

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-86335; File No. SR-BOX-2019-22)

July 9, 2019

Self-Regulatory Organizations; BOX Exchange LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the Fee Schedule on the BOX Options Market LLC (“BOX”) Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on June 26, 2019, BOX Exchange LLC (the “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange filed the proposed rule change pursuant to Section 19(b)(3)(A)(ii) of the Act,<sup>3</sup> and Rule 19b-4(f)(2) thereunder,<sup>4</sup> which renders the proposal effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization’s Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange is filing with the Securities and Exchange Commission (“Commission”) a proposed rule change to amend the Fee Schedule on the BOX Options Market LLC (“BOX”) facility. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission’s Public Reference Room and also on the Exchange’s Internet website at <http://boxexchange.com>.

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

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

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

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

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

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

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

1. Purpose

The Exchange proposes to amend Section VI. (Technology Fees) of the BOX Fee Schedule to establish BOX Connectivity Fees for Participants and non-Participants who connect to the BOX network. Connectivity fees will be based upon the amount of bandwidth that will be used by the Participant or non-Participant. Further, BOX Participants or non-Participants connected as of the last trading day of each calendar month will be charged the applicable Connectivity Fee for that month. The Connectivity Fees will be as follows:

<b>Connection Type</b>	<b>Monthly Fees</b>
Non-10 Gb Connection	\$1,000 per connection
10 Gb Connection	\$5,000 per connection

The Exchange also proposes to amend certain language and numbering in Section VI.A to reflect the changes discussed above. Specifically, BOX proposes to add the title “Third Party Connectivity Fees” under Section VI.A. Further, the Exchange proposes to add Section VI.A.2, which details the proposed BOX Connectivity Fees discussed above. Finally the Exchange is proposing to remove Section VI.C. High Speed Vendor Feed (“HSVF”), and reclassify the HSVF as a Port Fee.

The Exchange initially filed the proposed fees on July 19, 2018, designating the proposed fees effective July 1, 2018. The first proposed rule change was published for comment in the Federal Register on August 2, 2018.<sup>5</sup> The Commission received one comment letter on the proposal.<sup>6</sup> The proposed fees remained in effect until they were temporarily suspended pursuant to a suspension order (the “Suspension Order”) issued by the Division of Trading and Markets, which also instituted proceedings to determine whether to approve or disapprove the proposed rule change.<sup>7</sup> The Commission subsequently received one further comment letter on the proposed rule change, supporting the decision to suspend and institute proceedings on the proposed fee change.<sup>8</sup>

In response to the Suspension Order, the Exchange timely filed a Notice of Intention to Petition for Review<sup>9</sup> and Petition for Review to vacate the Division’s Order,<sup>10</sup> which stayed the Division’s suspension of the filing. On November 16, 2018 the Commission granted the Exchange’s Petition for Review but discontinued the automatic stay.<sup>11</sup> The Exchange then filed

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<sup>5</sup> See Securities Exchange Act Release No. 83728 (July 27, 2018), 83 FR 37853 (August 2, 2018) (SR-BOX-2018-24).

<sup>6</sup> See Letter from Tyler Gellasch, Executive Director, The Healthy Markets Association, to Brent J. Fields, Secretary, Commission, dated August 23, 2018 (“Healthy Markets Letter”).

<sup>7</sup> See Securities Exchange Act Release No. 34-84168 (September 17, 2018).

<sup>8</sup> See Letter from Theodore R. Lazo, Managing Director and Associate General Counsel, and Ellen Greene, Managing Director, Financial Services Operations, Securities Industry and Financial Markets Association, dated October 15, 2018.

<sup>9</sup> See Letter from Amir Tayrani, Partner, Gibson, Dunn & Crutcher LLP, dated September 19, 2018.

<sup>10</sup> See Petition for Review of Order Temporarily Suspending BOX Exchange LLC’s Proposal to Amend the Fee Schedule on BOX Market LLC, dated September 26, 2018.

