Required fields are shown with yellow backgrounds and asterisks.

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 19b-4

File No. * SR 2023 - * 08
Amendment No. (req. for Amendments *)

Filing by Miami International Securities Exchange, LLC.

Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial *	Amendment *	Withdrawal
✓		

Section 19(b)(2) *	Section 19(b)(3)(A) *	Section 19(b)(3)(B) *
	✓	

Pilot	Extension of Time Period for Commission Action *	Date Expires *

Rule

19b-4(f)(1)	19b-4(f)(4)
✓ 19b-4(f)(2)	19b-4(f)(5)
19b-4(f)(3)	19b-4(f)(6)

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010

Section 806(e)(1) *	Section 806(e)(2) *

Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 3C(b)(2) *

Exhibit 2 Sent As Paper Document

Exhibit 3 Sent As Paper Document

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Proposal to amend the Fee Schedule to amend certain connectivity and port fees.

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name *	Michael	Last Name *	Slade
Title *	AVP, Associate Counsel		
E-mail *	mslade@miami-holdings.com		
Telephone *	(609) 897-8499	Fax	

Signature

Pursuant to the requirements of the Securities Exchange of 1934, Miami International Securities Exchange, l has duty caused this filing to be signed on its behalf by the undersigned thereunto duty authorized.

Date	02/23/2023		(Title *)
By	Michael Slade	AVP, Associate Counsel	
	(Name *)		

NOTE: Clicking the signature block at right will initiate digitally signing the form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

Michael Slade Date: 2023.02.23 11:19:25 -05'00'

Required fields are shown with yellow backgrounds and astericks.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

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SR-MIAX-2023-08 - 19b4v6 final acce

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

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SR-MIAX-2023-08 - Exhibit 1.docx

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A - Notice of Proposed Rule Change, Security-Based Swap Submission, or Advanced Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2- Notices, Written Comments, Transcripts, Other Communications

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Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

☐ Exhibit Sent As Paper Document

Exhibit 3 - Form, Report, or Questionnaire

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Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

☐ Exhibit Sent As Paper Document

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

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SR-MIAX-2023-08 - Exhibit 5.docx

The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change

Partial Amendment

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If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1. Text of the Proposed Rule Change

(a) Miami International Securities Exchange, LLC ("MIAX" or "Exchange"), pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act" or "Exchange Act")[1] and Rule 19b-4 thereunder,[2] proposes to amend the MIAX Options Exchange Fee Schedule (the "Fee Schedule") to amend certain connectivity and port fees.

A notice of the proposed rule change for publication in the Federal Register is attached hereto as Exhibit 1, and a copy of the applicable section of the proposed Fee Schedule is attached hereto as Exhibit 5.

(b) Inapplicable.

(c) Inapplicable.

2. Procedures of the Self-Regulatory Organization

The proposed rule change was approved by the Chief Executive Officer of the Exchange or his designee pursuant to authority delegated by the Exchange Board of Directors on February 2, 2023. Exchange staff will advise the Board of Directors of any action taken pursuant to delegated authority. No other action by the Exchange is necessary for the filing of the proposed rule change.

Questions and comments on the proposed rule change may be directed to Chris Solgan, Vice President, Senior Counsel, at (609) 423-9414.

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

a. Purpose

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

2 17 CFR 240.19b-4.

The Exchange proposes to amend the Fee Schedule as follows: (1) increase the fees for a 10 gigabit ("Gb") ultra-low latency ("ULL") fiber connection for Members[3] and non-Members; and (2) amend the fees for Limited Service MIAX Express Interface ("MEI") Ports[4] available to Market Makers.[5] The Exchange and its affiliate, MIAX PEARL, LLC ("MIAX Pearl") operated 10Gb ULL connectivity (for MIAX Pearl's options market) on a single shared network that provided access to both exchanges via a single 10Gb ULL connection. The Exchange last increased fees for 10Gb ULL connections from $9,300 to $10,000 per month on January 1, 2021.[6] At the same time, MIAX Pearl also increased its 10Gb ULL connectivity fee from $9,300 to $10,000 per month.[7] The Exchange and MIAX Pearl shared a combined cost analysis in those filings due to the single shared 10Gb ULL connectivity network for both exchanges. In those filings, the Exchange and MIAX Pearl allocated a combined total of $17.9 million in expenses to providing 10Gb ULL connectivity.[8]

Beginning in late January 2023, the Exchange also recently determined a substantial operational need to no longer operate 10Gb ULL connectivity on a single shared network with MIAX Pearl. The Exchange is bifurcating 10Gb ULL connectivity due to ever-increasing

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3 The term "Member" means an individual or organization approved to exercise the trading rights associated with a Trading Permit. Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

4 MIAX Express Interface is a connection to MIAX systems that enables Market Makers to submit simple and complex electronic quotes to MIAX. See Fee Schedule, note 26.

5 The term "Market Makers" refers to Lead Market Makers ("LMMs"), Primary Lead Market Makers ("PLMMs"), and Registered Market Makers ("RMMs") collectively. See Exchange Rule 100.

6 See Securities Exchange Act Release No. 90980 (January 25, 2021), 86 FR 7602 (January 29, 2021) (SR-MIAX-2021-02).

7 See Securities Exchange Act Release No. 90981 (January 25, 2021), 86 FR 7582 (January 29, 2021) (SR-PEARL-2021-01).

8 See id.

capacity constraints and to enable it to continue to satisfy the anticipated access needs for Members and other market participants.[9] Since the time of 2021 increase discussed above, the Exchange experienced ongoing increases in expenses, particularly internal expenses.[10] As discussed more fully below, the Exchange recently calculated increased annual aggregate costs of $12,034,554 for providing 10Gb ULL connectivity on a single unshared network (an overall increase over its prior cost to provide 10Gb ULL connectivity on a shared network with MIAX Pearl) and $2,157,178 for providing Limited Service MEI Ports.

Much of the cost relates to monitoring and analysis of data and performance of the network via the subscriber's connection with nanosecond granularity, and continuous improvements in network performance with the goal of improving the subscriber's experience. The costs associated with maintaining and enhancing a state-of-the-art network is a significant expense for the Exchange, and thus the Exchange believes that it is reasonable and appropriate to help offset those increased costs by amending fees for connectivity services. Subscribers expect the Exchange to provide this level of support so they continue to receive the performance they expect. This differentiates the Exchange from its competitors.

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9 See MIAX Options and MIAX Pearl Options - Announce planned network changes related to shared 10G ULL extranet, issued August 12, 2022, available at https://www.miaxoptions.com/alerts/2022/08/12/miax-options-and-miax-pearl-options-announce-planned-network-changes-related-0. The Exchange will continue to provide access to both the Exchange and MIAX Pearl over a single shared 1Gb connection. See Securities Exchange Act Release Nos. 96553 (December 20, 2022), 87 FR 79379 (December 27, 2022) (SR-PEARL-2022-60); 96545 (December 20, 2022) 87 FR 79393 (December 27, 2022) (SR-MIAX-2022-48).

10 For example, the New York Stock Exchange, Inc.'s ("NYSE") Secure Financial Transaction Infrastructure ("SFTI") network, which contributes to the Exchange's connectivity cost, increased its fees by approximately 9% since 2021. Similarly, since 2021, the Exchange, and its affiliates, experienced an increase in data center costs of approximately 17% and an increase in hardware and software costs of approximately 19%. These percentages are based on the Exchange's actual 2021 and proposed 2023 budgets.

The Exchange now proposes to amend the Fee Schedule to amend the fees for 10Gb ULL connectivity and Limited Service MEI Ports in order to recoup cost related to bifurcating 10Gb connectivity to the Exchange and MIAX Pearl as well as the ongoing costs and increase in expenses set forth below in the Exchange's cost analysis.[11] The Exchange proposes to implement the changes to the Fee Schedule pursuant to this proposal immediately. The Exchange initially filed the proposal on December 30, 2022 (SR-MIAX-2022-50) (the "Initial Proposal").[12] The Exchange recently withdrew the Initial Proposal and replaced it with this current proposal (SR-MIAX-2023-08).

The Exchange previously included a cost analysis in the Initial Proposal. As described more fully below, the Exchange provides an updated cost analysis that includes, among other things, additional descriptions of how the Exchange allocated costs among it and its affiliated exchanges (MIAX Pearl (separately among MIAX Pearl Options and MIAX Pearl Equities) and MIAX Emerald, LLC ("MIAX Emerald," together with MIAX Pearl Options and MIAX Pearl Equities, the "affiliated markets")) to ensure no cost was allocated more than once, as well as additional detail supporting its cost allocation processes and explanations as to why a cost allocation in this proposal may differ from the same cost allocation in a similar proposal submitted by one of its affiliated exchanges. Although the baseline cost analysis used to justify the proposed fees was made in the Initial Proposal, the fees themselves have not changed since the Initial Proposal and the Exchange still proposes fees that are intended to cover the

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11 The Exchange notes that MIAX Pearl will make a similar filing to increase its 10Gb ULL connectivity fees.

12 See Securities Exchange Act Release No. 96629 (January 10, 2023), 88 FR 2729 (January 17, 2023) (SR-MIAX-2022-50).

Exchange's cost of providing 10Gb ULL connectivity and Limited Service MEI Ports with a reasonable mark-up over those costs.

* * * * *

Starting in 2017, following the United States Court of Appeals for the District of Columbia's Susquehanna Decision[13] and various other developments, the Commission began to undertake a heightened review of exchange filings, including non-transaction fee filings that was substantially and materially different from it prior review process (hereinafter referred to as the "Revised Review Process"). In the Susquehanna Decision, the D.C. Circuit Court stated that the Commission could not maintain a practice of "unquestioning reliance" on claims made by a self-regulatory organization ("SRO") in the course of filing a rule or fee change with the Commission.[14] Then, on October 16, 2018, the Commission issued an opinion in Securities Industry and Financial Markets Association finding that exchanges failed both to establish that the challenged fees were constrained by significant competitive forces and that these fees were consistent with the Act.[15] On that same day, the Commission issued an order remanding to various exchanges and national market system ("NMS") plans challenges to over 400 rule changes and plan amendments that were asserted in 57 applications for review (the "Remand Order").[16] The Remand Order directed the exchanges to "develop a record," and to "explain

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13 See Susquehanna International Group, LLP v. Securities & Exchange Commission, 866 F.3d 442 (D.C. Circuit 2017) (the "Susquehanna Decision").

14 Id.

15 See Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84432, 2018 WL 5023228 (October 16, 2018) (the "SIFMA Decision").

16 See Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84433, 2018 WL 5023230 (Oct. 16, 2018). See 15 U.S.C. §§ 78k-1, 78s; see also Rule 608(d) of Regulation NMS, 17 C.F.R. § 242.608(d) (asserted as an alternative basis of jurisdiction in some applications).

their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review."[17] The Commission denied requests by various exchanges and plan participants for reconsideration of the Remand Order.[18] However, the Commission did extend the deadlines in the Remand Order "so that they d[id] not begin to run until the resolution of the appeal of the SIFMA Decision in the D.C. Circuit and the issuance of the court's mandate."[19] Both the Remand Order and the Order Denying Reconsideration were appealed to the D.C. Circuit.

While the above appeal to the D.C. Circuit was pending, on March 29, 2019, the Commission issued an order disapproving a proposed fee change by BOX Exchange LLC ("BOX") to establish connectivity fees (the "BOX Order"), which significantly increased the level of information needed for the Commission to believe that an exchange's filing satisfied its obligations under the Act with respect to changing a fee.[20] Despite approving hundreds of access fee filings in the years prior to the BOX Order (described further below) utilizing a "market-

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17 Id. at page 2.

18 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 85802, 2019 WL 2022819 (May 7, 2019) (the "Order Denying Reconsideration").

