SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-86343; File No. SR-PEARL-2019-21)

July 10, 2019

Self-Regulatory Organizations; MIAX PEARL, LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the MIAX PEARL Fee Schedule

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),[1] and Rule 19b-4 thereunder,[2] notice is hereby given that on June 26, 2019, MIAX PEARL, LLC ("MIAX PEARL" or "Exchange") filed with the Securities and Exchange Commission ("Commission") a proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

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

The Exchange is filing a proposal to amend the MIAX PEARL Fee Schedule (the "Fee Schedule") to modify certain of the Exchange's system connectivity fees.

The Exchange previously filed the proposal on April 30, 2019 (SR-PEARL-2019-17). That filing has been withdrawn and replaced with the current filing (SR-PEARL-2019-21).

The text of the proposed rule change is available on the Exchange's website at http://www.miaxoptions.com/rule-filings/pearl at MIAX PEARL's principal office, and at the Commission's Public Reference Room.

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

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on

1 15 U.S.C. 78s(b)(1).

2 17 CFR 240.19b-4.

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 the Fee Schedule regarding connectivity to the Exchange. Specifically, the Exchange proposes to amend Sections 5a) and b) of the Fee Schedule to increase the network connectivity fees for the 1 Gigabit ("Gb") fiber connection, the 10Gb fiber connection, and the 10Gb ultra-low latency ("ULL") fiber connection, which are charged to both Members[3] and non-Members of the Exchange for connectivity to the Exchange's primary/secondary facility. The Exchange also proposes to increase the network connectivity fees for the 1Gb and 10Gb fiber connections for connectivity to the Exchange's disaster recovery facility. Each of these connections are shared connections, and thus can be utilized to access both the Exchange and the Exchange's affiliate, Miami International Securities Exchange, LLC ("MIAX"). These proposed fee increases are collectively referred to herein as the "Proposed Fee Increases."

The Exchange initially filed the Proposed Fee Increases on July 31, 2018, designating the Proposed Fee Increases effective August 1, 2018.[4] The First Proposed Rule Change was

---

3 The term "Member" means an individual or organization that is registered with the Exchange pursuant to Chapter II of the Exchange's Rules for purposes of trading on the Exchange as an "Electronic Exchange Member" or "Market Maker." Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

4 See Securities Exchange Act Release No. 83785 (August 7, 2018), 83 FR 40101 (August 13, 2018) (SR-PEARL-2018-16) (the "First Proposed Rule Change").

published for comment in the Federal Register on August 13, 2018.[5] The Commission received one comment letter on the proposal.[6] The Proposed Fee Increases remained in effect until they were temporarily suspended pursuant to a suspension order (the "Suspension Order") issued by the Commission on September 17, 2018.[7] The Suspension Order also instituted proceedings to determine whether to approve or disapprove the proposed rule change.[8]

The Healthy Markets Letter argued that the Exchange did not provide sufficient information in its filing to support a finding that the proposal is consistent with the Act. Specifically, the Healthy Markets Letter objected to the Exchange's reliance on the fees of other exchanges to demonstrate that its fee increases are consistent with the Act. In addition, the Healthy Markets Letter argued that the Exchange did not offer any details to support its basis for asserting that the Proposed Fee Increases are consistent with the Act.

On October 5, 2018, the Exchange withdrew the First Proposed Rule Change.[9] The Exchange refiled the Proposed Fee Increases on September 18, 2018, designating the Proposed Fee Increases immediately effective.[10] The Second Proposed Rule Change was published for comment in the Federal Register on October 10, 2018.[11] The Commission received one

---

5 Id.

6 See Letter from Tyler Gellasch, Executive Director, The Healthy Markets Association, to Brent J. Fields, Secretary, Commission, dated September 4, 2018 ("Healthy Markets Letter").

7 See Securities Exchange Act Release No. 34-84177 (September 17, 2018).

8 Id.

9 See Securities Exchange Act Release No. 84397 (October 10, 2018), 83 FR 52272 (October 16, 2018) (SR-PEARL-2018-16).

10 See Securities Exchange Act Release No. 84358 (October 3, 2018), 83 FR 51022 (October 10, 2018) (SR-PEARL-2018-19) (the "Second Proposed Rule Change").

11 Id.

comment letter on the proposal.[12] The Proposed Fee Increases remained in effect until they were temporarily suspended pursuant to a suspension order (the "Second Suspension Order") issued by the Commission on October 3, 2018.[13] The Second Suspension Order also instituted proceedings to determine whether to approve or disapprove the Second Proposed Rule Change.[14]

The SIFMA Letter argued that the Exchange did not provide sufficient information in its filing to support a finding that the proposal should be approved by the Commission after further review of the proposed fee increases. Specifically, the SIFMA Letter objected to the Exchange's reliance on the fees of other exchanges to justify its own fee increases. In addition, the SIFMA Letter argued that the Exchange did not offer any details to support its basis for asserting that the Proposed Fee Increases are reasonable. On November 23, 2018, the Exchange withdrew the Second Proposed Rule Change.[15]

The Exchange refiled the Proposed Fee Increases on March 1, 2019, designating the Proposed Fee Increases immediately effective.[16] The Third Proposed Rule Change was published for comment in the Federal Register on March 20, 2019.[17] The Third Proposed Rule Change provided new information, including additional detail about the market participants

---

12 See Letter from Theodore R. Lazo, Managing Director and Associate General Counsel, and Ellen Greene, Managing Director Financial Services Operations, The Securities Industry and Financial Markets Association ("SIFMA"), to Brent J. Fields, Secretary, Commission, dated October 15, 2018 ("SIFMA Letter").