<sup>11</sup> See Securities Exchange Act Release No. 84614. Order Granting Petition for Review and Scheduling Filing of Statements, dated November 16, 2018. Separately, the Securities Industry and Financial Markets Association filed an application under Section 19(d) of the Exchange Act challenging the Exchange’s proposed fees as alleged prohibitions or

a statement to reiterate the arguments set for in its petition for review and to supplement that petition with additional information.<sup>12</sup>

The Exchange subsequently refiled its fee proposal on November 30<sup>th</sup>, 2018. The proposed fees were noticed and again temporarily suspended pursuant to a suspension order issued by the Division of Trading and Markets, which also instituted proceedings to determine whether to approve or disapprove the proposed rule change.<sup>13</sup> The Commission received two comment letters supporting the decision to suspend and institute proceedings on the proposed fee change.<sup>14</sup>

The Exchange again refiled its fee proposal on February 13, 2019. The proposed fees were noticed and again temporarily suspended pursuant to a suspension order issued by the Division of Trading and Markets, which also instituted proceedings to determine whether to

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limitations on access. *See In re Securities Industry and Financial Markets Association*, Admin. Proc. File No. 3-18680 (Aug. 24, 2018). The Commission thereafter remanded that denial-of-access proceeding to the Exchange while “express[ing] no view regarding the merits” and emphasizing that it was “not set[ting] aside the challenged rule change[.]” *In re Applications of SIFMA & Bloomberg*, Exchange Act Rel. No. 84433, at 2 (Oct. 16, 2018) (“Remand Order”), *available at* <https://www.sec.gov/litigation/opinions/2018/34-84433.pdf>. The Division’s Suspension Order is inconsistent with the Commission’s intent in the Remand Order to leave the challenged fees in place during the pendency of the remand proceedings and singles out the Exchange for disparate treatment because it means that the Exchange—unlike every other exchange whose rule changes were the subject of the Remand Order—is not permitted to continue charging the challenged fees during the remand proceedings.

<sup>12</sup> See Letter from Amir Tayrani, Partner, Gibson, Dunn & Crutcher LLP, dated December 10, 2018.

<sup>13</sup> See Securities Exchange Act Release No. 84823 (December 14, 2018), 83 FR 65381 (December 20, 2018) (SR-BOX-2018-37).

<sup>14</sup> See Letters from Tyler Gellasch, Executive Director, The Healthy Markets Association (“Second Healthy Markets Letter”), and Chester Spatt, Pamela R. and Kenneth B. Dunn Professor of Finance, Tepper School of Business, Carnegie Mellon University (“Chester Spatt Letter”), to Brent J. Fields, Secretary, Commission, dated January 2, 2019.

approve or disapprove the proposed rule change.<sup>15</sup> The Commission received four comment letters supporting the decision to suspend and institute proceedings on the proposed fee change.<sup>16</sup>

On March 29, 2019, the Commission issued its Order Disapproving each iteration of the BOX Proposal (“BOX Order”). In the BOX Order, the Commission highlighted a number of deficiencies it found in three separate rule filings by BOX to establish BOX’s connectivity fees that prevented the Commission from finding that BOX’s proposed connectivity fees were consistent with the Act.

Finally, on May 21, 2019 the Division of Trading and Markets released new Guidance on SRO Rule Filings Relating to Fees.

The Exchange is once again re-filing the proposed fees to address each topic raised for discussion in the BOX Order and the new guidance on SRO Fee Filings to ensure that the Proposed Fees are consistent with the Act. The proposed rule change is immediately effective upon filing with the Commission pursuant to Section 19(b)(3)(A) of the Act.

As discussed herein, the Exchange believes that it is reasonable and appropriate to begin charging for physical connectivity fees to partially offset the costs associated with maintaining and enhancing a state-of-the-art exchange network infrastructure in the US options industry. There are significant costs associated with various projects and initiatives to improve overall network performance and stability, as well as costs paid to the third-party data centers for space rental, power used, etc.

The Exchange has always offered physical connectivity to the Exchange for Participants

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<sup>15</sup> See Securities Exchange Act Release No. 85201 (February 26, 2019), 84 FR 7146 (March 1, 2019)(SR-BOX-2019-04).