19 Order Denying Reconsideration, 2019 WL 2022819, at *13.

20 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) (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 Commission noted in the BOX Order that it "historically applied a 'market-based' test in its assessment of market data fees, which [the Commission] believe[s] present similar issues as the connectivity fees proposed herein." Id. at page 16. Despite this admission, the Commission disapproved BOX's proposal to begin charging $5,000 per month for 10Gb connections (while allowing legacy exchanges to charge rates equal to 3-4 times that amount utilizing "market-based" fee filings from years prior).

based" test, the Commission changed course and disapproved BOX's proposal to begin charging connectivity at one-fourth the rate of competing exchanges' pricing.

Also while the above appeal was pending, on May 21, 2019, the Commission Staff issued guidance "to assist the national securities exchanges and FINRA … in preparing Fee Filings that meet their burden to demonstrate that proposed fees are consistent with the requirements of the Securities Exchange Act."[21] In the Staff Guidance, the Commission Staff states that, "[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces."[22] The Staff Guidance also states that, "… even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act."[23]

Following the BOX Order and Staff Guidance, on August 6, 2020, the D.C. Circuit vacated the Commission's SIFMA Decision in NASDAQ Stock Market, LLC v. SEC[24] and remanded for further proceedings consistent with its opinion.[25] That same day, the D.C. Circuit issued an order remanding the Remand Order to the Commission for reconsideration in light of

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

22 Id.

23 Id.

24 NASDAQ Stock Mkt., LLC v. SEC, No 18-1324, --- Fed. App'x ----, 2020 WL 3406123 (D.C. Cir. June 5, 2020). The court's mandate was issued on August 6, 2020.

25 Nasdaq v. SEC, 961 F.3d 421, at 424, 431 (D.C. Cir. 2020). The court's mandate issued on August 6, 2020. The D.C. Circuit held that Exchange Act "Section 19(d) is not available as a means to challenge the reasonableness of generally-applicable fee rules." Id. The court held that "for a fee rule to be challengeable under Section 19(d), it must, at a minimum, be targeted at specific individuals or entities." Id. Thus, the court held that "Section 19(d) is not an available means to challenge the fees at issue" in the SIFMA Decision. Id.

NASDAQ. The court noted that the Remand Order required the exchanges and NMS plan participants to consider the challenges that the Commission had remanded in light of the SIFMA Decision. The D.C. Circuit concluded that because the SIFMA Decision "has now been vacated, the basis for the [Remand Order] has evaporated."[26] Accordingly, on August 7, 2020, the Commission vacated the Remand Order and ordered the parties to file briefs addressing whether the holding in NASDAQ v. SEC that Exchange Act Section 19(d) does not permit challenges to generally applicable fee rules requiring dismissal of the challenges the Commission previously remanded.[27] The Commission further invited "the parties to submit briefing stating whether the challenges asserted in the applications for review … should be dismissed, and specifically identifying any challenge that they contend should not be dismissed pursuant to the holding of Nasdaq v. SEC."[28] Without resolving the above issues, on October 5, 2020, the Commission issued an order granting SIFMA and Bloomberg's request to withdraw their applications for review and dismissed the proceedings.[29]

As a result of the Commission's loss of the NASDAQ vs. SEC case noted above, the Commission never followed through with its intention to subject the over 400 fee filings to "develop a record," and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review."[30] As such, all of those fees remained in

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26 Id. at *2; see also id. ("[T]he sole purpose of the challenged remand has disappeared.").

27 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 89504, 2020 WL 4569089 (August 7, 2020) (the "Order Vacating Prior Order and Requesting Additional Briefs").

28 Id.

29 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 90087 (October 5, 2020).

30 See supra note 16, at page 2.

place and amounted to a baseline set of fees for those exchanges that had the benefit of getting their fees in place before the Commission Staff's fee review process materially changed. The net result of this history and lack of resolution in the D.C. Circuit Court resulted in an uneven competitive landscape where the Commission subjects all new non-transaction fee filings to the new Revised Review Process, while allowing the previously challenged fee filings, mostly submitted by incumbent exchanges prior to 2019, to remain in effect and not subject to the "record" or "review" earlier intended by the Commission.

While the Exchange appreciates that the Staff Guidance articulates an important policy goal of improving disclosures and requiring exchanges to justify that their market data and access fee proposals are fair and reasonable, the practical effect of the Revised Review Process, Staff Guidance, and the Commission's related practice of continuous suspension of new fee filings, is anti-competitive, discriminatory, and has put in place an un-level playing field, which has negatively impacted smaller, nascent, non-legacy exchanges ("non-legacy exchanges"), while favoring larger, incumbent, entrenched, legacy exchanges ("legacy exchanges").[31] The legacy exchanges all established a significantly higher baseline for access and market data fees prior to the Revised Review Process. From 2011 until the issuance of the Staff Guidance in

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[31] Commission Chair Gary Gensler recently reiterated the Commission's mandate to ensure competition in the equities markets. See "Statement on Minimum Price Increments, Access Fee Caps, Round Lots, and Odd-Lots", by Chair Gary Gensler, dated December 14, 2022 (stating "[i]n 1975, Congress tasked the Securities and Exchange Commission with responsibility to facilitate the establishment of the national market system and *enhance competition in the securities markets, including the equity markets*" (*emphasis added*)). In that same statement, Chair Gary Gensler cited the five objectives laid out by Congress in 11A of the Exchange Act (15 U.S.C. 78k-1), including ensuring "fair competition among brokers and dealers, among exchange markets, and *between exchange markets* and markets other than exchange markets… ." (*emphasis added*). Id. at note 1. See also Securities Acts Amendments of 1975, available at https://www.govtrack.us/congress/bills/94/s249.

2019, national securities exchanges filed, and the Commission Staff did not abrogate or suspend (allowing such fees to become effective), at least 92 filings[32] to amend exchange connectivity or port fees (or similar access fees). The support for each of those filings was a simple statement by the relevant exchange that the fees were constrained by competitive forces.[33] These fees remain in effect today.

The net result is that the non-legacy exchanges are effectively now blocked by the Commission Staff from adopting or increasing fees to amounts comparable to the legacy exchanges (which were not subject to the Revised Review Process and Staff Guidance), despite providing enhanced disclosures and rationale to support their proposed fee changes that far exceed any such support provided by legacy exchanges. Simply put, legacy exchanges were able to increase their non-transaction fees during an extended period in which the Commission applied a "market-based" test that only relied upon the assumed presence of significant competitive forces, while exchanges today are subject to a cost-based test requiring extensive cost and revenue disclosures, a process that is complex, inconsistently applied, and rarely results in a successful outcome, i.e., non-suspension. The Revised Review Process and Staff Guidance

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32 This timeframe also includes challenges to over 400 rule filings by SIFMA and Bloomberg discussed above. Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84433, 2018 WL 5023230 (Oct. 16, 2018). Those filings were left to stand, while at the same time, blocking newer exchanges from the ability to establish competitive access and market data fees. See The Nasdaq Stock Market, LLC v. SEC, Case No. 18-1292 (D.C. Cir. June 5, 2020). The expectation at the time of the litigation was that the 400 rule flings challenged by SIFMA and Bloomberg would need to be justified under revised review standards.

33 See, e.g., Securities Exchange Act Release Nos. 74417 (March 3, 2015), 80 FR 12534 (March 9, 2015) (SR-ISE-2015-06); 83016 (April 9, 2018), 83 FR 16157 (April 13, 2018) (SR-PHLX-2018-26); 70285 (August 29, 2013), 78 FR 54697 (September 5, 2013) (SR-NYSEMKT-2013-71); 76373 (November 5, 2015), 80 FR 70024 (November 12, 2015) (SR-NYSEMKT-2015-90); 79729 (January 4, 2017), 82 FR 3061 (January 10, 2017) (SR-NYSEARCA-2016-172).

changed decades-long Commission Staff standards for review, resulting in unfair discrimination and placing an undue burden on inter-market competition between legacy exchanges and non-legacy exchanges.

Commission Staff now require exchange filings, including from non-legacy exchanges such as the Exchange, to provide detailed cost-based analysis in place of competition-based arguments to support such changes. However, even with the added detailed cost and expense disclosures, the Commission Staff continues to either suspend such filings and institute disapproval proceedings, or put the exchanges in the unenviable position of having to repeatedly withdraw and re-file with additional detail in order to continue to charge those fees.[34] By impeding any path forward for non-legacy exchanges to establish commensurate non-transaction fees, or by failing to provide any alternative means for smaller markets to establish "fee parity" with legacy exchanges, the Commission is stifling competition: non-legacy exchanges are, in effect, being deprived of the revenue necessary to compete on a level playing field with legacy exchanges. This is particularly harmful, given that the costs to maintain exchange systems and operations continue to increase. The Commission Staff's change in position impedes the ability of non-legacy exchanges to raise revenue to invest in their systems to compete with the legacy exchanges who already enjoy disproportionate non-transaction fee based revenue. For example, the Cboe Exchange, Inc. ("Cboe") reported "access and capacity fee" revenue of $70,893,000 for

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[34] The Exchange has filed, and subsequently withdrawn, various forms of this proposed fee change numerous times since August 2021 with each proposal containing hundreds of cost and revenue disclosures never previously disclosed by legacy exchanges in their access and market data fee filings prior to 2019.

2020[35] and $80,383,000 for 2021[36]. Cboe C2 Exchange, Inc. ("C2") reported "access and capacity fee" revenue of $19,016,000 for 2020[37] and $22,843,000 for 2021[38]. Cboe BZX Exchange, Inc. ("BZX") reported "access and capacity fee" revenue of $38,387,000 for 2020[39] and $44,800,000 for 2021[40]. Cboe EDGX Exchange, Inc. ("EDGX") reported "access and capacity fee" revenue of $26,126,000 for 2020[41] and $30,687,000 for 2021[42]. For 2021, the affiliated Cboe, C2, BZX, and EDGX (the four largest exchanges of the Cboe exchange group) reported $178,712,000 in "access and capacity fees" in 2021. NASDAQ Phlx, LLC ("NASDAQ Phlx") reported "Trade Management Services" revenue of $20,817,000 for 2019.[43] The Exchange notes it is unable to compare "access fee" revenues with NASDAQ Phlx (or other

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35 According to Cboe's 2021 Form 1 Amendment, access and capacity fees represent fees assessed for the opportunity to trade, including fees for trading-related functionality. See Cboe 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000465.pdf.

36 See Cboe 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001155.pdf.

37 See C2 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000469.pdf.

38 See C2 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001156.pdf.

39 See BZX 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000465.pdf.

40 See BZX 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001152.pdf.

41 See EDGX 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000467.pdf.

42 See EDGX 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001154.pdf.

43 According to PHLX, "Trade Management Services" includes "a wide variety of alternatives for connectivity to and accessing [the PHLX] markets for a fee. These participants are charged monthly fees for connectivity and support in accordance with [PHLX's] published fee schedules." See PHLX 2020 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2001/20012246.pdf.

affiliated NASDAQ exchanges) because after 2019, the "Trade Management Services" line item was bundled into a much larger line item in PHLX's Form 1, simply titled "Market services."[44]

The much higher non-transaction fees charged by the legacy exchanges provides them with two significant competitive advantages. First, legacy exchanges are able to use their additional non-transaction revenue for investments in infrastructure, vast marketing and advertising on major media outlets,[45] new products and other innovations. Second, higher non-transaction fees provide the legacy exchanges with greater flexibility to lower their transaction fees (or use the revenue from the higher non-transaction fees to subsidize transaction fee rates), which are more immediately impactful in competition for order flow and market share, given the variable nature of this cost on member firms. The prohibition of a reasonable path forward denies the Exchange (and other non-legacy exchanges) this flexibility, eliminates the ability to remain competitive on transaction fees, and hinders the ability to compete for order flow and market share with legacy exchanges. While one could debate whether the pricing of non-transaction fees are subject to the same market forces as transaction fees, there is little doubt that subjecting one exchange to a materially different standard than that historically applied to legacy exchanges for non-transaction fees leaves that exchange at a disadvantage in its ability to compete with its pricing of transaction fees.

While the Commission has clearly noted that the Staff Guidance is merely guidance and "is not a rule, regulation or statement of the…Commission…the Commission has neither

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44 See PHLX Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000475.pdf. The Exchange notes that this type of Form 1 accounting appears to be designed to obfuscate the true financials of such exchanges and has the effect of perpetuating fee and revenue advantages of legacy exchanges.