13 See supra note 10.

14 Id.

15 See Securities Exchange Act Release No. 84651 (November 26, 2018), 83 FR 61687 (November 30, 2018) (SR-PEARL-2018-19).

16 See Securities Exchange Act Release No. 85317 (March 14, 2019), 84 FR 10380 (March 20, 2019) (SR-PEARL-2019-08) (the "Third Proposed Rule Change") (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend the MIAX PEARL Fee Schedule).

17 Id.

impacted by the Proposed Fee Increases, as well as the additional costs incurred by the Exchange associated with providing the connectivity alternatives, in order to provide more transparency and support relating to the Exchange's belief that the Proposed Fee Increases are reasonable, equitable, and non-discriminatory, and to provide sufficient information for the Commission to determine that the Proposed Fee Increases are consistent with the Act.

On March 29, 2019, the Commission issued its 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 (the "BOX Order").[18] In the BOX Order, the Commission highlighted a number of deficiencies it found in three separate rule filings by BOX Exchange LLC ("BOX") to increase BOX's connectivity fees that prevented the Commission from finding that BOX's proposed connectivity fees were consistent with the Act. These deficiencies relate to topics that the Commission believes should be discussed in a connectivity fee filing.

After the BOX Order was issued, the Commission received four comment letters on the Third Proposed Rule Change.[19]

The Second SIFMA Letter argued that the Exchange did not provide sufficient information in its Third Proposed Rule Change to support a finding that the proposal should be

---

18 See Securities Exchange Act Release No. 85459 (March 29, 2019), 84 FR 13363 (April 4, 2019) (SR-BOX-2018-24, SR-BOX-2018-37, and SR-BOX-2019-04).

19 See Letter from Joseph W. Ferraro III, SVP & Deputy General Counsel, MIAX, to Vanessa Countryman, Acting Secretary, Commission, dated April 5, 2019 ("MIAX Letter"); Letter from Theodore R. Lazo, Managing Director and Associate General Counsel, SIFMA, to Vanessa Countryman, Acting Secretary, Commission, dated April 10, 2019 ("Second SIFMA Letter"); Letter from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, to Vanessa Countryman, Acting Secretary, Commission, dated April 10, 2019 ("IEX Letter"); and Letter from Tyler Gellasch, Executive Director, Healthy Markets, to Brent J. Fields, Secretary, Commission, dated April 18, 2019 ("Second Healthy Markets Letter").

approved by the Commission after further review of the proposed fee increases. Specifically, the Second SIFMA Letter argued that the Exchange's market data fees and connectivity fees were not constrained by competitive forces, the Exchange's filing lacked sufficient information regarding cost and competition, and that the Commission should establish a framework for determining whether fees for exchange products and services are reasonable when those products and services are not constrained by significant competitive forces.

The IEX Letter argued that the Exchange did not provide sufficient information in its Third Proposed Rule Change to support a finding that the proposal should be approved by the Commission and that the Commission should extend the time for public comment on the Third Proposed Rule Change. Despite the objection to the Proposed Fee Increases, the IEX Letter did find that "MIAX has provided more transparency and analysis in these filings than other exchanges have sought to do for their own fee increases."[20] The IEX Letter specifically argued that the Proposed Fee Increases were not constrained by competition, the Exchange should provide data on the Exchange's actual costs and how those costs relate to the product or service in question, and whether and how MIAX considered changes to transaction fees as an alternative to offsetting exchange costs.

The Second Healthy Markets Letter did not object to the Third Proposed Rule Change and the information provided by the Exchange in support of the Proposed Fee Increases. Specifically, the Second Healthy Markets Letter stated that the Third Proposed Rule Change was "remarkably different," and went on to further state as follows:

> The instant MIAX filings -- along with their April 5th supplement -- provide much greater detail regarding users of connectivity, the market for connectivity,

[20] See IEX Letter, pg. 1.

and costs than the Initial MIAX Filings. They also appear to address many of the issues raised by the Commission staff's BOX disapproval order. This third round of MIAX filings suggests that MIAX is operating in good faith to provide what the Commission and staff seek.[21]

On April 29, 2019, the Exchange withdrew the Third Proposed Rule Change.[22]

The Exchange refiled the Proposed Fee Increases on April 30, 2019, designating the Proposed Fee Increases immediately effective.[23] The Fourth Proposed Rule Change was published for comment in the Federal Register on May 16, 2019.[24] The Fourth Proposed Rule Change provided further cost analysis information to squarely and comprehensively address each and every topic raised for discussion in the BOX Order, the IEX Letter and the Second SIFMA Letter to ensure that the Proposed Fee Increases are reasonable, equitable, and non-discriminatory, and that the Commission should find that the Proposed Fee Increases are consistent with the Act.

On May 21, 2019, the Commission issued the Staff Guidance on SRO Rule Filings Relating to Fees (the "Guidance").[25]

The Commission received two comment letters on the Fourth Proposed Rule Change, after the Guidance was released.[26] The Second IEX Letter and the Third SIFMA Letter argued

---

21 See Second Healthy Markets Letter, pg. 2.

22 See SR-PEARL-2019-08.

23 See Securities Exchange Act Release No. 85837 (May 10, 2019), 84 FR 22214 (May 16, 2019) (SR-PEARL-2019-17) (the "Fourth Proposed Rule Change") (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend the MIAX PEARL Fee Schedule).