<sup>16</sup> See Letters from Theodore R. Lazo, Managing Director and Associate General Counsel, SIFMA (“Second SIFMA Comment Letter”), Tyler Gellasch, Executive Director, Healthy Markets Association (“Third Healthy Markets Letter”), Stefano Durdic, Former Owner of R2G Services, LLC, and Anand Prakash.

and non-Participants to access the Exchange's trading platforms, market data, test systems and disaster recovery facilities. These physical connections consist of 10Gb and non-10Gb connections, where the 10Gb connection provides for faster processing of messages sent to it in comparison to the non-10Gb connection. Since becoming a self-regulated organization in 2012, the Exchange has not charged for physical connectivity and has instead relied on transaction fees as the basis of BOX's revenue. However, in recent years transaction fees have continually decreased across the options industry. At the same time these transactions fees were decreasing, the options exchanges except for BOX began charging physical connectivity fees to market participants. As such BOX began to find itself at a significant competitive disadvantage, and had no choice but to begin charging Participants and non-Participants fees for connecting directly to the BOX network (which the Exchange has taken considerable measures to maintain and enhance for the benefit of those Participants and non-Participants) in order to remain competitive with the other options exchanges in the industry.

As discussed in BOX's recent Petition for Review of the Commission's Order Disapproving BOX's three filings, not allowing BOX to charge such connectivity fees arbitrarily and inequitably treats the Exchange differently from each of the other exchanges that submitted prior immediately effective connectivity fee filings that were not suspended or disapproved by the Commission.<sup>17</sup> The Exchange notes that all other options exchanges currently charge for similar physical connectivity.<sup>18</sup>

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<sup>17</sup> See Securities Exchange Act Release No. 85927. Order Granting Petition for Review and Scheduling Filing of Statements, dated May 23, 2019.

<sup>18</sup> Nasdaq PHLX LLC ("Phlx"), The Nasdaq Stock Market LLC ("Nasdaq"), NYSE Arca, Inc. ("Arca"), NYSE American LLC ("NYSE American"), Nasdaq ISE, LLC ("ISE"), Cboe Exchange, Inc. ("Cboe"), Cboe BZX Exchange, Inc. ("CboeBZX"), Cboe EDGX Exchange, Inc. ("CboeEDGX") and Cboe C2 Exchange, Inc. ("C2") all offer a type of 10Gb and non-10Gb connectivity alternative to their participants. See Phlx, and ISE

## 2. Statutory Basis

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Act, in general, and Section 6(b)(4) and 6(b)(5) of the Act,<sup>19</sup> in particular, in that it provides for the equitable allocation of reasonable dues, fees, and other charges among BOX Participants and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

The Exchange believes that the proposed fees in general constitute an equitable allocation of fees, and are not unfairly discriminatory, because they allow the Exchange to recover costs associated with offering access through the network connections. The proposed fees are also expected to offset the costs both the Exchange and BOX incur in maintaining and implementing ongoing improvements to the trading systems, including connectivity costs, costs incurred on software and hardware enhancements and resources dedicated to software development, quality assurance, and technology support.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act, in that the proposed fee changes are fair, equitable and not unreasonably discriminatory, because

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Rules, General Equity and Options Rules, General 8, Section 1(b). Phlx and ISE each charge a monthly fee of \$2,500 for each 1Gb connection, \$10,000 for each 10Gb connection and \$15,000 for each 10Gb Ultra connection, which is the equivalent of the Exchange's 10Gb ULL connection. See also Nasdaq Price List – Trading Connectivity. Nasdaq charges a monthly fee of \$7,500 for each 10Gb direct connection to Nasdaq and \$2,500 for each direct connection that supports up to 1Gb. See also NYSE American Fee Schedule, Section V.B, and Arca Fees and Charges, Co-Location Fees. NYSE American and Arca each charge a monthly fee of \$5,000 for each 1Gb circuit, \$14,000 for each 10Gb circuit and \$22,000 for each 10Gb LX circuit, which is the equivalent of the Exchange's 10Gb ULL connection. See also Cboe, CboeBZX, CboeEDGX and C2 Fee Schedules. Cboe charges monthly quoting and order entry bandwidth packet fees. Specifically, Cboe charges \$1,600 for the 1st through 5th packet, \$800 for the 6th through 8th packet, \$400 for the 9th through 13th packet and \$200 for the 14th packet and each additional packet. CboeBZX, CboeEDGX and C2 each charge a monthly fee of \$2,500 for each 1Gb connection and \$7,500 for each 10Gb connection.

<sup>19</sup> 15 U.S.C. 78f(b)(4) and (5).

the fees for the connectivity alternatives available on the Exchange, as proposed, are competitive and market-driven. The U.S. options markets are highly competitive (there are currently 16 options markets) and a reliance on competitive markets is an appropriate means to ensure equitable and reasonable prices.