45 See, e.g., CNBC Debuts New Set on NYSE Floor, available at https://www.cnbc.com/id/46517876.

approved nor disapproved its content…",[46] this is not the reality experienced by exchanges such as MIAX. As such, non-legacy exchanges are forced to rely on an opaque cost-based justification standard. However, because the Staff Guidance is devoid of detail on what must be contained in cost-based justification, this standard is nearly impossible to meet despite repeated good-faith efforts by the Exchange to provide substantial amount of cost-related details. The Exchange has attempted to increase fees using a cost-based justification numerous times, having submitted over six filings.[47] However, despite providing 100+ page filings describing in extensive detail its costs associated with providing the services described in the filings, Commission Staff continues to suspend such filings, with the rationale that the Exchange has not provided sufficient detail of its costs and without ever being precise about what additional data points are required. The Commission Staff appears to be interpreting the reasonableness standard set forth in Section 6(b)(4) of the Act[48] in a manner that is not possible to achieve. This essentially nullifies the cost-based approach for exchanges as a legitimate alternative as laid out in the Staff Guidance. By refusing to accept a reasonable cost-based argument to justify non-transaction fees (in addition to refusing to accept a competition-based argument as described

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46 See supra note 21, at note 1.

47 See Securities Exchange Act Release Nos. 94890 (May 11, 2022), 87 FR 29945 (May 17, 2022) (SR-MIAX-2022-20); 94720 (April 14, 2022), 87 FR 23586 (April 20, 2022) (SR-MIAX-2022-16); 94719 (April 14, 2022), 87 FR 23600 (April 20, 2022) (SR-MIAX-2022-14); 94259 (February 15, 2022), 87 FR 9747 (February 22, 2022) (SR-MIAX-2022-08); 94256 (February 15, 2022), 87 FR9711 (February 22, 2022) (SR-MIAX-2022-07); 93771 (December 14, 2021), 86 FR 71940 (December 20, 2021) (SR-MIAX-2021-60); 93775 (December 14, 2021), 86 FR 71996 (December 20, 2021) (SR-MIAX-2021-59); 93185 (September 29, 2021), 86 FR 55093 (October 5, 2021) (SR-MIAX-2021-43); 93165 (September 28, 2021), 86 FR 54750 (October 4, 2021) (SR-MIAX-2021-41); 92661 (August 13, 2021), 86 FR 46737 (August 19, 2021) (SR-MIAX-2021-37); 92643 (August 11, 2021), 86 FR 46034 (August 17, 2021) (SR-MIAX-2021-35).

48 15 U.S.C. 78f(b)(4).

above), or by failing to provide the detail required to achieve that standard, the Commission Staff is effectively preventing non-legacy exchanges from making any non-transaction fee changes, which benefits the legacy exchanges and is anticompetitive to the non-legacy exchanges. This does not meet the fairness standard under the Act and is discriminatory.

Because of the un-level playing field created by the Revised Review Process and Staff Guidance, the Exchange believes that the Commission Staff, at this point, should either (a) provide sufficient clarity on how its cost-based standard can be met, including a clear and exhaustive articulation of required data and its views on acceptable margins,[49] to the extent that this is pertinent; (b) establish a framework to provide for commensurate non-transaction based fees among competing exchanges to ensure fee parity;[50] or (c) accept that certain competition-based arguments are applicable given the linkage between non-transaction fees and transaction fees, especially where non-transaction fees among exchanges are based upon disparate standards of review, lack parity, and impede fair competition. Considering the absence of any such framework or clarity, the Exchange believes that the Commission does not have a reasonable basis to deny the Exchange this change in fees, where the proposed change would result in fees meaningfully lower than comparable fees at competing exchanges and where the associated non-transaction revenue is meaningfully lower than competing exchanges.

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49 To the extent that the cost-based standard includes Commission Staff making determinations as to the appropriateness of certain profit margins, the Exchange believes that Staff should be clear as to what they determine is an appropriate profit margin.

50 In light of the arguments above regarding disparate standards of review for historical legacy non-transaction fees and current non-transaction fees for non-legacy exchanges, a fee parity alternative would be one possible way to avoid the current unfair and discriminatory effect of the Staff Guidance and Revised Review Process. See, e.g., CSA Staff Consultation Paper 21-401, Real-Time Market Data Fees, available at https://www.bcsc.bc.ca/-/media/PWS/Resources/Securities_Law/Policies/Policy2/21401_Market_Data_Fee_CSA_Staff_Consulation_Paper.pdf.

In light of the above, disapproval of this would not meet the fairness standard under the Act, would be discriminatory and places a substantial burden on competition. The Exchange would be uniquely disadvantaged by not being able to increase its access fees to comparable levels (or lower levels than current market rates) to those of other options exchanges for connectivity. If the Commission Staff were to disapprove this proposal, that action, and not market forces, would substantially affect whether the Exchange can be successful in its competition with other options exchanges. Disapproval of this filing could also be viewed as an arbitrary and capricious decision should the Commission Staff continue to ignore its past treatment of non-transaction fee filings before implementation of the Revised Review Process and Staff Guidance and refuse to allow such filings to be approved despite significantly enhanced arguments and cost disclosures.[51]

Lastly, the Exchange notes that the Commission Staff has allowed similar fee increases by other exchanges to remain in effect by publishing those filings for comment and allowing the exchange to withdraw and re-file numerous times.[52] Recently, the Commission Staff has not

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51 The Exchange's costs have clearly increased and continue to increase, particularly regarding capital expenditures, as well as employee benefits provided by third parties (e.g., healthcare and insurance). Yet, practically no fee change proposed by the Exchange to cover its ever-increasing costs has been acceptable to the Commission Staff since 2021. The only other fair and reasonable alternative would be to require the numerous fee filings unquestioningly approved before the Staff Guidance and Revised Review Process to "develop a record," and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review," and to ensure a comparable review process with the Exchange's filing.

52 See, e.g., Securities Exchange Act Release Nos. 93937 (January 10, 2022), 87 FR 2466 (January 14, 2022) (SR-MEMX-2021-22); 94419 (March 15, 2022), 87 FR 16046 (March 21, 2022) (SR-MEMX-2022-02); SR-MEMX-2022-12 (withdrawn before being noticed); 94924 (May 16, 2022), 87 FR 31026 (May 20, 2022) (SR-MEMX-2022-13); 95299 (July 15, 2022), 87 FR 43563 (July 21, 2022) (SR-MEMX-2022-17); SR-MEMX-2022-24 (withdrawn before being noticed); 95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26); 94901 (May 12, 2022), 87 FR 30305 (May 18, 2022) (SR-MRX-2022-04); SR-MRX-2022-06 (withdrawn before being noticed); 95262 (July 12,

afforded the Exchange the same flexibility.[53] This again is evidence that the Commission Staff is not treating non-transaction fee filings in a consistent manner and is holding exchanges to different levels of scrutiny in reviewing filings.

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10Gb ULL Connectivity Fee Change

The Exchange recently filed a proposal to no longer operate 10Gb connectivity to the Exchange on a single shared network with its affiliate, MIAX Pearl. This change is an operational necessity due to ever-increasing capacity constraints and to accommodate anticipated access needs for Members and other market participants.[54] This proposal: (i) sets forth the applicable fees for the bifurcated 10Gb ULL network; and (ii) removes provisions in the Fee Schedule that provides for a shared 10Gb ULL network; and (iii) specifies that market participants may continue to connect to both the Exchange and MIAX Pearl via the 1Gb network.

The Exchange bifurcated the Exchange and MIAX Pearl 10Gb ULL networks on January 23, 2023. The Exchange issued an alert on August 12, 2022 publicly announcing the planned network change and implementation plan and dates to provide market participants adequate time to prepare.[55] Upon bifurcation of the 10Gb ULL network, subscribers would need to purchase

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2022), 87 FR 42780 (July 18, 2022) (SR-MRX-2022-09); 95710 (September 8, 2022), 87 FR 56464 (September 14, 2022) (SR-MRX-2022-12); 96046 (October 12, 2022), 87 FR 63119 (October 18, 2022) (SR-MRX-2022-20); 95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26); and 96430 (December 1, 2022), 87 FR 75083 (December 7, 2022) (SR-MEMX-2022-32).

53 See Securities Exchange Act Release Nos. 94719 (April 14, 2022), 87 FR 23600 (April 20, 2022) (SR-MIAX-2022-14) and 94720 (April 14, 2022), 87 FR 23586 (April 20, 2022) (SR-MIAX-2022-16).

54 See supra note 9.

55 Id.

separate connections to the Exchange and MIAX at the applicable rate. The Exchange's proposed amended rate for 10Gb ULL connectivity is described below. Until the 10Gb ULL network is bifurcated, subscribers to 10Gb ULL connectivity would be able to connect to both the Exchange and MIAX Pearl at the applicable rate set forth below.

The Exchange, therefore, proposes to amend the Fee Schedule to increase the fees for Members and non-Members to access the Exchange's system networks[56] via a 10Gb ULL fiber connection and to specify that this fee is for a dedicated connection to the Exchange and no longer provides access to MIAX Pearl. Specifically, the Exchange proposes to amend Sections 5)a)-b) of the Fee Schedule to increase the 10Gb ULL connectivity fee for Members and non-Members from $10,000 per month to $13,500 per month ("10Gb ULL Fee").[57] The Exchange also proposes to amend the Fee Schedule to reflect the bifurcation of the 10Gb ULL network and specify that only the 1Gb network provides access to both the Exchange and MIAX Pearl.

The Exchange proposes to make the following changes to reflect the bifurcated 10Gb ULL network for the Exchange and MIAX Pearl. The Exchange proposes to amend the explanatory paragraphs below the network connectivity fee tables in Sections 5)a)-b) of the Fee Schedule to specify that, with the bifurcated 10Gb ULL network, Members (and non-Members)

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56 The Exchange's system networks consist of the Exchange's extranet, internal network, and external network.

57 Market participants that purchase additional 10Gb ULL connections as a result of this change will not be subject to the Exchange's Member Network Connectivity Testing and Certification Fee under Section 4)c) of the Exchange's fee schedule. See Section 4)c) of the Exchange's fee schedule available at https://www.miaxoptions.com/sites/default/files/fee_schedule-files/MIAX_Options_Fee_Schedule_10192022.pdf (providing that "Network Connectivity Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange's system that requires testing and certification. Member Network Connectivity Testing and Certification Fees will not be assessed for testing and certification of connectivity to the Exchange's Disaster Recovery Facility.").

utilizing the MENI to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange and MIAX Pearl via a single, can only do so via a shared 1Gb connection.

The Exchange will continue to assess monthly Member and non-Member network connectivity fees for connectivity to the primary and secondary facilities in any month the Member or non-Member is credentialed to use any of the Exchange APIs or market data feeds in the production environment. The Exchange will continue to pro-rate the fees when a Member or non-Member makes a change to the connectivity (by adding or deleting connections) with such pro-rated fees based on the number of trading days that the Member or non-Member has been credentialed to utilize any of the Exchange APIs or market data feeds in the production environment through such connection, divided by the total number of trading days in such month multiplied by the applicable monthly rate.

Limited Service MEI Ports

Background

The Exchange also proposes to amend Section 5)d) of the Fee Schedule to adopt a tiered-pricing structure for Limited Service MEI Ports available to Market Makers. The Exchange allocates two (2) Full Service MEI Ports[58] and two (2) Limited Service MEI Ports[59] per matching

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58 Full Service MEI Ports provide Market Makers with the ability to send Market Maker quotes, eQuotes, and quote purge messages to the MIAX System. Full Service MEI Ports are also capable of receiving administrative information. Market Makers are limited to two Full Service MEI Ports per matching engine. See Fee Schedule, Section 5)d)ii), note 27.