24 Id.

25 See Staff Guidance on SRO Rule Filings Relating to Fees (May 21, 2019), at https://www.sec.gov/tm/staff-guidance-sro-rule-filings-fees.

that the Exchange did not provide sufficient information in its Fourth Proposed Rule Change to justify the Proposed Fee Increases based on the Guidance and the BOX Order. Of note, however, is that unlike their previous comment letter, the Third SIFMA Letter did not call for the Commission to suspend the Fourth Proposed Rule Change. Also, Healthy Markets did not comment on the Fourth Proposed Rule Change.

The Exchange is now re-filing the Proposed Fee Increases (the "Fifth Proposed Rule Change") to bolster its cost-based discussion to support its claim that the Proposed Fee Increases are fair and reasonable because they will permit recovery of the Exchange's costs and will not result in excessive pricing or supracompetitive profit, in light of the Guidance issued by Commission staff subsequent to the Fourth Proposed Rule Change. The Exchange believes that the Proposed Fee Increases are consistent with the Act because they (i) are reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) are, as demonstrated in the Fifth Proposed Rule Change and supported by evidence (including data and analysis), constrained by significant competitive forces; and (iv) are, as demonstrated in the Fifth Proposed Rule Change and supported by specific information (including quantitative information), fair and reasonable because they will permit recovery of the Exchange's costs and will not result in excessive pricing or supracompetitive profit. Accordingly, the Exchange believes that the Commission should find that the Proposed Fee Increases are consistent with the Act. The proposed rule change is

---

[26] See Letter from John Ramsay, Chief Market Policy Officer, Investors Exchange LLC, to Vanessa Countryman, Acting Secretary, Commission, dated June 5, 2019 (the "Second IEX Letter") and Letter from Theodore R. Lazo, Managing Director and Associate General Counsel, and Ellen Greene, Managing Director, SIFMA, to Vanessa Countryman, Acting Secretary, Commission, dated June 6, 2019 (the "Third SIFMA Letter").

immediately effective upon filing with the Commission pursuant to Section 19(b)(3)(A) of the Act.

The Exchange currently offers various bandwidth alternatives for connectivity to the Exchange to its primary and secondary facilities, consisting of a 1Gb fiber connection, a 10Gb fiber connection, and a 10Gb ULL fiber connection. The 10Gb ULL offering uses an ultra-low latency switch, which provides faster processing of messages sent to it in comparison to the switch used for the other types of connectivity. The Exchange currently assesses the following monthly network connectivity fees to both Members and non-Members for connectivity to the Exchange's primary/secondary facility: (a) $1,100 for the 1Gb connection; (b) $5,500 for the 10Gb connection; and (c) $8,500 for the 10Gb ULL connection. The Exchange also assesses to both Members and non-Members a monthly per connection network connectivity fee of $500 for each 1Gb connection to the disaster recovery facility and a monthly per connection network connectivity fee of $2,500 for each 10Gb connection to the disaster recovery facility.

The Exchange's MIAX Express Network Interconnect ("MENI") can be configured to provide Members and non-Members of the Exchange network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facilities of both the Exchange and its affiliate, MIAX, via a single, shared connection. Members and non-Members utilizing the MENI to connect to the trading platforms, market data systems, test systems and disaster recovery facilities of the Exchange and MIAX via a single, shared connection are assessed only one monthly network connectivity fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

The Exchange proposes to increase the monthly network connectivity fees for such connections for both Members and non-Members. The network connectivity fees for connectivity to the Exchange's primary/secondary facility will be increased as follows: (a) from $1,100 to $1,400 for the 1Gb connection; (b) from $5,500 to $6,100 for the 10Gb connection; and (c) from $8,500 to $9,300 for the 10Gb ULL connection. The network connectivity fees for connectivity to the Exchange's disaster recovery facility will be increased as follows: (a) from $500 to $550 for the 1Gb connection; and (b) from $2,500 to $2,750 for the 10Gb connection.

2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act[27] in general, and furthers the objectives of Section 6(b)(4) of the Act[28] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Exchange Members and issuers and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act[29] in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest and is not designed to permit unfair discrimination between customer, issuers, brokers and dealers.

The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, the Commission highlighted the importance of market forces in determining

---

27 15 U.S.C. 78f(b).

28 15 U.S.C. 78f(b)(4).

29 15 U.S.C. 78f(b)(5).

prices and SRO revenues and, also, recognized that current regulation of the market system "has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies."[30]

First, the Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act, in that the Proposed Fee Increases are fair, equitable and not unreasonably discriminatory, because the fees for the connectivity alternatives available on the Exchange, as proposed to be increased, are constrained by significant competitive forces. 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 Members of MIAX PEARL as compared to the much greater number of members at other options exchanges (as further detailed below). Not only does MIAX PEARL have less than half the number of members as certain other options exchanges, but there are also a number of the Exchange's Members that do not connect directly to MIAX PEARL. Further, of the number of Members that connect directly to MIAX PEARL, many such Members do not purchase market data from MIAX PEARL. There are a number of large market makers and broker-dealers that are members of other options exchange but not Members of MIAX PEARL. For example, the following are not Members of MIAX PEARL: The D. E. Shaw Group, CTC, XR Trading LLC, Hardcastle

30 See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496 (June 29, 2005).

Trading AG, Ronin Capital LLC, Belvedere Trading, LLC, Bluefin Trading, and HAP Capital LLC. In addition, of the market makers that are connected to MIAX PEARL, 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 Members that only purchase one connection (10Gb or 10Gb ULL) and the Exchange has market maker Members 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 that market makers that simply quote all symbols on the Exchange. Even though non-Members purchase and resell 10Gb and 10Gb ULL connections to both Members and non-Members, no market makers currently connect to the Exchange indirectly through such resellers.