The Exchange acknowledges that there is no regulatory requirement that any market participant connect to the Exchange, or that any participant connect at any specific connection speed. The rule structure for options exchanges are, in fact, fundamentally different from those of equities exchanges. In particular, options market participants are not forced to connect to (and purchase market data from) all options exchanges, as shown by the number of Participants of BOX as compared to the much greater number of participants at other options exchanges. Not only does BOX have less than half the number of participants as certain other options exchanges, but there are also a number of the Exchange's Participants that do not connect directly to BOX. Further, of the number of Participants that connect directly to BOX, many such Participants do not purchase market data from BOX. In addition, of the market makers that are connected to BOX, it is the individual needs of the market maker that require whether they need one connection or multiple connections to the Exchange. The Exchange has market maker Participants that only purchase one connection (10Gb) and the Exchange has market maker Participants that purchase multiple connections. It is all driven by the business needs of the market maker. Market makers that are consolidators that target resting order flow tend to purchase more connectivity than [sic] market makers that simply quote all symbols on the Exchange. Even though non-Participants purchase and resell 10Gb and non-10Gb connections to both Participants and non-Participants, no market makers currently connect to the Exchange indirectly through such resellers.

In SIFMA's comment letter, they argue that all broker-dealers are required to connect to all exchanges which is not true in the options markets. The options markets have evolved differently than the equities markets both in terms of market structure and functionality. For example, there are many order types that are available in the equities markets that are not utilized in the options markets, which relate to mid-point pricing and pegged pricing which require connection to the SIPs and each of the equities exchanges in order to properly execute those orders in compliance with best execution obligations. In addition, in the options markets there is a single SIP (OPRA) versus two SIPs in the equities markets, resulting in few hops and thus alleviating the need to connect directly to all the options exchanges. Additionally, in the options markets, the linkage routing and trade through protection are handled by the exchanges, not by the individual participants. Thus not connecting to an options exchange or disconnecting from an options exchange does not potentially subject a broker-dealer to violate order protection requirements as suggested by SIFMA. The Exchange recognizes that the decision of whether to connect to the Exchange is separate and distinct from the decision of whether and how to trade on the Exchange. The Exchange acknowledges that many firms may choose to connect to the Exchange, but ultimately not trade on it, based on their particular business needs.

To assist prospective Participants or firms considering connecting to BOX, the Exchange provides information about the Exchange's available connectivity alternatives.<sup>20</sup> The decision of which type of connectivity to purchase, or whether to purchase connectivity at all for a particular exchange, is based on the business needs of the firm. Section 2.4 of the BOX Connectivity Guide details the bandwidth requirements depending on the type of traffic each firm requires. Simple Order routing requires 128 kbps of bandwidth, which could be achieved with a non-10Gb

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<sup>20</sup> See BOX Connectivity Guide at <https://boxoptions.com/assets/NET-BX-001E-BOX-Network-Connection-Specifications-v2.7.pdf>

connection, while receiving the five best limits in all classes for the HSVF requires a 10Gb connection not purchase such data feed products. Accordingly, purchasing market data is a business decision/choice, and thus the pricing for it is [sic] constrained by competition.

Contrary to SIFMA's argument, there is competition for connectivity to BOX. BOX competes with ten (10) non-Participants who resell BOX connectivity or market data. Those non-Participants resell that connectivity to multiple market participants over that same connection, including both Participants and non-Participants of BOX. When connectivity is re-sold by a third-party, BOX does not receive any connectivity revenue from that sale. It is entirely between the third-party and the purchaser, thus constraining the ability of BOX to set its connectivity pricing as indirect connectivity is a substitute for direct connectivity. There are currently ten (10) non-Participants that purchase connectivity to BOX. Those non-Participants resell that connectivity or market data to approximately twenty-seven (27) customers, some of whom are agency broker-dealers that have tens of customers of their own. Some of those twenty-seven (27) customers also purchase connectivity directly from BOX. Accordingly, indirect connectivity is a viable alternative that is already being used by non-Participants of BOX, constraining the price that BOX is able to charge for connectivity to its Exchange.