59 Limited Service MEI Ports provide Market Makers with the ability to send eQuotes and quote purge messages only, but not Market Maker Quotes, to the MIAX System. Limited Service MEI Ports are also capable of receiving administrative information. Market Makers initially receive two Limited Service MEI Ports per matching engine. See Fee Schedule, Section 5)d)ii), note 28.

engine[60] to which each Market Maker connects. Market Makers may also request additional Limited Service MEI Ports for each matching engine to which they connect. The Full Service MEI Ports and Limited Service MEI Ports all include access to the Exchange's primary and secondary data centers and its disaster recovery center. Market Makers may request additional Limited Service MEI Ports. Currently, Market Makers are assessed a $100 monthly fee for each Limited Service MEI Port for each matching engine above the first two Limited Service MEI Ports that are included for free. This fee was unchanged since 2016.[61]

Limited Service MEI Port Fee Changes

The Exchange now proposes to move from a flat monthly fee per Limited Service MEI Port for each matching engine to a tiered-pricing structure for Limited Service MEI Ports for each matching engine under which the monthly fee would vary depending on the number of Limited Service MEI Ports each Market Maker elects to purchase. Specifically, the Exchange will continue to provide the first and second Limited Service MEI Ports for each matching engine free of charge. For Limited Service MEI Ports, the Exchange proposes to adopt the following tiered-pricing structure: (i) the third and fourth Limited Service MEI Ports for each matching engine will increase from the current flat monthly fee of $100 to $150 per port; (ii) the fifth and sixth Limited Service MEI Ports for each matching engine will increase from the current flat monthly fee of $100 to $200 per port; and (iii) the seventh or more Limited Service

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60 A "matching engine" is a part of the MIAX electronic system that processes options quotes and trades on a symbol-by-symbol basis. Some matching engines will process option classes with multiple root symbols, and other matching engines will be dedicated to one single option root symbol (for example, options on SPY will be processed by one single matching engine that is dedicated only to SPY). A particular root symbol may only be assigned to a single designated matching engine. A particular root symbol may not be assigned to multiple matching engines. See Fee Schedule, Section 5)d)ii), note 29.

61 See Securities Exchange Act Release No. 79666 (December 22, 2016), 81 FR 96133 (December 29, 2016) (SR-MIAX-2016-47).

MEI Ports will increase from the current monthly flat fee of $100 to $250 per port. The Exchange believes a tiered-pricing structure will encourage Market Makers to be more efficient when determining how to connect to the Exchange. This should also enable the Exchange to better monitor and provide access to the Exchange's network to ensure sufficient capacity and headroom in the System[62] in accordance with its fair access requirements under Section 6(b)(5) of the Act.[63]

The Exchange offers various types of ports with differing prices because each port accomplishes different tasks, are suited to different types of Members, and consume varying capacity amounts of the network. For instance, Market Makers who take the maximum amount of Limited Service MEI Ports account for approximately greater than 99% of message traffic over the network, while Market Makers with fewer Limited Service MEI Ports account for approximately less than 1% of message traffic over the network. In the Exchange's experience, Market Makers who only utilize the two free Limited Service MEI Ports do not have a business need for the high performance network solutions required by Market Makers who take the maximum amount of Limited Service MEI Ports. The Exchange's high performance network solutions and supporting infrastructure (including employee support), provides unparalleled system throughput and the capacity to handle approximately 18 million quote messages per second. Based on November 2022 trading results, on an average day, the Exchange handles over approximately 8.8 billion quotes, and more than 185 billion quotes over the entire month.

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62 The term "System" means the automated trading system used by the Exchange for the trading of securities. See the Definitions Section of the Fee Schedule and Exchange Rule 100.

63 See 15 U.S.C. 78f(b). The Exchange may offer access on terms that are not unfairly discriminatory among its Members, and ensure sufficient capacity and headroom in the System. The Exchange monitors the System's performance and makes adjustments to its System based on market conditions and Member demand.

Of that total, Market Makers with the maximum amount of Limited Service MEI Ports generated approximately 5 billion quotes, and Market Makers who utilized the two free Limited Service MEI Ports generated approximately 1.5 billion quotes. Also for November 2022, Market Makers who utilized 3 to 4 Limited Service MEI ports submitted an average of 1,152,654,133 quotes per day and Market Makers who utilized 5 to 9 Limited Service MEI ports submitted an average of 1,172,105,181 quotes per day. To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[64] Thus, as the number of connections a Market Maker has increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. The Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange. With this in mind, the Exchange proposes no fee or lower fees for those Market Makers who receive fewer Limited Service MEI Ports since those Market Makers generally tend to send the least amount of orders and messages over those

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64 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

connections. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers who take the most Limited Service MEI Ports pay for the vast majority of the shared network resources from which all Member and non-Member users benefit, but is designed and maintained from a capacity standpoint to specifically handle the message rate and performance requirements of those Market Makers.

The Exchange proposes to increase its monthly Limited Service MEI Port fees since it has not done so since 2016,[65] which is designed to recover a portion of the costs associated with directly accessing the Exchange.

Implementation. The proposed fee changes are immediately effective.

b. Statutory Basis

The Exchange believes that the proposed fees are consistent with Section 6(b) of the Act[66] in general, and furthers the objectives of Section 6(b)(4) of the Act[67] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Members and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposed fees further the objectives of Section 6(b)(5) of the Act[68] in that they are designed to promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in

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65 See Securities Exchange Act Release No. 79666 (December 22, 2016), 81 FR 96133 (December 29, 2016) (SR-MIAX-2016-47).

66 15 U.S.C. 78f(b).

67 15 U.S.C. 78f(b)(4).

68 15 U.S.C. 78f(b)(5).

general protect investors and the public interest and are not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange believes that the information provided to justify the proposed fees meets or exceeds the amount of detail required in respect of proposed fee changes under the Revised Review Process and as set forth in recent Staff Guidance. Based on both the BOX Order[69] and the Staff Guidance[70], the Exchange believes that the proposed fees are consistent with the Act because they are: (i) reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Staff Guidance; and (iii) supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable and will not result in excessive pricing or supra-competitive profit.

The Exchange believes that exchanges, in setting fees of all types, should meet high standards of transparency to demonstrate why each new fee or fee amendment meets the requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among market participants. The Exchange believes this high standard is especially important when an exchange imposes various fees for market participants to access an exchange's marketplace.

In the Staff Guidance, the Commission Staff states that, "[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces."[71] The Staff Guidance further states that, "… even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a

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69 See supra note 20.

70 See supra note 21.

71 Id.

cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act."[72] In the Staff Guidance, the Commission Staff further states that, "[i]f an SRO seeks to support its claims that a proposed fee is fair and reasonable because it will permit recovery of the SRO's costs, . . . , specific information, including quantitative information, should be provided to support that argument."[73]

The proposed fees are reasonable because they promote parity among exchange pricing for access, which promotes competition, including in the Exchanges' ability to competitively price transaction fees, invest in infrastructure, new products and other innovations, all while allowing the Exchange to recover its costs to provide dedicated access via 10Gb ULL connectivity (driven by the bifurcation of the 10Gb ULL network) and Limited Service MEI Ports. As discussed above, the Revised Review Process and Staff Guidance have created an uneven playing field between legacy and non-legacy exchanges by severely restricting non-legacy exchanges from being able to increase non-transaction related fees to provide them with additional necessary revenue to better compete with legacy exchanges, which largely set fees prior to the Revised Review Process. The much higher non-transaction fees charged by the legacy exchanges provides them with two significant competitive advantages: (i) additional non-transaction revenue that may be used to fund areas other than the non-transaction service related to the fee, such as investments in infrastructure, advertising, new products and other innovations; and (ii) greater flexibility to lower their transaction fees by using the revenue from the higher non-transaction fees to subsidize transaction fee rates. The latter is more immediately impactful in competition for order flow and market share, given the variable nature of this cost on Member

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72 Id.

73 Id.

firms. The absence of a reasonable path forward to increase non-transaction fees to comparable (or lower rates) limits the Exchange's flexibility to, among other things, make additional investments in infrastructure and advertising, diminishes the ability to remain competitive on transaction fees, and hinders the ability to compete for order flow and market share. Again, while one could debate whether the pricing of non-transaction fees are subject to the same market forces as transaction fees, there is little doubt that subjecting one exchange to a materially different standard than that applied to other exchanges for non-transaction fees leaves that exchange at a disadvantage in its ability to compete with its pricing of transaction fees.

The Proposed Fees Ensure Parity Among Exchange Access Fees, Which Promotes Competition

The Exchange commenced operations in 2012 and adopted its initial fee schedule, with all connectivity and port fees set at $0.00 (the Exchange originally had a non-ULL 10Gb connectivity option, which it has since removed).[74] As a new exchange entrant, the Exchange chose to offer connectivity and ports free of charge to encourage market participants to trade on the Exchange and experience, among things, the quality of the Exchange's technology and trading functionality. This practice is not uncommon. New exchanges often do not charge fees or charge lower fees for certain services such as memberships/trading permits to attract order flow to an exchange, and later amend their fees to reflect the true value of those services, absorbing all costs to provide those services in the meantime. Allowing new exchange entrants time to build and sustain market share through various pricing incentives before increasing non-transaction fees encourages market entry and fee parity, which promotes competition among exchanges. It also enables new exchanges to mature their markets and allow market participants

74 See Securities Exchange Act Release No. 68415 (December 12, 2012), 77 FR 74905 (December 18, 2012) (SR-MIAX-2012-01).

to trade on the new exchanges without fees serving as a potential barrier to attracting memberships and order flow.[75]

Later in 2013, as the Exchange's market share increased,[76] the Exchange adopted a nominal $10 fee for each additional Limited Service MEI Port.[77] The Exchange last increased the fees for its 10Gb ULL fiber connections from $9,300 to $10,000 per month on January 1, 2021.[78] The Exchange balanced business and competitive concerns with the need to financially compete with the larger incumbent exchanges that charge higher fees for similar connectivity and use that revenue to invest in their technology and other service offerings.

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75 See Securities Exchange Act Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17) (stating, "[t]he Exchange established this lower (when compared to other options exchanges in the industry) Participant Fee in order to encourage market participants to become Participants of BOX…"). See also Securities Exchange Act Release No. 90076 (October 2, 2020), 85 FR 63620 (October 8, 2020) (SR-MEMX-2020-10) (proposing to adopt the initial fee schedule and stating that "[u]nder the initial proposed Fee Schedule, the Exchange proposes to make clear that it does not charge any fees for membership, market data products, physical connectivity or application sessions."). MEMX's market share has increased and recently proposed to adopt numerous non-transaction fees, including fees for membership, market data, and connectivity. See Securities Exchange Act Release Nos. 93927 (January 7, 2022), 87 FR 2191 (January 13, 2022) (SR-MEMX-2021-19) (proposing to adopt membership fees); 96430 (December 1, 2022), 87 FR 75083 (December 7, 2022) (SR-MEMX-2022-32) and 95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26) (proposing to adopt fees for connectivity). See also, e.g., Securities Exchange Act Release No. 88211 (February 14, 2020), 85 FR 9847 (February 20, 2020) (SR-NYSENAT-2020-05), available at https://www.nyse.com/publicdocs/nyse/markets/nyse-national/rule-filings/filings/2020/SR-NYSENat-2020-05.pdf (initiating market data fees for the NYSE National exchange after initially setting such fees at zero).

76 The Exchange experienced a monthly average equity options trading volume of 1.87% for the month of November 2013. See Market at a Glance, available at www.miaxoptions.com.

77 See Securities Exchange Act Release No. 70903 (November 20, 2013), 78 FR 70615 (November 26, 2013) (SR-MIAX-2013-52).

78 See Securities Exchange Act Release No. 90980 (January 25, 2021), 86 FR 7602 (January 29, 2021) (SR-MIAX-2021-02).

The proposed changes to the Fee Schedule are reasonable in several respects. As a threshold matter, the Exchange is subject to significant competitive forces, which constrains its pricing determinations for transaction fees as well as non-transaction fees. The fact that the market for order flow is competitive has long been recognized by the courts. In NetCoalition v. Securities and Exchange Commission, the D.C. Circuit stated, "[n]o one disputes that competition for order flow is 'fierce.' … As the SEC explained, '[i]n the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers'…."[79]

The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention to determine prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining 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."[80]

Congress directed the Commission to "rely on 'competition, whenever possible, in meeting its regulatory responsibilities for overseeing the SROs and the national market

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79 See NetCoalition, 615 F.3d at 539 (D.C. Cir. 2010) (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782-83 (December 9, 2008) (SR-NYSEArca-2006-21)).