SIFMA's argument that all broker-dealers are required to connect to all exchanges 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 fewer 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 members. 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. Gone are the days when the retail brokerage firms (the Fidelity's, the Schwab's, the eTrade's) were members of the options exchanges – they are not members of MIAX PEARL or its affiliates, MIAX and MIAX Emerald, they do not purchase connectivity to MIAX PEARL, and they do not purchase market data from MIAX PEARL. The Exchange further 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 Members or firms considering connecting to MIAX PEARL, the Exchange provides information about the Exchange's available connectivity alternatives in a Connectivity Guide, which contains detailed specifications regarding, among other things, throughput and latency for each available connection.[31] 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. For example, if the firm wants to receive the top-of-market data feed product or depth data feed product, due to the amount/size of data contained in those feeds, such firm would need to purchase either the 10Gb or 10Gb ULL connection. The 1Gb connection is too small to support those data feed products. MIAX PEARL notes that there are twelve (12) Members that only purchase the 1Gb connectivity alternative. Thus, while there is a meaningful percentage of purchasers of only 1Gb connections (12 of 33), by definition, those twelve (12) members purchase connectivity that cannot support the top-of-market data feed product or depth data feed product and thus they do not purchase such data feed products.

31 See the MIAX Connectivity Guide at https://www.miaxoptions.com/sites/default/files/page-files/MIAX_Connectivity_Guide_v3.6_01142019.pdf.

Accordingly, purchasing market data is a business decision/choice, and thus the pricing for it is constrained by competition.

Contrary to SIFMA's argument, there is competition for connectivity to MIAX PEARL and its affiliates. MIAX PEARL competes with nine (9) non-Members who resell MIAX PEARL connectivity. These are resellers of MIAX PEARL connectivity – they are not arrangements between broker-dealers to share connectivity costs, as SIFMA suggests. Those non-Members resell that connectivity to multiple market participants over that same connection, including both Members and non-Members of MIAX PEARL (typically extranets and service bureaus). When connectivity is re-sold by a third-party, MIAX PEARL does not receive any connectivity revenue from that sale. It is entirely between the third-party and the purchaser, thus constraining the ability of MIAX PEARL to set its connectivity pricing as indirect connectivity is a substitute for direct connectivity. There are currently nine (9) non-Members that purchase connectivity to MIAX PEARL and/or MIAX. Those non-Members resell that connectivity to eleven (11) customers, some of whom are agency broker-dealers that have tens of customers of their own. Some of those eleven (11) customers also purchase connectivity directly from MIAX PEARL and/or MIAX. Accordingly, indirect connectivity is a viable alternative that is already being used by non-Members of MIAX PEARL, constraining the price that MIAX PEARL is able to charge for connectivity to its Exchange.

The Exchange[32] and MIAX[33] are comprised of 41 distinct Members between the two exchanges, excluding any additional affiliates of such Members that are also Members of MIAX

32 MIAX PEARL has 36 distinct Members, excluding affiliated entities. See MIAX PEARL Exchange Member Directory, available at https://www.miaxoptions.com/exchange-members/pearl.

33 MIAX has 38 distinct Members, excluding affiliated entities. See MIAX Exchange Member Directory, available at https://www.miaxoptions.com/exchange-members.

PEARL, MIAX, or both. Of those 41 distinct Members, 33 Members have purchased the 1Gb, 10Gb, 10Gb ULL connections or some combination of multiple various connections. Furthermore, every Member who has purchased at least one connection also trades on the Exchange, MIAX, or both, with the exception of one new Member who is currently in the on-boarding process. The 8 remaining Members who have not purchased any connectivity to the Exchange are still able to trade on the Exchange indirectly through other Members or non-Member service bureaus that are connected. These 8 Members 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, Members have the choice to purchase connectivity and are not compelled to do so in any way.