The Exchange is comprised of 51 Participants. Of those 51 Participants, 13 Participants have purchased 10Gb or non-10Gb connections or some combination of multiple various connections. Furthermore, every Participant who has purchased at least one connection also trades on the Exchange with the exception of one new Participant who is currently in the onboarding process. The remaining Participants who have not purchased any connectivity to the Exchange are still able to trade on the Exchange indirectly through other Participants or non-Participant service bureaus that are connected. These remaining Participants who have not

purchased connectivity are not forced or compelled to purchase connectivity, and they retain all of the other benefits of membership with the Exchange. Accordingly, Participants and non-Participants have the choice to purchase connectivity and are not compelled to do so in any way.

The Exchange believes that the proposed fees are fair, equitable and not unreasonably discriminatory because the connectivity pricing is associated with relative usage or the various market participants and does not impose a barrier to entry to smaller participants. Accordingly, the Exchange offers two direct connectivity alternatives and various indirect connectivity (via third party) alternatives, as described above. BOX recognizes that there are various business models and varying sizes of market participants conducting business on the Exchange. The non-10Gb direct connectivity alternatives<sup>21</sup> are all comprised of bandwidth of equal to or less than 1Gb and are purchased by market participants that require less bandwidth. As stated above, Section 2.4 of the BOX Connectivity Guide details the bandwidth requirements depending on the type of traffic each firm requires. While non-10Gb connections can fully support the sending of orders and the consumption of BOX's HSVF Data Feed,<sup>22</sup> these connections use less exchange resources and network infrastructure. In contrast, market participants that purchase 10Gb connections utilize the most bandwidth, and those are the participants that consume the most resources from the network. The 10Gb connection offers optimized connectivity for latency sensitive participants and is faster in round trip time for connection oriented traffic to the Exchange than the non-10Gb connection. This lower latency is achieved through more advanced

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<sup>21</sup> Non-10Gb connectivity alternatives are comprised of protocol types that are at or under 1Gb bandwidth. The protocol types are: Gigabit Ethernet, Ethernet, Fast Ethernet, Fiber Channel, OC-3, Singlemode Fiber, ISDN, POTS and T1.

<sup>22</sup> The Exchange notes that, unlike MIAX, BOX's HSVF Data Feed does not require a 10Gb physical connection. On BOX, the HSVF Data Feed can [sic] be consumed through a non-10Gb connection. On MIAX, the 1Gb connection cannot support the consumption of the top of market data feed or the depth data feed product – both require a 10Gb connection.

network equipment, such as advanced hardware and switching components, which translates to increased costs to the Exchange. Market participants that are less latency sensitive can purchase non-10Gb direct connections and quote in all products on the Exchange and consume the HSVF Market Data Feed, and such non-10Gb direct connections are priced lower than the 10Gb connections, offering smaller sized market makers a lower cost alternative.

A 10Gb connection uses at least ten times the network infrastructure as the non-10Gb connections and the Exchange has to scale our systems by the amount and size of all connections regardless of how they are used.<sup>23</sup> Accordingly, the Exchange believes that the allocation of the proposed fees (\$1,000 per non-10Gb connection and \$5,000 per 10Gb connection) are reasonable based on the network resources consumed by the market participants – lower bandwidth consuming market participants pay the least, and highest bandwidth consuming market participants pay the most, particularly since higher bandwidth consumption translates to higher costs to the Exchange.

Separately, the Exchange is not aware of any reason why market participants could not simply drop their connections and cease being Participants of the Exchange if the Exchange were to establish unreasonable and uncompetitive price increases for its connectivity alternatives. Market participants choose to connect to a particular exchange and because it is a choice, BOX must set reasonable connectivity pricing, otherwise prospective participants would not connect and existing participants would disconnect or connect through a third-party reseller of connectivity. No options market participant is required by rule, regulation, or competitive forces

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<sup>23</sup> The Exchange's network infrastructure requirements are based on the premise of all connections operating at full capacity, [sic]

to be a Participant of the Exchange.<sup>24</sup> Several market participants choose not to be Participants of the Exchange and choose not to access the Exchange, and several market participants also access the Exchange indirectly through another market participant. If all market participants were required to be Participants of each exchange and connect directly to the Exchange, all exchanges would have over 200 Participants, in line with Cboe's total membership.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the proposed fees allow the Exchange to recover a portion of the costs incurred by the Exchange associated with maintaining and enhancing a state-of-the-art exchange network infrastructure in the US options industry. Additionally, there are significant costs associated with various projects and initiatives to improve overall network performance and stability, as well as costs paid to the third-party data centers for space rental, power used, etc.