80 See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) ("Regulation NMS Adopting Release").

system.'"[81] As a result, and as evidenced above, the Commission has historically relied on competitive forces to determine whether a fee proposal is equitable, fair, reasonable, and not unreasonably or unfairly discriminatory. "If competitive forces are operative, the self-interest of the exchanges themselves will work powerfully to constrain unreasonable or unfair behavior."[82] Accordingly, "the existence of significant competition provides a substantial basis for finding that the terms of an exchange's fee proposal are equitable, fair, reasonable, and not unreasonably or unfairly discriminatory."[83] In the Revised Review Process and Staff Guidance, Commission Staff indicated that they would look at factors beyond the competitive environment, such as cost, only if a "proposal lacks persuasive evidence that the proposed fee is constrained by significant competitive forces."[84]

The Exchange believes the competing exchanges' 10Gb connectivity and port fees are useful examples of alternative approaches to providing and charging for access and demonstrating how such fees are competitively set and constrained. To that end, the Exchange believes the proposed fees are competitive and reasonable because the proposed fees are similar to or less than fees charged for similar connectivity and port access provided by other options exchanges with comparable market shares. As such, the Exchange believes that denying its ability to institute fees that allow us to recoup our costs and some margin in a manner that is

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81 See NetCoalition, 615 F.3d at 534-35; see also H.R. Rep. No. 94-229 at 92 (1975) ("[I]t is the intent of the conferees that the national market system evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed.").

82 See Securities Exchange Act Release No. 59039 (December 2, 2008), 73 Fed. Reg. 74,770 (December 9, 2008) (SR-NYSEArca-2006-21).

83 Id.

84 See supra note 21.

closer to parity with legacy exchanges, in effect, impedes its ability to compete, including in its pricing of transaction fees and ability to invest in competitive infrastructure and other offerings.

The following table shows how the Exchange's proposed fees remain similar to or less than fees charged for similar connectivity and port access provided by other options exchanges with similar market share. Each of the market data rates in place at competing options exchanges were filed with the Commission for immediate effectiveness and remain in place today.

Exchange	**Type of Connection or Port**	**Monthly Fee (per connection or per port)**
MIAX (as proposed) (equity options market share of 5.64% for the month of November 2022)[85]	10Gb ULL connection	$13,500
	Limited Service MEI Ports	1-2 ports: FREE (not changed in this proposal) 3-4 ports: $150 each 5-6 ports: $200 each 7 or more ports: $250 each
NASDAQ[86] (equity options market share of 6.61% for the month of November 2022)[87]	10Gb Ultra fiber connection	$15,000 per connection
	SQF Port[88]	1-5 ports: $1,500 per port 6-20 ports: $1,000 per port 21 or more ports: $500 per port
NASDAQ ISE LLC ("ISE")[89]	10Gb Ultra fiber connection	$15,000 per connection
	SQF Port	$1,100 per port

85 See supra note 76.

86 See NASDAQ Pricing Schedule, Options 7, Section 3, Ports and Other Services and NASDAQ Rules, General 8: Connectivity, Section 1. Co-Location Services.

87 See supra note 76.

88 Similar to the Exchange's MEI Ports, SQF ports are primarily utilized by Market Makers.

89 See ISE Pricing Schedule, Options 7, Section 7, Connectivity Fees and ISE Rules, General 8: Connectivity.

(equity options market share of 5.76% for the month of November 2022)[90]		
NYSE American LLC ("NYSE American")[91] (equity options market share of 6.41% for the month of November 2022)[92]	10Gb LX LCN connection	$22,000 per connection
	Order/Quote Entry Port	1-40 ports: $450 per port 41 or more ports: $150 per port
NASDAQ GEMX, LLC ("GEMX")[93] (equity options market share of 1.79% for the month of November 2022)[94]	10Gb Ultra connection	$15,000 per connection
	SQF Port	$1,250 per port

There is no requirement, regulatory or otherwise, that any broker-dealer connect to and access any (or all of) the available options exchanges. Market participants may choose to become a member of one or more options exchanges based on the market participant's assessment of the business opportunity relative to the costs of the Exchange. With this, there is elasticity of demand for exchange membership. As an example, the Exchange's affiliate, MIAX PEARL, LLC ("MIAX Pearl"), experienced a decrease in membership as the result of similar fees proposed herein. One MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023, as a direct result of the proposed connectivity and port fee changes on MIAX Pearl.

90 See supra note 76.

91 See NYSE American Options Fee Schedule, Section V.A. Port Fees and Section V.B. Co-Location Fees.

92 See supra note 76.

93 See GEMX Pricing Schedule, Options 7, Section 6, Connectivity Fees and GEMX Rules, General 8: Connectivity.

94 See supra note 76.

It is not a requirement for market participants to become members of all options exchanges, in fact, certain market participants conduct an options business as a member of only one options market.[95] A very small number of market participants choose to become a member of all sixteen options exchanges. Most firms that actively trade on options markets are not currently Members of the Exchange and do not purchase connectivity or port services at the Exchange. Connectivity and ports are only available to Members or service bureaus, and only a Member may utilize a port.[96]

One other exchange recently noted in a proposal to amend their own trading permit fees that of the 62 market making firms that are registered as Market Makers across Cboe, MIAX, and BOX, 42 firms access only one of the three exchanges.[97] The Exchange and its affiliates,

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95 BOX recently adopted an electronic market maker trading permit fee. See Securities Exchange Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17). In that proposal, BOX stated that, "… it is not aware of any reason why Market Makers could not simply drop their access to an exchange (or not initially access an exchange) if an exchange were to establish prices for its non-transaction fees that, in the determination of such Market Maker, did not make business or economic sense for such Market Maker to access such exchange. [BOX] again notes that no market makers are required by rule, regulation, or competitive forces to be a Market Maker on [BOX]." Also in 2022, MEMX established a monthly membership fee. See Securities Exchange Act Release No. 93927 (January 7, 2022), 87 FR 2191 (January 13, 2022) (SR-MEMX-2021-19). In that proposal, MEMX reasoned that that there is value in becoming a member of the exchange and stated that it believed that the proposed membership fee "is not unfairly discriminatory because no broker-dealer is required to become a member of the Exchange" and that "neither the trade-through requirements under Regulation NMS nor broker-dealers' best execution obligations require a broker-dealer to become a member of every exchange."

96 Service Bureaus may obtain ports on behalf of Members.

97 See Securities Exchange Act Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the Fee Schedule on the BOX Options Market LLC Facility To Adopt Electronic Market Maker Trading Permit Fees). The Exchange believes that BOX's observation demonstrates that market making firms can, and do, select which exchanges they wish to access, and, accordingly, options exchanges must take competitive considerations into account when setting fees for such access.

MIAX Pearl and MIAX Emerald, have a total of 47 members. Of those 47 total members, 35 are members of all three affiliated exchanges, four are members of only two (2) affiliated exchanges, and eight (8) are members of only one affiliated exchange. The Exchange also notes that no firm is a Member of the Exchange only. The above data evidences that a broker-dealer need not have direct connectivity to all options exchanges, let alone the Exchange and its two affiliates, and broker-dealers may elect to do so based on their own business decisions and need to directly access each exchange's liquidity pool.

Not only is there not an actual regulatory requirement to connect to every options exchange, the Exchange believes there is also no "de facto" or practical requirement as well, as further evidenced by the broker-dealer membership analysis of the options exchanges discussed above. As noted above, this is evidenced by the fact that one MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023 as a direct result of the proposed connectivity and port fee changes on MIAX Pearl (which are similar to the changes proposed herein). Indeed, broker-dealers choose if and how to access a particular exchange and because it is a choice, the Exchange must set reasonable pricing, otherwise prospective members would not connect and existing members would disconnect from the Exchange. The decision to become a member of an exchange, particularly for registered market makers, is complex, and not solely based on the non-transactional costs assessed by an exchange. As noted herein, specific factors include, but are not limited to: (i) an exchange's available liquidity in options series; (ii) trading functionality offered on a particular market; (iii) product offerings; (iv) customer service on an exchange; and (v) transactional pricing. Becoming a member of the exchange does not "lock" a potential member into a market or diminish the overall competition for exchange services.

In lieu of becoming a member at each options exchange, a market participant may join one exchange and elect to have their orders routed in the event that a better price is available on an away market. Nothing in the Order Protection Rule requires a firm to become a Member at – or establish connectivity to – the Exchange.[98] If the Exchange is not at the NBBO, the Exchange will route an order to any away market that is at the NBBO to ensure that the order was executed at a superior price and prevent a trade-through.[99]

With respect to the submission of orders, Members may also choose not to purchase any connection at all from the Exchange, and instead rely on the port of a third party to submit an order. For example, a third-party broker-dealer Member of the Exchange may be utilized by a retail investor to submit orders into an Exchange. An institutional investor may utilize a broker-dealer, a service bureau,[100] or request sponsored access[101] through a member of an exchange in order to submit a trade directly to an options exchange.[102] A market participant may either pay the costs associated with becoming a member of an exchange or, in the alternative, a market participant may elect to pay commissions to a broker-dealer, pay fees to a service bureau to

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98 See Options Order Protection and Locked/Crossed Market Plan (August 14, 2009), available at https://www.theocc.com/getmedia/7fc629d9-4e54-4b99-9f11-c0e4db1a2266/options_order_protection_plan.pdf.

99 Members may elect to not route their orders by utilizing the Do Not Route order type. See Exchange Rule 516(g).

100 Service Bureaus provide access to market participants to submit and execute orders on an exchange. On the Exchange, a Service Bureau may be a Member. Some Members utilize a Service Bureau for connectivity and that Service Bureau may not be a Member. Some market participants utilize a Service Bureau who is a Member to submit orders.

101 Sponsored Access is an arrangement whereby a Member permits its customers to enter orders into an exchange's system that bypass the Member's trading system and are routed directly to the Exchange, including routing through a service bureau or other third-party technology provider.

102 This may include utilizing a floor broker and submitting the trade to one of the five options trading floors.

submit trades, or pay a member to sponsor the market participant in order to submit trades directly to an exchange.

Non-Member third-parties, such as service bureaus and extranets, resell the Exchange's connectivity. This indirect connectivity is another viable alternative for market participants to trade on the Exchange without connecting directly to the Exchange (and thus not pay the Exchange's connectivity fees), which alternative is already being used by non-Members and further constrains the price that the Exchange is able to charge for connectivity and other access fees to its market. The Exchange notes that it could, but chooses not to, preclude market participants from reselling its connectivity. Unlike other exchanges, the Exchange also does not currently assess fees on third-party resellers on a per customer basis (i.e., fees based on the number of firms that connect to the Exchange indirectly via the third-party).[103] Indeed, the Exchange does not receive any connectivity revenue when connectivity is resold by a third-party, which often is resold to multiple customers, some of whom are agency broker-dealers that have numerous customers of their own.[104] Particularly, in the event that a market participant views the Exchange's direct connectivity and access fees as more or less attractive than competing markets, that market participant can choose to connect to the Exchange indirectly or may choose not to connect to the Exchange and connect instead to one or more of the other 16 options

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103 See, e.g., Nasdaq Price List – U.S. Direct Connection and Extranet Fees, available at, US Direct-Extranet Connection (nasdaqtrader.com); and Securities Exchange Act Release Nos. 74077 (January 16, 2022), 80 FR 3683 (January 23, 2022) (SR-NASDAQ-2015-002); and 82037 (November 8, 2022), 82 FR 52953 (November 15, 2022) (SR-NASDAQ-2017-114).