The Exchange believes that the Proposed Fee Increases are fair, equitable and not unreasonably discriminatory because the connectivity pricing is associated with relative usage of the various market participants and does not impose a barrier to entry to smaller participants. Accordingly, the Exchange offers three direct connectivity alternatives and various indirect connectivity (via third-party) alternatives, as described above. MIAX PEARL recognizes that there are various business models and varying sizes of market participants conducting business on the Exchange. The 1Gb direct connectivity alternative is 1/10th the size of the 10Gb direct connectivity alternative. Because it is 1/10th of the size, it does not offer access to many of the products and services offered by the Exchange, such as the ability to quote or receive certain market data products. Thus, the value of the 1Gb alternative is much lower than value of a 10Gb alternative, when measured based on the type of Exchange access it offers, which is the basis for difference in price between a 1Gb connection and a 10Gb connection. Approximately just less than half of MIAX PEARL and MIAX Members that connect (14 out of 33) purchase 1Gb connections. The 1Gb direct connection can support the sending of orders and the consumption of all market data feed products, other than the top-of-market data feed product or depth data feed product (which require a 10Gb connection). The 1Gb direct connection is generally purchased by market participants that utilize less bandwidth. The market participants that purchase 10Gb ULL direct connections utilize the most bandwidth, and those are the participants that consume the most resources from the network. Accordingly, the Exchange believes the allocation of the Proposed Fee Increases ($9,300 for a 10Gb ULL connection versus $1,400 for a 1Gb connection) are reasonable based on the network resources consumed by the market participants – lowest bandwidth consuming members pay the least, and highest bandwidth consuming members pays the most, particularly since higher bandwidth consumption translates to higher costs to the Exchange. The 10Gb ULL connection offers optimized connectivity for latency sensitive participants and is approximately single digit microseconds faster in round trip time for connection oriented traffic to the Exchange than the 10Gb connection. This lower latency is achieved through more advanced 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 10Gb direct connections and quote in all products on the Exchange and consume all market data feeds, and such 10Gb direct connections are priced lower than the 10Gb ULL direct connections, offering smaller sized market makers a lower cost alternative.

With respect to options trading, the Exchange had only 4.84% market share of the U.S. options industry in Equity/ETF classes according to the OCC in May 2019.[34] For May of 2019, the Exchange's affiliate, MIAX, had only 3.75% market share of the U.S. options industry in

---

34 See Exchange Market Share of Equity Products – 2019, The Options Clearing Corporation, available at https://www.theocc.com/webapps/exchange-volume.

Equity/ETF classes according to the OCC.[35] For May 2019, the Exchange's affiliate, MIAX Emerald, had only 0.77% market share of the U.S. options industry in Equity/ETF classes according to the OCC.[36] The Exchange is aware of no evidence that a combined market share of less than 10% provides the Exchange with anti-competitive pricing power. This, in addition to the fact that not all broker-dealers are required to connect to all options exchanges, supports the Exchange's conclusion that its pricing is constrained by competition.

Separately, the Exchange is not aware of any reason why market participants could not simply drop their connections and cease being Members 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, MIAX PEARL must set reasonable connectivity pricing, otherwise prospective members would not connect and existing members would disconnect or connect through a third-party reseller of connectivity. No options market participant is required by rule, regulation, or competitive forces to be a Member of the Exchange. Several market participants choose not to be Members of the Exchange and choose not to access the Exchange, and several market participants also access the Exchange indirectly through another market participant. To illustrate, the Exchange has only 41 Members (including all such Members' affiliate Members). However, Cboe Exchange, Inc. ("Cboe") has over 200 members,[37] Nasdaq ISE, LLC has approximately 100 members,[38] and

---

35 Id.

36 Id.

37 See Form 1/A, filed August 30, 2018 (https://www.sec.gov/Archives/edgar/vprr/1800/18002831.pdf); Form 1/A, filed August 30, 2018 (https://www.sec.gov/Archives/edgar/vprr/1800/18002833.pdf); Form 1/A, filed July 24, 2018 (https://www.sec.gov/Archives/edgar/vprr/1800/18002781.pdf); Form 1/A, filed August 30, 2018 (https://www.sec.gov/Archives/edgar/data/1473845/999999999718007832/9999999997-18-007832-index.htm).

NYSE American LLC has over 80 members.[39] If all market participants were required to be Members of the Exchange and connect directly to the Exchange, the Exchange would have over 200 Members, in line with Cboe's total membership. But it does not. The Exchange only has 41 Members (inclusive of Members' affiliates).

The Exchange finds it compelling that all of the Exchange's existing Members continued to purchase the Exchange's connectivity services during the period for which the Proposed Fee Increases took effect in August 2018. In particular, the Exchange believes that the Proposed Fee Increases are reasonable because the Exchange did not lose any Members (or the number of connections each Member purchased) or non-Member connections due to the Exchange increasing its connectivity fees through the First Proposed Rule Change, which fee increase became effective August 1, 2018. For example, in July 2018, fourteen (14) Members purchased 1Gb connections, ten (10) Members purchased 10Gb connections, and fifteen (15) Members purchased 10Gb ULL connections. (The Exchange notes that 1Gb connections are purchased primarily by EEM Members; 10Gb ULL connections are purchased primarily by higher volume Market Makers quoting all products across both MIAX PEARL and MIAX; and 10Gb connections are purchased by higher volume EEMs and lower volume Market Makers.) The vast majority of those Members purchased multiple such connections with the actual number of connections depending on the Member's throughput requirements based on the volume of their quote/order traffic and market data needs associated with their business model. After the fee increase, beginning August 1, 2018, the same number of Members purchased the same number

---

38 See Form 1/A, filed July 1, 2016 (https://www.sec.gov/Archives/edgar/vprr/1601/16019243.pdf).

39 See https://www.nyse.com/markets/american-options/membership#directory.

of connections.[40] Furthermore, the total number of connections did not decrease from July to August 2018, and in fact one Member even purchased two (2) additional 10Gb ULL connections in August 2018, after the fee increase.

Also, in July 2018, four (4) non-Members purchased 1Gb connections, two (2) non-Members purchased 10Gb connections, and one (1) non-Member purchased 10Gb ULL connections. After the fee increase, beginning August 1, 2018, the same non-Members purchased the same number of connections across all available alternatives and two (2) additional non-Members purchased three (3) more connections after the fee increase. These non-Members freely purchased their connectivity with the Exchange in order to offer trading services to other firms and customers, as well as access to the market data services that their connections to the Exchange provide them, but they are not required or compelled to purchase any of the Exchange's connectivity options. MIAX PEARL did not experience any noticeable change (increase or decrease) in order flow sent by its market participants as a result of the fee increase.