The Exchange notes that unlike its competitors, the Exchange does not own its own data center and therefore cannot control data center costs. While some of the data center expenses are fixed, much of the expenses are not fixed, and thus increases as the number of physical connections increase. For example, new non-10Gb and 10Gb connections require the purchase of additional hardware to support those connections. Further, as the total number of all connections increase, BOX needs to increase their data center footprint and consume more power, resulting in increased costs charged by their third-party data center provider. Accordingly, cost to BOX is not entirely fixed. In 2018, the annual operational expense (which relates 100% to the network infrastructure, associated data center processing equipment required to support various connections, network monitoring systems and associated software required to support the various

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<sup>24</sup> Cboe Exchange Inc. has over 200 members, Nasdaq ISE, LLC has approximately 100 members, and NYSE American LLC has over 80 members. In comparison, the BOX has 51 Participants.

forms of connectivity) was approximately \$6.4 million. This does not include additional indirect expenses that the Exchange incurs that are allocated to the support of network infrastructure of the Exchange. Additionally, every year BOX undertakes physical improvements to the BOX network. For example, in the last three years, BOX spent approximately \$2 million on physical hardware alone. As such, BOX looks to offset those costs through the proposed connectivity fees.

A more detailed breakdown of the annual operational expense in 2018 includes over \$2.8 million for space rental, power used, connections, etc. at the Exchange's data centers, over \$1.1 million for data center support and management of third party vendors, over \$700,000 in technological improvements to the data center infrastructure, over \$1.4 million for resources for technical and operational services for the Exchange's data centers and \$400,000 in market data connectivity fees. Of note, regarding market data connectivity fees, this is the cost associated with BOX consuming connectivity/content from the equities markets in order to operate the Exchange, causing BOX to effectively pay its competitors for this connectivity.

Further, as discussed herein, because the costs of operating a data center are significant and not economically feasible for the Exchange, the Exchange does not operate its own data centers, and instead contracts with a third-party data center provider. The Exchange notes that larger, dominant exchange operators own/operate their data centers, which offers them greater control over their data center costs. Because those exchanges own and operate their data centers as profit centers, the Exchange is subject to additional costs. Connectivity fees, which are charged for accessing the Exchange's data center network infrastructure, are directly related to the network and offset such costs.

As discussed herein, the Exchange now believes that it is reasonable and appropriate to

begin charging for physical connectivity fees to partially offset the costs associated with maintaining and enhancing a state-of-the-art exchange network infrastructure in the US options industry. There are significant costs associated with various projects and initiatives to improve overall network performance and stability, as well as costs paid to the third-party data centers for space rental, power used, etc. As discussed above, the Exchange notes that unlike other options exchanges, the Exchange does not own and operate its own data center and therefore cannot control data center costs. As detailed herein, the Exchange has incurred substantial costs associated with maintaining and enhancing the BOX network. These costs, coupled with the Exchange's historically low transaction fees, place BOX at a competitive disadvantage against other options exchanges who charge connectivity fees to market participants. BOX has no choice but to begin charging Participants and non-Participants fees for connecting directly to the network which the Exchange has taken considerable measures to maintain and enhance for the benefit of those Participants and non-Participants in order to remain competitive with the other options exchanges in the industry.

As the Exchange explained to the Division, the existence of robust competition between exchanges to attract order flow requires exchanges to keep prices for all of their joint services – including connectivity to the exchanges' networks at a pro-competitive level.<sup>25</sup> This conclusion is substantiated by the report prepared by Professor Janusz A. Ordover and Gustavo Bamberger addressing the theory of "Platform Competition" and its application to the pricing of exchanges' services, including connectivity services.<sup>26</sup> In the report, Ordover and Bamberger explain that

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<sup>25</sup> Letter from Lisa J. Fall, BOX, to Brent J. Fields, Secretary, Securities and Exchange Commission (Feb. 19, 2019), <https://www.sec.gov/comments/sr-box-2018-24/srbox201824-4945872-178516.pdf>.

<sup>26</sup> See Attachment to Letter from Lisa J. Fall, *supra* note 25 ("Ordover/Bamberger Statement").

“the provision of connectivity services...is inextricably linked to the provision of trading services, so that, as a matter of economics, it is not possible to appropriately evaluate the pricing of connectivity services in isolation from the pricing of trading and other ‘joint’ services offered by” an exchange. Ordover and Bamberger state that “connectivity services are an ‘input’ into trading” and that “excessive pricing of such services would raise the costs of trading on [an exchange] relative to its rivals and thus discourage trading on” that exchange.