104 The Exchange notes that resellers, such as SFTI, are not required to publicize, let alone justify or file with the Commission their fees, and as such could charge the market participant any fees it deems appropriate (including connectivity fees higher than the Exchange's connectivity fees), even if such fees would otherwise be considered potentially unreasonable or uncompetitive fees.

markets. Accordingly, the Exchange believes that the proposed fees are fair and reasonable and constrained by competitive forces.

The Exchange is obligated to regulate its Members and secure access to its environment. In order to properly regulate its Members and secure the trading environment, the Exchange takes measures to ensure access is monitored and maintained with various controls. Connectivity and ports are methods utilized by the Exchange to grant Members secure access to communicate with the Exchange and exercise trading rights. When a market participant elects to be a Member, and is approved for membership by the Exchange, the Member is granted trading rights to enter orders and/or quotes into Exchange through secure connections.

Again, there is no legal or regulatory requirement that a market participant become a Member of the Exchange. This is again evidenced by the fact that one MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023 as a direct result of the proposed connectivity and port fee changes on MIAX Pearl. If a market participant chooses to become a Member, they may then choose to purchase connectivity beyond the one connection that is necessary to quote or submit orders on the Exchange. Members may freely choose to rely on one or many connections, depending on their business model.

Bifurcation of 10Gb ULL Connectivity and Related Fees

The Exchange began to operate on a single shared network with MIAX Pearl when MIAX Pearl commenced operations as a national securities exchange on February 7, 2017.[105] The Exchange and MIAX Pearl have operated on a single shared network to provide Members

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105 See Securities Exchange Act Release No. 80061 (February 17, 2017), 82 FR 11676 (February 24, 2017) (establishing MIAX Pearl Fee Schedule and establishing that the MENI can also be configured to provide network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facility of the MIAX Pearl's affiliate, MIAX, via a single, shared connection).

with a single convenient set of access points for both exchanges. Both the Exchange and MIAX Pearl offer two methods of connectivity, 1Gb and 10Gb ULL connections. The 1Gb connection services are supported by a discrete set of switches providing 1Gb access ports to Members. The 10Gb ULL connection services are supported by a second and mutually exclusive set of switches providing 10Gb ULL access ports to Members. Previously, both the 1Gb and 10Gb ULL shared extranet ports allow Members to use one connection to access both exchanges, namely their trading platforms, market data systems, test systems, and disaster recovery facilities.

The Exchange stresses that bifurcating the 10Gb ULL connectivity between the Exchange and MIAX Pearl was not designed with the objective to generate an overall increase in access fee revenue. Rather, the proposed change was necessitated by 10Gb ULL connectivity experiencing a significant decrease in port availability mostly driven by connectivity demands of latency sensitive Members that seek to maintain multiple 10Gb ULL connections on every switch in the network. Operating two separate national securities exchanges on a single shared network provided certain benefits, such as streamlined connectivity to multiple exchanges, and simplified exchange infrastructure. However, doing so was no longer sustainable due to ever-increasing capacity constraints and current system limitations. The network is not an unlimited resource. As described more fully in the proposal to bifurcate the 10Gb ULL network,[106] the connectivity needs of Members and market participants has increased every year since the launch of MIAX Pearl and the operations of the Exchange and MIAX Pearl on a single shared 10Gb ULL network is no longer feasible. This required constant System expansion to meet Member demand for additional ports and 10Gb ULL connections has resulted in limited available System

106 See Securities Exchange Act Release Nos. 96553 (December 20, 2022), 87 FR 79379 (December 27, 2022) (SR-PEARL-2022-60); 96545 (December 20, 2022) 87 FR 79393 (December 27, 2022) (SR-MIAX-2022-48).

headroom, which eventually became operationally problematic for both the Exchange and its customers.

As stated above, the shared network is not an unlimited resource and its expansion was constrained by MIAX's and MIAX Pearl's ability to provide fair and equitable access to all market participants of both markets. Due to the ever-increasing connectivity demands, the Exchange found it necessary to bifurcate 10Gb ULL connectivity to the Exchange's and MIAX Pearl's Systems and networks to be able to continue to meet ongoing and future 10Gb ULL connectivity and access demands.[107]

Unlike the switches that provide 1Gb connectivity, the availability for additional 10Gb ULL connections on each switch had significantly decreased. This was mostly driven by the connectivity demands of latency sensitive Members (e.g., Market Makers and liquidity removers) that sought to maintain connectivity across multiple 10Gb ULL switches. Based on the Exchange's experience, such Members did not typically use a shared 10Gb ULL connection to reach both the Exchange and MIAX Pearl due to related latency concerns. Instead, those Members maintain dedicated separate 10Gb ULL connections for the Exchange and separate dedicated 10Gb ULL connections for MIAX Pearl. This resulted in a much higher 10Gb ULL usage per switch by those Members on the shared 10Gb ULL network than would otherwise be needed if the Exchange and MIAX Pearl had their own dedicated 10Gb ULL networks. Separation of the Exchange and MIAX Pearl 10Gb ULL networks naturally lends itself to reduced 10Gb ULL port consumption on each switch and, therefore, increased 10Gb ULL port availability for current Members and new Members.

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[107] Currently, the Exchange maintains sufficient headroom to meet ongoing and future requests for 1Gb connectivity. Therefore, the Exchange did not propose to alter 1Gb connectivity and continues to provide 1Gb connectivity over a shared network.

Prior to bifurcating the 10Gb ULL network, the Exchange and MIAX Pearl continued to add switches to meet ongoing demand for 10Gb ULL connectivity. That was no longer sustainable because simply adding additional switches to expand the current shared 10Gb ULL network would not adequately alleviate the issue of limited available port connectivity. While it would have resulted in a gain in overall port availability, the existing switches on the shared 10Gb ULL network in use would have continued to suffer from lack of port headroom given many latency sensitive Members' needs for a presence on each switch to reach both the Exchange and MIAX Pearl. This was because those latency sensitive Members sought to have a presence on each switch to maximize the probability of experiencing the best network performance. Those Members routinely decide to rebalance orders and/or messages over their various connections to ensure each connection is operating with maximum efficiency. Simply adding switches to the extranet would not have resolved the port availability needs on the shared 10Gb ULL network since many of the latency sensitive Members were unwilling to relocate their connections to a new switch due to the potential detrimental performance impact. As such, the impact of adding new switches and rebalancing ports would not have been effective or responsive to customer needs. The Exchange has found that ongoing and continued rebalancing once additional switches are added has had, and would have continued to have had, a diminishing return on increasing available 10Gb ULL connectivity.

Based on its experience and expertise, the Exchange found the most practical way to increase connectivity availability on its switches was to bifurcate the existing 10Gb ULL networks for the Exchange and MIAX Pearl by migrating the exchanges' connections from the shared network onto their own set of switches. Such changes accordingly necessitated a review of the Exchange's previous 10Gb ULL connectivity fees and related costs. The proposed fees

are necessary to allow the Exchange to cover ongoing costs related to providing and maintaining such connectivity, described more fully below. The ever increasing connectivity demands that necessitated this change further support that the proposed fees are reasonable because this demand reflects that Members and non-Members believe they are getting value from the 10Gb ULL connections they purchase.

The Exchange announced on August 12, 2022 the planned network change and the January 23, 2023 implementation date to provide market participants adequate time to prepare.[108] Since August 12, 2022, the Exchange has worked with current 10Gb ULL subscribers to address their connectivity needs ahead of the January 23, 2023 date. Based on those interactions and subscriber feedback, the Exchange experienced a minimal net increase of approximately six (6) overall 10Gb ULL connectivity subscriptions across the Exchange and MIAX Pearl. This anticipated immaterial increase in overall connections reflect a minimal fee impact for all types of subscribers and reflects that subscribers elected to reallocate existing 10Gb ULL connectivity directly to the Exchange or MIAX Pearl, or chose to decrease or cease connectivity as a result of the change.

Should the Commission Staff disapprove such fees, it would effectively dictate how an exchange manages its technology and would hamper the Exchange's ability to continue to invest in and fund access services in a manner that allows it to meet existing and anticipated access demands of market participants. Disapproval could also have the adverse effect of discouraging exchanges from optimizing its operations and deploying innovative technology to the benefit of market participants if it believes the Commission would later prevent that exchange from covering its costs and monetizing operational enhancements, thus adversely impacting

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108 See supra note 9.

competition. Also, as noted above, the economic consequences of not being able to better establish fee parity with other exchanges for non-transaction fees hampers the Exchange's ability to compete on transaction fees.

Cost Analysis

In general, the Exchange believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee increase meets the Exchange Act requirements that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among members and markets. In particular, the Exchange believes that each exchange should take extra care to be able to demonstrate that these fees are based on its costs and reasonable business needs.

In proposing to charge fees for connectivity services, the Exchange is especially diligent in assessing those fees in a transparent way against its own aggregate costs of providing the related service, and in carefully and transparently assessing the impact on Members – both generally and in relation to other Members, i.e., to assure the fee will not create a financial burden on any participant and will not have an undue impact in particular on smaller Members and competition among Members in general. The Exchange believes that this level of diligence and transparency is called for by the requirements of Section 19(b)(1) under the Act,[109] and Rule 19b-4 thereunder,[110] with respect to the types of information SROs should provide when filing fee changes, and Section 6(b) of the Act,[111] which requires, among other things, that exchange

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109 15 U.S.C. 78s(b)(1).

110 17 CFR 240.19b-4.

111 15 U.S.C. 78f(b).

fees be reasonable and equitably allocated,[112] not designed to permit unfair discrimination,[113] and that they not impose a burden on competition not necessary or appropriate in furtherance of the purposes of the Act.[114] This rule change proposal addresses those requirements, and the analysis and data in each of the sections that follow are designed to clearly and comprehensively show how they are met.[115] The Exchange reiterates that the legacy exchanges with whom the Exchange vigorously competes for order flow and market share, were not subject to any such diligence or transparency in setting their baseline non-transaction fees, most of which were put in place before the Revised Review Process and Staff Guidance.

As detailed below, the Exchange recently calculated its aggregate annual costs for providing physical 10Gb ULL connectivity to the Exchange at $12,034,554 (or approximately $1,002,880 per month, rounded up to the nearest dollar when dividing the annual cost by 12 months) and its aggregate annual costs for providing Limited Service MEI Ports at $2,157,178 (or approximately $179,765 per month, rounded down to the nearest dollar when dividing the annual cost by 12 months). In order to cover the aggregate costs of providing connectivity to its Users (both Members and non-Members[116]) going forward and to make a modest profit, as described below, the Exchange proposes to modify its Fee Schedule to charge a fee of $13,500 per month for each physical 10Gb ULL connection and to remove language providing for a

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112 15 U.S.C. 78f(b)(4).

113 15 U.S.C. 78f(b)(5).

114 15 U.S.C. 78f(b)(8).

115 See supra note 21.

116 Types of market participants that obtain connectivity services from the Exchange but are not Members include service bureaus and extranets. Service bureaus offer technology-based services to other companies for a fee, including order entry services, and thus, may access Limited Service MEI Ports on behalf of one or more Members. Extranets offer physical connectivity services to Members and non-Members.

shared 10Gb ULL network between the Exchange and MIAX Pearl. The Exchange also proposes to modify its Fee Schedule to charge tiered rates for additional Limited Service MEI Ports.

In 2019, the Exchange completed a study of its aggregate costs to produce market data and connectivity (the "Cost Analysis").[117] The Cost Analysis required a detailed analysis of the Exchange's aggregate baseline costs, including a determination and allocation of costs for core services provided by the Exchange – transaction execution, market data, membership services, physical connectivity, and port access (which provide order entry, cancellation and modification functionality, risk functionality, the ability to receive drop copies, and other functionality). The Exchange separately divided its costs between those costs necessary to deliver each of these core services, including infrastructure, software, human resources (i.e., personnel), and certain general and administrative expenses ("cost drivers").