Of those Members and non-Members that bought multiple connections, no firm dropped any connections beginning August 1, 2018, when the Exchange increased its fees. Nor did the Exchange lose any Members. Furthermore, the Exchange did not receive any comment letters or official complaints from any Member or non-Member purchaser of connectivity regarding the increased fees regarding how the fee increase was unreasonable, unduly burdensome, or would negatively impact their competitiveness amongst other market participants. These facts, coupled with the discussion above, showing that it is not necessary to join and/or connect to all options exchanges, demonstrate that the Exchange's fees are constrained by competition and are

---

[40] The Exchange notes that one Member downgraded one connection in July of 2018, however such downgrade was done well ahead of notice of the Proposed Fee Increase and was the result of a change to the Member's business operation that was completely independent of, and unrelated to, the Proposed Fee Increases.

reasonable and not contrary to the Law of Demand as SIFMA suggests. Therefore, the Exchange believes that the Proposed Fee Increases are fair, equitable, and non-discriminatory, as the fees are competitive.

The Exchange believes that the Proposed Fee Increases are equitably allocated among Members and non-Members, as evidenced by the fact that the fee increases are allocated across all connectivity alternatives, and there is not a disproportionate number of Members purchasing any alternative -- fourteen (14) Members purchased 1Gb connections, ten (10) Members purchased 10Gb connections, fifteen (15) Members purchased 10Gb ULL connections, four (4) non-Members purchased 1Gb connections, two (2) non-Members purchased 10Gb connections, and one (1) non-Member purchased 10Gb ULL connections. The Exchange recognizes that the relative fee increases are 27% for the 1Gb connection, 10.9% for the 10Gb connection, and 9.4% for the 10Gb ULL connection, but the Exchange believes that percentage increase differentiation is appropriate, given the different levels of service provided and the largest percentage increase being associated with the lowest cost connection. Further, the Exchange believes that the fees are reasonably allocated as the users of the higher bandwidth connections consume the most resources of the Exchange's network. It is these firms that account that also account for the vast majority of the Exchange's trading volume. The purchasers of the 10Gb ULL connectivity account for approximately 80% of the volume on the Exchange. For example, in June of 2019, to date, approximately 11.3 million contracts of the approximately 13.6 million contracts executed were done by the top market making firms of the Exchange's total volume. The Exchange considered whether to increase transaction fees and other fees in order to offset its costs as an alternative to increasing connectivity fees, however, the Exchange determined that increasing its connectivity fees was the only viable alternative. This is because the increased costs are more closely associated with connectivity, as well as the intense level of competition among the options exchanges for order flow through transaction fees.

Second, the Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the Proposed Fee Increases will permit recovery of the Exchange's costs and will not result in excessive pricing or supracompetitive profit. The Proposed Fee Increases will allow the Exchange to recover a portion (less than all) of the increased costs incurred by the Exchange associated with providing and maintaining the necessary hardware and other network infrastructure to support this technology since Exchange launched operations in February 2017. Put simply, the costs of the Exchange to provide these services have increased considerably over this time, as more fully-detailed and quantified below. The Exchange believes that it is reasonable and appropriate to increase its fees charged for use of its connectivity to partially offset the increased costs the Exchange incurred during this time associated with maintaining and enhancing a state-of-the-art exchange network infrastructure in the U.S. options industry.

In particular, the Exchange's increased costs associated with supporting its network are due to several factors, including increased costs associated with maintaining and expanding a team of highly-skilled network engineers (the Exchange also hired additional network engineering staff in 2017 and 2018), increasing fees charged by the Exchange's third-party data center operator, and costs associated with projects and initiatives designed to improve overall network performance and stability, through the Exchange's research and development ("R&D") efforts.

In order to provide more detail and to quantify the Exchange's increased costs, the Exchange notes that increased costs are associated with the infrastructure and increased headcount to fully-support the advances in infrastructure and expansion of network level services, including customer monitoring, alerting and reporting. Additional technology expenses were incurred related to the expanding its Information Security services, network monitoring and customer reporting, as well as Regulation SCI mandated processes associated with network technology. All of these additional expenses have been incurred by the Exchange since became operational in February 2017. Additionally, while some of the expense is fixed, much of the expense is not fixed, and thus increases as the number of connections increase. For example, new 1Gb, 10Gb, and 10Gb ULL connections require the purchase of additional hardware to support those connections as well as enhanced monitoring and reporting of customer performance that MIAX PEARL and its affiliates provide. And 10Gb ULL connections require the purchase of specialized, more costly hardware. Further, as the total number of all connections increase, MIAX PEARL and its affiliates need 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 MIAX PEARL and its affiliates is not entirely fixed. Just the initial fixed cost buildout of the network infrastructure of MIAX PEARL and its affiliates, including both primary/secondary sites and disaster recovery, was over $30 million. These costs have increased over 10% since the Exchange became operational in February 2017. As these network connectivity-related expenses increase, MIAX PEARL and its affiliates look to offset those costs through increased connectivity fees.

