6(b)(5) of the Act, which requires that the rules of a national securities exchange be designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and in general, to protect investors and the public interest, and not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.¹⁶¹

In addition, the Commission believes that the fiber-length equalization measures proposed in Partial Amendment No. 3 will enhance competition in the market for wireless connectivity services between the Mahwah Data Center and Third Party Data Centers, and therefore that the proposals, as amended, are consistent with Section 6(b)(8) of the Act, which prohibits any national securities exchange rule from imposing any burden on competition that is not necessary or appropriate in furtherance of the Act.

In making these findings, the Commission has also taken into consideration certain representations made by the Exchanges in Partial Amendment No. 3.¹⁶² Consistent with their representations, the Commission expects the Exchanges to adhere to the principle of having no

¹⁶¹ 15 U.S.C. 78f(b)(5).

¹⁶² See discussion of Partial Amendment No. 3 supra.

measurable latency differential due to their use of the Data Center Pole.¹⁶³ Further, the Commission expects the Exchanges, as well as the Commission staff, to monitor the Wireless Connections, particularly as market conditions and technology evolve, to assess whether conditions continue to permit competitors to offer substantially similar substitutes for the Wireless Connections.

IV. Solicitation of Comments on Partial Amendment No. 3

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether Partial Amendment No. 3 to each of the Wireless I and Wireless II proposals 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. Please include File Nos. SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SR-NYSENAT-2020-03, SR-NYSE-2020-11, SR-NYSEAMER-2020-10, SR-NYSEArca-2020-15, SR-NYSECHX-2020-05, SR-NYSENAT-2020-08 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 Nos. SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SR-NYSENAT-2020-03, SR-NYSE-2020-11, SR-

¹⁶³ See Wireless I Partial Amendment No. 3, *supra* note 16, at 10; Wireless II Partial Amendment No. 3, *supra* note 16, at 10.

NYSEAMER-2020-10, SR-NYSEArca-2020-15, SR-NYSECHX-2020-05, and SR-NYSENAT-2020-08. The file numbers 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 Exchanges. 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 publicly available. All submissions should refer to File Nos. SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SR-NYSENAT-2020-03, SR-NYSE-2020-11, SR-NYSEAMER-2020-10, SR-NYSEArca-2020-15, SR-NYSECHX-2020-05, and SR-NYSENAT-2020-08 and should be submitted on or before **[INSERT DATE 21 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

V. Accelerated Approval of Proposed Rule Changes, as Modified by Partial Amendment No. 3

The Commission finds good cause to approve the proposed rule changes, each as modified by Partial Amendment No. 3, prior to the thirtieth day after the date of publication of

notice of the amended proposal in the Federal Register. The revisions made to the proposals in Partial Amendment No. 3 would place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for the Wireless Connections. The Commission believes that Partial Amendment No. 3 addresses issues raised by the comments and provides substantially greater support for the conclusion that the Wireless Connections are offered in a market characterized by significant competition in which substantially similar substitutes are available. Further, approval of the proposals will permit competition to continue, rather than reduce the number of competitors in the market for wireless connectivity services. Accordingly, the Commission finds good cause, pursuant to Section 19(b)(2) of the Act,¹⁶⁴ to approve the proposed rule changes, each as modified by Partial Amendment No. 3, on an accelerated basis.

VI. Conclusion

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Act,¹⁶⁵ that the proposed rule changes (SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SR-NYSENAT-2020-03, SR-NYSE-2020-11, SR-NYSEAMER-2020-10, SR-NYSEArca-2020-15, SR-NYSECHX-2020-05, SR-NYSENAT-2020-08) be, and hereby are, approved on an accelerated basis.

By the Commission.

Vanessa A. Countryman,

Secretary.

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¹⁶⁴ 15 U.S.C. 78s(b)(2).

¹⁶⁵ See id.