As an initial step, the Exchange determined the total cost for the Exchange and the affiliated markets). That total cost was then divided among the Exchange and each of its affiliated markets based on a number of factors, including server counts, additional hardware and software utilization, current or anticipated functional or non-functional development projects, capacity needs, end-of-life or end-of-service intervals, number of members, market model (e.g., price time or pro-rata), which may impact message traffic, individual system architectures that impact platform size,[118] storage needs, dedicated infrastructure versus shared infrastructure

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117 The Exchange frequently updates it Cost Analysis as strategic initiatives change, costs increase or decrease, and market participant needs and trading activity changes. The Exchange's most recent Cost Analysis was conducted ahead of this filing.

118 For example, the Exchange maintains 24 matching engines, MIAX Pearl Options maintains 12 matching engines, MIAX Pearl Equities maintains 24 matching engines, and MIAX Emerald maintains 12 matching engines.

allocated per platform based on the resources required to support each platform, number of available connections, and employees allocated time. This will result in different allocation percentages among the Exchange and its affiliated markets. Meanwhile this allocation methodology ensures that no portion of any cost was allocated twice or double-counted between the Exchange and its affiliated markets.

Next, the Exchange adopted an allocation methodology with thoughtful and consistently applied principles to guide how much of a particular cost amount allocated to the Exchange pursuant to the above methodology should be allocated within the Exchange to each core service. For instance, fixed costs that are not driven by client activity (e.g., message rates), such as data center costs, were allocated more heavily to the provision of physical 1Gb and 10Gb ULL connectivity (62%), with smaller allocations to all ports (15%), and the remainder to the provision of transaction execution, membership services and market data services (23%). This next level of the allocation methodology at the individual exchange level also took into account a number of factors similar to those set forth under the first allocation methodology described above, to determine the appropriate allocation to connectivity or market data versus what is to be allocated to providing other services. The allocation methodology was developed through an assessment of costs with senior management intimately familiar with each area of the Exchange's operations. After adopting this allocation methodology, the Exchange then applied an estimated allocation of each cost driver to each core service, resulting in the cost allocations described below. Each of the below cost allocations is unique to the Exchange and represents a percentage of overall cost that was allocated to the Exchange pursuant to the initial allocation described above.

By allocating segmented costs to each core service, the Exchange was able to estimate by

core service the potential margin it might earn based on different fee models. The Exchange notes that as a non-listing venue it has five primary sources of revenue that it can potentially use to fund its operations: transaction fees, fees for connectivity and port services, membership fees, regulatory fees, and market data fees. Accordingly, the Exchange must cover its expenses from these five primary sources of revenue. The Exchange also notes that as a general matter each of these sources of revenue is based on services that are interdependent. For instance, the Exchange's system for executing transactions is dependent on physical hardware and connectivity; only Members and parties that they sponsor to participate directly on the Exchange may submit orders to the Exchange; many Members (but not all) consume market data from the Exchange in order to trade on the Exchange; and, the Exchange consumes market data from external sources in order to comply with regulatory obligations. Accordingly, given this interdependence, the allocation of costs to each service or revenue source required judgment of the Exchange and was weighted based on estimates of the Exchange that the Exchange believes are reasonable, as set forth below. While there is no standardized and generally accepted methodology for the allocation of an exchange's costs, the Exchange's methodology is the result of an extensive review and analysis and will be consistently applied going forward for any other potential fee proposals. In the absence of the Commission attempting to specify a methodology for the allocation of exchanges' interdependent costs, the Exchange will continue to be left with its best efforts to attempt to conduct such an allocation in a thoughtful and reasonable manner.

Through the Exchange's extensive updated Cost Analysis, the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the provision of connectivity services, and, if such expense did so relate, what portion (or percentage) of such expense actually supports the provision of connectivity services, and thus

bears a relationship that is, "in nature and closeness," directly related to network connectivity services. In turn, the Exchange allocated certain costs more to physical connectivity and others to ports, while certain costs were only allocated to such services at a very low percentage or not at all, using consistent allocation methodologies as described above. Based on this analysis, the Exchange estimates that the cost drivers to provide 10Gb ULL connectivity and Limited Service MEI Port services, including both physical 10Gb connections and Limited Service MEI Ports, result in an aggregate monthly cost of approximately $1,182,645 (utilizing the rounded numbers when dividing the annual cost for 10Gb ULL connectivity and annual cost for Limited Service MEI Ports by 12 months, then adding both numbers together), as further detailed below.

Costs Related to Offering Physical 10Gb ULL Connectivity

The following chart details the individual line-item costs considered by the Exchange to be related to offering physical dedicated 10Gb ULL connectivity via an unshared network as well as the percentage of the Exchange's overall costs that such costs represent for such area (e.g., as set forth below, the Exchange allocated approximately 25.6% of its overall Human Resources cost to offering physical connectivity).

COST DRIVERS	ANNUAL COST[119]	MONTHLY COST[120]	% OF ALL
Human Resources	$3,867,297	$322,275	25%
Connectivity (external fees, cabling, switches, etc.)	$70,163	$5,847	60.6%
Internet Services, including External Market Data	$424,584	$35,382	73.3%
Data Center	$718,950	$59,912	60.6%
Hardware and Software Maintenance and Licenses	$727,734	$60,645	49.8%
Depreciation	$2,310,898	$192,575	61.6%
Allocated Shared Expenses	$3,914,928	$326,244	49.1%

119 The Annual Cost includes figures rounded to the nearest dollar.

120 The Monthly Cost was determined by dividing the Annual Cost for each line item by twelve (12) months and rounding up or down to the nearest dollar.

TOTAL	**$12,034,554**	**$1,002,880**	**39.4%**

Below are additional details regarding each of the line-item costs considered by the Exchange to be related to offering physical 10Gb ULL connectivity.

Human Resources

For personnel costs (Human Resources), the Exchange calculated an allocation of employee time for employees whose functions include providing and maintaining physical connectivity and performance thereof (primarily the Exchange's network infrastructure team, which spends most of their time performing functions necessary to provide physical connectivity) and for which the Exchange allocated a percentage of 42% of each employee's time. The Exchange also allocated Human Resources costs to provide physical connectivity to a limited subset of personnel with ancillary functions related to establishing and maintaining such connectivity (such as information security and finance personnel), for which the Exchange allocated cost on an employee-by-employee basis (i.e., only including those personnel who do support functions related to providing physical connectivity) and then applied a smaller allocation to such employees (less than 18%). The Exchange notes that it and its affiliated markets have 184 employees and each department leader has direct knowledge of the time spent by those spent by each employee with respect to the various tasks necessary to operate the Exchange. Specifically, twice a year and as needed with additional new hires and new project initiatives, in consultation with employees as needed, managers and department heads assign a percentage of time to every employee and then allocate that time amongst the Exchange and its affiliated markets to determine that market's individual Human Resources expense. Then, again managers and department heads assign a percentage of each employee's time allocated to the Exchange into buckets including network connectivity, ports, market data, and other exchange

services. This process ensures that every employee is 100% allocated, ensuring there is no double counting between the Exchange and its affiliated markets.

The estimates of Human Resources cost were therefore determined by consulting with such department leaders, determining which employees are involved in tasks related to providing physical connectivity, and confirming that the proposed allocations were reasonable based on an understanding of the percentage of their time such employees devote to tasks related to providing physical connectivity. The Exchange notes that senior level executives were only allocated Human Resources costs to the extent the Exchange believed they are involved in overseeing tasks related to providing physical connectivity. The Human Resources cost was calculated using a blended rate of compensation reflecting salary, equity and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions.

Connectivity and Internet Services

The Connectivity cost includes external fees paid to connect to other exchanges and third parties, cabling and switches required to operate the Exchange. The Connectivity line-item is more narrowly focused on technology used to complete connections to the Exchange and to connect to external markets. The Exchange notes that its connectivity to external markets is required in order to receive market data to run the Exchange's matching engine and basic operations compliant with existing regulations, primarily Regulation NMS.

The Exchange relies on various connectivity and content service providers for connectivity and data feeds for the entire U.S. options industry, as well as content, connectivity, and infrastructure services for critical components of the network that are necessary to provide and maintain its System Networks and access to its System Networks via 10Gb ULL connectivity. Specifically, the Exchange utilizes connectivity and content service providers to

connect to other national securities exchanges, the Options Price Reporting Authority ("OPRA"), and to receive market data from other exchanges and market data providers. The Exchange understands that these service providers provide services to most, if not all, of the other U.S. exchanges and other market participants. Connectivity and market data provided these service providers is critical to the Exchanges daily operations and performance of its System Networks to which market participants connect to via 10Gb ULL connectivity. Without these services providers, the Exchange would not be able to connect to other national securities exchanges, market data providers, or OPRA and, therefore, would not be able to operate and support its System Networks. The Exchange does not employ a separate fee to cover its connectivity and content service provider expense and recoups that expense, in part, by charging for 10Gb ULL connectivity.

Data Center

Data Center costs includes an allocation of the costs the Exchange incurs to provide physical connectivity in the third-party data centers where it maintains its equipment (such as dedicated space, security services, cooling and power). The Exchange notes that it does not own the Primary Data Center or the Secondary Data Center, but instead, leases space in data centers operated by third parties. The Exchange has allocated a high percentage of the Data Center cost (60.6%) to physical 10Gb ULL connectivity because the third-party data centers and the Exchange's physical equipment contained therein is the most direct cost in providing physical access to the Exchange. In other words, for the Exchange to operate in a dedicated space with connectivity of participants to a physical trading platform, the data centers are a very tangible cost, and in turn, if the Exchange did not maintain such a presence then physical connectivity would be of no value to market participants.

External Market Data

External Market Data includes fees paid to third parties, including other exchanges, to receive and consume market data from other markets. The Exchange included External Market Data fees to the provision of 10Gb ULL connectivity as such market data is necessary here to offer certain services related to such connectivity, such as certain risk checks that are performed prior to execution, and checking for other conditions (e.g., re-pricing of orders to avoid lock or crossed markets, trading collars). This allocation was included as part of the Internet Services cost described above. Thus, as market data from other exchanges is consumed at the matching engine level, (to which 10Gb ULL connectivity provides access to) in order to validate orders before additional entering the matching engine or being executed, the Exchange believes it is reasonable to allocate a small amount of such costs to 10Gb ULL connectivity.

Hardware and Software Maintenance and Licenses

Hardware and Software Licenses includes hardware and software licenses used to operate and monitor physical assets necessary to offer physical connectivity to the Exchange.[121]

Monthly Depreciation

All physical assets and software, which also includes assets used for testing and monitoring of Exchange infrastructure, were valued at cost, depreciated or leased over periods ranging from three to five years. Thus, the depreciation cost primarily relates to servers necessary to operate the Exchange, some of which are owned by the Exchange and some of which are leased by the Exchange in order to allow efficient periodic technology refreshes. As

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121 This expense may be less than the Exchange's affiliated markets, specifically MIAX Pearl, because, unlike the Exchange, MIAX Pearl (the options and equities markets) maintains an additional gateway to accommodate its member's access and connectivity needs. This added gateway contributes to the difference in allocations between the Exchange and MIAX Pearl.

noted above, the Exchange allocated 61.6% of all depreciation costs to providing physical 10Gb ULL connectivity. The Exchange notes, however, that it did not allocate depreciation costs for any depreciated software necessary to operate the Exchange to physical connectivity, as such software does not impact the provision of physical connectivity. The Exchange also notes that this allocation differs from its affiliated markets due to a number of factors, such as the age of physical assets and software (e.g., older physical assets and software were previously depreciated and removed from the allocation), or certain system enhancements that required new physical assets and software, thus providing a higher contribution to the depreciated cost.