A more detailed breakdown of the expense increases since February 2017 include an approximate 70% increase in technology-related personnel costs in infrastructure, due to expansion of services/support (increase of approximately $800,000); an approximate 10% increase in datacenter costs due to price increases and footprint expansion (increase of approximately $500,000); an approximate 5% increase in vendor-supplied dark fiber due to price increases and expanded capabilities (increase of approximately $25,000); and a 30% increase in market data connectivity fees (increase of approximately $200,000). Of note, regarding market data connectivity fee increased cost, this is the cost associated with MIAX PEARL consuming connectivity/content from the equities markets in order to operate the Exchange, causing MIAX PEARL to effectively pay its competitors for this connectivity. While the Exchange and MIAX have incurred a total increase in connectivity expenses since January 2017 (the last time connectivity fees were raised) of approximately $1.5 million per year (as described above), the total increase in connectivity revenue amount as a result of the Proposed Fee Increases is projected to be approximately $1.2 million per year for MIAX PEARL and MIAX. Accordingly, the total projected MIAX PEARL and MIAX connectivity revenue as a result of the proposed increase, on an annualized basis, is less than total annual actual MIAX PEARL and MIAX connectivity expense. Accordingly, the Proposed Fee Increases are fair and reasonable because they will not result in excessive pricing or supracompetitive profit, when comparing the increase in actual costs to the Exchange (since February 2017) versus the projected increase in annual revenue. The Exchange also incurred additional significant capital expenditures over this same period to upgrade and enhance the underlying technology components, as more fully-detailed below.

Further, 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. As a result, the Exchange is subject to fee increases from its data center provider, which the Exchange experienced in 2017 and 2018 of approximately 10%, as cited above. Connectivity fees, which are charged for accessing the Exchange's data center network infrastructure, are directly related to the network and offset such costs.

Further, the Exchange invests significant resources in network R&D, which are not included in direct expenses to improve the overall performance and stability of its network. For example, the Exchange has a number of network monitoring tools (some of which were developed in-house, and some of which are licensed from third-parties), that continually monitor, detect, and report network performance, many of which serve as significant value-adds to the Exchange's Members and enable the Exchange to provide a high level of customer service. These tools detect and report performance issues, and thus enable the Exchange to proactively notify a Member (and the SIPs) when the Exchange detects a problem with a Member's connectivity. The costs associated with the maintenance and improvement of existing tools and the development of new tools resulted in significant increased cost to the Exchange since February 2017.

Certain recently developed network aggregation and monitoring tools provide the Exchange with the ability to measure network traffic with a much more granular level of variability. This is important as Exchange Members demand a higher level of network determinism and the ability to measure variability in terms of single digit nanoseconds. Also, the Exchange routinely conducts R&D projects to improve the performance of the network's hardware infrastructure. As an example, in the last year, the Exchange's R&D efforts resulted in a performance improvement, requiring the purchase of new equipment to support that improvement, and thus resulting in increased costs in the hundreds of thousands of dollars range.

In sum, the costs associated with maintaining and enhancing a state-of-the-art exchange network infrastructure in the U.S. options industry is a significant expense for the Exchange that continues to increase, and thus the Exchange believes that it is reasonable to offset a portion of those increased costs by increasing its network connectivity fees, as proposed herein. The Exchange invests in and offers a superior network infrastructure as part of its overall options exchange services offering, resulting in significant costs associated with maintaining this network infrastructure, which are directly tied to the amount of the connectivity fees that must be charged to access it, in order to recover those costs. As detailed in the Exchange's 2018 audited financial statements which will be publicly available as part of the Exchange's Form 1 Amendment, the Exchange only has four primary sources of revenue: transaction fees, access fees (of which network connectivity constitute the majority), regulatory fees, and market data fees. Accordingly, the Exchange must cover all of its expenses from these four primary sources of revenue.

The Proposed Fee Increases are fair and reasonable because they will not result in excessive pricing or supracompetitive profit, when comparing the total annual expense of the Exchange associated with providing the network connectivity services versus the total projected annual revenue of the Exchange associated with providing the network connectivity services. For 2018, the annual expense associated with providing the network connectivity services (that is, the shared network connectivity of MIAX PEARL and MIAX, but excluding MIAX Emerald) was approximately $20.8 million. This amount is comprised of both direct and indirect expense. The direct 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 forms of connectivity) was approximately

$8.5 million (constituting primarily Information Technology expense in the Exchange's 2018 financial statements). The indirect expense (which includes expense from such areas as trading operations, software development, business development, information technology, marketing, human resources, legal and regulatory, finance and accounting) that the Exchange allocates to the maintenance and support of network connectivity services was approximately $12.3 million. This indirect expense amount of $12.3 million represents approximately 20% of the total annual expense of MIAX PEARL and MIAX for 2018 of approximately $70 million, less direct expense of $8.5 million ($70 million less $8.5 million equals $61.5 million multiplied by 20% equals $12.3 million). Total projected annualized revenue of the Exchange associated with selling the network connectivity services (reflecting the Proposed Fee Increases on a fully-annualized basis, using May 2019 data) for MIAX PEARL and MIAX is projected to be approximately $14.5 million. This projected revenue amount of $14.5 million represents approximately 20% of total net revenue of MIAX PEARL and MIAX for 2018 of approximately $72 million. The Exchange believes that an indirect expense allocation of 20% of total expense (less direct expense) to network connectivity services is fair and reasonable, as total projected network connectivity revenue represents approximately 20% of total net revenue for 2018. That is, direct expense of $8.5 million plus indirect expense of $12.3 million fairly reflects the total annual expense associated with providing the network connectivity services, both from the perspective of similar revenue and expense percentages (connectivity to total), as well as matching connectivity resources to connectivity expenses. The Exchange believes that this is a conservative allocation of indirect expense. Accordingly, the total projected MIAX PEARL and MIAX connectivity revenue, reflective of the proposed increase, on an annualized basis, of $14.5 million, is less than total annual actual MIAX PEARL and MIAX connectivity expense for 2018 of $20.8 million.