Although the Ordover/Bamberger Statement focuses on the pricing of connectivity services by Nasdaq-affiliated equities exchanges, its “overarching conclusion...that the pricing of connectivity services should not be analyzed in isolation” applies with equal force to the proposed fees. Because BOX is engaged with rigorous competition with other exchanges to attract order flow to its platform, BOX is constrained in its ability to price its joint services – including connectivity services – at supracompetitive levels. That competition ensures that BOX’s connectivity fees are set at levels consistent with the requirements of the Exchange Act.

The Exchange again notes that other exchanges have similar connectivity alternatives for their participants, including similar low-latency connectivity. For example, Nasdaq PHLX LLC (“Phlx”), NYSE Arca, Inc. (“Arca”), NYSE American LLC (“NYSE American”) and Nasdaq ISE, LLC (“ISE”) all offer a 1Gb, 10Gb and 10Gb low latency ethernet connectivity alternatives to each of their participants.<sup>27</sup> The Exchange further notes that Phlx, ISE, Arca and NYSE American each charge higher rates for such similar connectivity to primary and secondary

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<sup>27</sup> See Phlx and ISE Rules, General Equity and Options Rules, General 8, Section 1(b). Phlx and ISE each charge a monthly fee of \$2,500 for each 1Gb connection, \$10,000 for each 10Gb connection and \$15,000 for each 10Gb Ultra connection, which the [sic] equivalent of the Exchange’s 10Gb ULL connection. See also NYSE American Fee Schedule, Section V.B, and Arca Fees and Charges, Co-Location Fees. NYSE American and Arca each charge a monthly fee of \$5,000 for each 1Gb circuit, \$14,000 for each 10Gb circuit and \$22,000 for each 10Gb LX circuit, which the [sic] equivalent of the Exchange’s 10Gb ULL connection.

facilities.<sup>28</sup> [sic]

Finally, the Exchange believes redefining the HSVF Connection Fee as a Port Fee is reasonable, equitable and not unfairly discriminatory. This classification is more accurate because an HSVF subscription is not enabled through a physical connection to the Exchange. Although market participant must be credentialed by BOX to receive the HSVF, anyone can become credentialed by submitting the required documentation.<sup>29</sup> The Exchange does not propose to alter the amount of the existing HSVF fee; subscribers to the HSVF will continue to pay \$1,500 per month. As with the Connectivity Fees, BOX's HSVF Port Fee is in line with industry practice.<sup>30</sup>

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

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. Unilateral action by the Exchange in establishing fees for services provided to its Participants and others using its facilities will not have an impact on competition. As a small exchange in the already highly competitive environment for options trading, the Exchange does not have the market power necessary to set prices for services that are unreasonable or unfairly discriminatory in violation of the Exchange Act. The Exchange's proposed fees, as described herein, are comparable to and generally lower than fees charged by other options exchanges for the same or similar services. Lastly, the Exchange believes the proposed change will not impose a burden on intramarket

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<sup>28</sup> Id.

<sup>29</sup> *See Trading Interface Specification*, BOX Options, <https://boxoptions.com/technology/trading-interface-specifications/>

<sup>30</sup> *See Cboe Data Services, LLC (CDS) Fee Schedule § VI* (charging \$500 per month for up to five users to access the Enhanced Controlled Data Distribution Program).

competition as the proposed fees are applicable to all Participants and others using its facilities that connect to BOX.

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

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Exchange Act<sup>31</sup> and Rule 19b-4(f)(2) thereunder,<sup>32</sup> because it establishes or changes a due, or fee.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend the rule change if it appears to the Commission that the action is necessary or appropriate in the public interest, for the protection of investors, or would otherwise further the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or

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<sup>31</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>32</sup> 17 CFR 240.19b-4(f)(2).

- Send an e-mail to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-BOX-2019-22 on the subject line.

Paper comments:

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

All submissions should refer to File Number SR-BOX-2019-22. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to

make available publicly. All submissions should refer to File Number SR-BOX-2019-22, and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>33</sup>

Vanessa A. Countryman  
Secretary

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<sup>33</sup> 17 CFR 200.30-3(a)(12).