The Exchange projects comparable network connectivity revenue and expense for 2019 for MIAX PEARL and MIAX. Accordingly, the Proposed Fee Increases are fair and reasonable because they do not result in excessive pricing or supracompetitive profit, when comparing the actual network connectivity costs to the Exchange versus the projected network connectivity annual revenue, including the increase amount. Additional information on overall revenue and expense of the Exchange can be found in the Exchange's 2018 audited financial results, which will be publicly available as part of the Exchange's Form 1 filed with the Commission by June 30, 2019.

The Exchange 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.[41] The Exchange further notes that Phlx, ISE, Arca and NYSE American each charge higher rates for such similar connectivity to primary and secondary facilities.[42] While MIAX PEARL's proposed connectivity fees are substantially lower than the fees charged by Phlx, ISE, Arca and NYSE American, MIAX PEARL believes that it offers significant value to Members over other exchanges in terms of network monitoring and reporting, which MIAX PEARL believes is a competitive advantage, and differentiates its

[41] 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 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 equivalent of the Exchange's 10Gb ULL connection.

[42] Id.

connectivity versus connectivity to other exchanges. Additionally, the Exchange's proposed connectivity fees to its disaster recovery facility are within the range of the fees charged by other exchanges for similar connectivity alternatives.[43]

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

MIAX PEARL does not believe that the proposed rule changes will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

Intra-Market Competition

The Exchange does not believe that the proposed rule change would place certain market participants at the Exchange at a relative disadvantage compared to other market participants or affect the ability of such market participants to compete. In particular, the Exchange has received no official complaints from Members, non-Members (extranets and service bureaus), third-parties that purchase the Exchange's connectivity and resell it, and customers of those resellers, that the Exchange's fees or the Proposed Fee Increases are negatively impacting or would negatively impact their abilities to compete with other market participants or that they are placed at a disadvantage. The Exchange believes that the Proposed Fee Increases do not place certain market participants at a relative disadvantage to other market participants because the connectivity pricing is associated with relative usage of the various market participants and does not impose a barrier to entry to smaller participants. As described above, the less expensive 1Gb direct connection is generally purchased by market participants that utilize less bandwidth. The market participants that purchase 10Gb ULL direct connections utilize the most bandwidth, and

[43] See Nasdaq ISE, Options Rules, Options 7, Pricing Schedule, Section 11.D. (charging $3,000 for disaster recovery testing & relocation services); see also Cboe Exchange, Inc. ("Cboe") Fees Schedule, p. 14, Cboe Command Connectivity Charges (charging a monthly fee of $2,000 for a 1Gb disaster recovery network access port and a monthly fee of $6,000 for a 10Gb disaster recovery network access port).

those are the participants that consume the most resources from the network. Accordingly, the Proposed Fee Increases do not favor certain categories of market participants in a manner that would impose a burden on competition; rather, the allocation of the Proposed Fee Increases reflects the network resources consumed by the various size of market participants – lowest bandwidth consuming members pay the least, and highest bandwidth consuming members pays the most, particularly since higher bandwidth consumption translates to higher costs to the Exchange.

Inter-Market Competition

The Exchange believes the Proposed Fee Increases do not place an undue burden on competition on other SROs that is not necessary or appropriate. 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 Members of MIAX PEARL as compared to the much greater number of members at other options exchanges (as described above). Not only does MIAX PEARL have less than half the number of members as certain other options exchanges, but there are also a number of the Exchange's Members that do not connect directly to MIAX PEARL. There are a number of large market makers and broker-dealers that are members of other options exchange but not Members of MIAX PEARL. Additionally, the Exchange other exchanges have similar connectivity alternatives for their participants, including similar low-latency connectivity, but with much higher rates to connect.[44] The Exchange is also unaware of any assertion that its existing fee levels or the Proposed Fee Increases would somehow unduly impair its competition with other options exchanges. To the contrary, if the fees charged are deemed too high by market participants, they can simply disconnect. While the Exchange recognizes the distinction

[44] See supra note 41.

between connecting to an exchange and trading at the exchange, the Exchange notes that it operates in a highly competitive options market in which market participants can readily connect and trade with venues they desire. In such an environment, the Exchange must continually adjust its fees to remain competitive with other exchanges. The Exchange believes that the proposed changes reflect this competitive environment.

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

Written comments were neither solicited nor 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 Act,[45] and Rule 19b-4(f)(2)[46] thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

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:

---

45 15 U.S.C. 78s(b)(3)(A)(ii).

46 17 CFR 240.19b-4(f)(2).

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 Number SR-PEARL-2019-21 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-PEARL-2019-21. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (http://www.sec.gov/rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. 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-PEARL-2019-21 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.[47]

Eduardo A. Aleman
Deputy Secretary

[47] 17 CFR 200.30-3(a)(12).