Allocated Shared Expenses

Finally, a limited portion of general shared expenses was allocated to overall physical connectivity costs as without these general shared costs the Exchange would not be able to operate in the manner that it does and provide physical connectivity. The costs included in general shared expenses include general expenses of the Exchange, including office space and office expenses (e.g., occupancy and overhead expenses), utilities, recruiting and training, marketing and advertising costs, professional fees for legal, tax and accounting services (including external and internal audit expenses), and telecommunications costs. The Exchange notes that the cost of paying directors to serve on its Board of Directors is also included in the Exchange's general shared expenses.[122] The Exchange notes that the 49.1% allocation of general shared expenses for physical 10Gb ULL connectivity is higher than that allocated to general shared expenses for Limited Service MEI Ports based on its allocation methodology that

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122 The Exchange notes that MEMX allocated a precise amount of 10% of the overall cost for directors to providing physical connectivity. The Exchange does not calculate is expenses at that granular a level. Instead, director costs are included as part of the overall general allocation.

weighted costs attributable to each Core Service based on an understanding of each area. While physical connectivity has several areas where certain tangible costs are heavily weighted towards providing such service (e.g., Data Centers, as described above), Limited Service MEI Ports do not require as many broad or indirect resources as other Core Services. The total monthly cost for 10Gb ULL connectivity of $1,002,880 was divided by the number of physical 10Gb ULL connections the Exchange maintained at the time that proposed pricing was determined (93), to arrive at a cost of approximately $10,784 per month, per physical 10Gb ULL connection.

Costs Related to Offering Limited Service MEI Ports

The following chart details the individual line-item costs considered by the Exchange to be related to offering Limited Service MEO Ports as well as the percentage of the Exchange's overall costs such costs represent for such area (e.g., as set forth below, the Exchange allocated approximately 5.8% of its overall Human Resources cost to offering Limited Service MEI Ports).

COST DRIVERS	ANNUAL COST[123]	MONTHLY COST[124]	% OF ALL
Human Resources	$898,480	$74,873	5.8%
Connectivity (external fees, cabling, switches, etc.)	$4,435	$370	3.8%
Internet Services, including External Market Data	$41,601	$3,467	7.2%
Data Center	$85,214	$7,101	7.2%
Hardware and Software Maintenance and Licenses	$104,859	$8,738	7.2%
Depreciation	$237,335	$19,778	6.3%
Allocated Shared Expenses	$785,254	$65,438	9.8%
TOTAL	**$2,157,178**	**$179,765**	**7.1%**

Human Resources

123 See supra note 119 (describing rounding of Annual Costs).

124 See supra note 120 (describing rounding of Monthly Costs based on Annual Costs).

With respect to Limited Service MEI Ports, the Exchange calculated Human Resources cost by taking an allocation of employee time for employees whose functions include providing Limited Service MEI Ports and maintaining performance thereof (including a broader range of employees such as technical operations personnel, market operations personnel, and software engineering personnel) as well as a limited subset of personnel with ancillary functions related to maintaining such connectivity (such as sales, membership, and finance personnel). Just as described above for 10Gb ULL connectivity, the estimates of Human Resources cost were again determined by consulting with department leaders, determining which employees are involved in tasks related to providing Limited Service MEI Ports and maintaining performance thereof, and confirming that the proposed allocations were reasonable based on an understanding of the percentage of their time such employees devote to tasks related to providing Limited Service MEI Ports and maintaining performance thereof. The Exchange notes that senior level executives were only allocated Human Resources costs to the extent the Exchange believed they are involved in overseeing tasks related to providing Limited Service MEI Ports and maintaining performance thereof. The Human Resources cost was again calculated using a blended rate of compensation reflecting salary, equity and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions.

Connectivity and Internet Services

The Connectivity cost includes external fees paid to connect to other exchanges, cabling and switches, as described above. For purposes of Limited Service MEI Ports, the Exchange also includes a portion of its costs related to External Market Data, as described below.

Data Center

Data Center costs includes an allocation of the costs the Exchange incurs to provide physical connectivity in the third-party data centers where it maintains its equipment as well as related costs (the Exchange does not own the Primary Data Center or the Secondary Data Center, but instead, leases space in data centers operated by third parties).

External Market Data

External Market Data includes fees paid to third parties, including other exchanges, to receive and consume market data from other markets. The Exchange included External Market Data fees to the provision of Limited Service MEI Ports as such market data is also necessary here (in addition to physical connectivity) to offer certain services related to such ports, such as validating orders on entry against the national best bid and national best offer and checking for other conditions (e.g., whether a symbol is halted). This allocation was included as part of the Internet Services cost described above.[125] Thus, as market data from other Exchanges is consumed at the Limited Service MEI Port level in order to validate orders before additional processing occurs with respect to such orders, the Exchange believes it is reasonable to allocate a small amount of such costs to Limited Service MEI Ports.

Hardware and Software Maintenance and Licenses

Hardware and Software Licenses includes hardware and software licenses used to monitor the health of the order entry services provided by the Exchange, as described above.

Monthly Depreciation

All physical assets and software, which also includes assets used for testing and monitoring of order entry infrastructure, were valued at cost, depreciated or leased over periods

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[125] The Exchange notes that MEMX separately allocated 7.5% of its external market data costs to providing physical connectivity.

ranging from three to five years. Thus, the depreciation cost primarily relates to servers necessary to operate the Exchange, some of which is owned by the Exchange and some of which is leased by the Exchange in order to allow efficient periodic technology refreshes. The Exchange allocated 6.3% of all depreciation costs to providing Limited Service MEI Ports. In contrast to physical connectivity, described above, the Exchange did allocate depreciation costs for depreciated software necessary to operate the Exchange to Limited Service MEI Ports because such software is related to the provision of such connectivity. The Exchange also notes that this allocation differs from its affiliated markets due to a number of factors, such as the age of physical assets and software (e.g., older physical assets and software were previously depreciated and removed from the allocation), or certain system enhancements that required new physical assets and software, thus providing a higher contribution to the depreciated cost.

Allocated Shared Expenses

Finally, a limited portion of general shared expenses was allocated to overall Limited Service MEI Ports costs as without these general shared costs the Exchange would not be able to operate in the manner that it does and provide Limited Service MEI Ports. The costs included in general shared expenses include general expenses of the Exchange, including office space and office expenses (e.g., occupancy and overhead expenses), utilities, recruiting and training, marketing and advertising costs, professional fees for legal, tax and accounting services (including external and internal audit expenses), and telecommunications costs. The Exchange again notes that the cost of paying directors to serve on its Board of Directors is included in the calculation of Allocated Shared Expenses, and thus a portion of such overall cost amounting to less than 10% of the overall cost for directors was allocated to providing Limited Service MEI Ports. The Exchange notes that the 9.8% allocation of general shared expenses for Limited

Service MEI Ports is lower than that allocated to general shared expenses for physical connectivity based on its allocation methodology that weighted costs attributable to each Core Service based on an understanding of each area. While Limited Service MEI Ports have several areas where certain tangible costs are heavily weighted towards providing such service (e.g., Data Centers, as described above), 10Gb ULL connectivity requires a broader level of support from Exchange personnel in different areas, which in turn leads to a broader general level of cost to the Exchange. The total monthly cost of $179,765 was divided by the number of chargeable Limited Service MEI Ports (excluding the two free Limited Service MEI Ports per matching engine that each Member receives) the Exchange maintained at the time that proposed pricing was determined (1303), to arrive at a cost of approximately $138 per month, per charged Limited Service MEI Port.

Cost Analysis – Additional Discussion

In conducting its Cost Analysis, the Exchange did not allocate any of its expenses in full to any core services (including physical connectivity or Limited Service MEI Ports) and did not double-count any expenses. Instead, as described above, the Exchange allocated applicable cost drivers across its core services and used the same Cost Analysis to form the basis of this proposal and the filings the Exchange submitted proposing fees for proprietary data feeds offered by the Exchange. For instance, in calculating the Human Resources expenses to be allocated to physical connections based upon the above described methodology, the Exchange has a team of employees dedicated to network infrastructure and with respect to such employees the Exchange allocated network infrastructure personnel with a high percentage of the cost of such personnel (42%) given their focus on functions necessary to provide physical connections. The salaries of those same personnel were allocated only 8.4% to Limited Service MEI Ports and the remaining

49.6% was allocated to 1Gb connectivity, other port services, transaction services, membership services and market data. The Exchange did not allocate any other Human Resources expense for providing physical connections to any other employee group, outside of a smaller allocation of 17.8% for 10Gb ULL connectivity or 18.2% for the entire network, of the cost associated with certain specified personnel who work closely with and support network infrastructure personnel. In contrast, the Exchange allocated much smaller percentages of costs (5% or less) across a wider range of personnel groups in order to allocate Human Resources costs to providing Limited Service MEI Ports. This is because a much wider range of personnel are involved in functions necessary to offer, monitor and maintain Limited Service MEI Ports but the tasks necessary to do so are not a primary or full-time function.

In total, the Exchange allocated 25.6% of its personnel costs to providing physical connections and 5.8% of its personnel costs to providing Limited Service MEI Ports, for a total allocation of 31.4% Human Resources expense to provide these specific connectivity services. In turn, the Exchange allocated the remaining 68.6% of its Human Resources expense to membership services, transaction services, other port services and market data. Thus, again, the Exchange's allocations of cost across core services were based on real costs of operating the Exchange and were not double-counted across the core services or their associated revenue streams.

As another example, the Exchange allocated depreciation expense to all core services, including physical connections and Limited Service MEI Ports, but in different amounts. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense includes the actual cost of the computer equipment, such as dedicated servers, computers, laptops, monitors, information security appliances and storage, and network

switching infrastructure equipment, including switches and taps that were purchased to operate and support the network. Without this equipment, the Exchange would not be able to operate the network and provide connectivity services to its Members and non-Members and their customers. However, the Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing connectivity services, but instead allocated approximately 67.9% of the Exchange's overall depreciation and amortization expense to connectivity services (61.6% attributed to 10Gb ULL physical connections and 6.3% to Limited Service MEI Ports). The Exchange allocated the remaining depreciation and amortization expense (approximately 32.1%) toward the cost of providing transaction services, membership services, other port services and market data.

The Exchange notes that its revenue estimates are based on projections across all potential revenue streams and will only be realized to the extent such revenue streams actually produce the revenue estimated. The Exchange does not yet know whether such expectations will be realized. For instance, in order to generate the revenue expected from connectivity, the Exchange will have to be successful in retaining existing clients that wish to maintain physical connectivity and/or Limited Service MEI Ports or in obtaining new clients that will purchase such services. Similarly, the Exchange will have to be successful in retaining a positive net capture on transaction fees in order to realize the anticipated revenue from transaction pricing.

The Exchange notes that the Cost Analysis is based on the Exchange's 2023 fiscal year of operations and projections. It is possible however that such costs will either decrease or increase. To the extent the Exchange sees growth in use of connectivity services it will receive additional revenue to offset future cost increases.

However, if use of connectivity services is static or decreases, the Exchange might not

realize the revenue that it anticipates or needs in order to cover applicable costs. Accordingly, the Exchange is committing to conduct a one-year review after implementation of these fees. The Exchange expects that it may propose to adjust fees at that time, to increase fees in the event that revenues fail to cover costs and a reasonable mark-up of such costs. Similarly, the Exchange would propose to decrease fees in the event that revenue materially exceeds our current projections. In addition, the Exchange will periodically conduct a review to inform its decision making on whether a fee change is appropriate (e.g., to monitor for costs increasing/decreasing or subscribers increasing/decreasing, etc. in ways that suggest the then-current fees are becoming dislocated from the prior cost-based analysis) and would propose to increase fees in the event that revenues fail to cover its costs and a reasonable mark-up, or decrease fees in the event that revenue or the mark-up materially exceeds our current projections. In the event that the Exchange determines to propose a fee change, the results of a timely review, including an updated cost estimate, will be included in the rule filing proposing the fee change. More generally, the Exchange believes that it is appropriate for an exchange to refresh and update information about its relevant costs and revenues in seeking any future changes to fees, and the Exchange commits to do so.

Projected Revenue[126]

The proposed fees will allow the Exchange to cover certain costs incurred by the Exchange associated with providing and maintaining necessary hardware and other network infrastructure as well as network monitoring and support services; without such hardware,

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126 For purposes of calculating revenue for 10Gb ULL connectivity, the Exchange used projected revenues for February 2023, the first full month for which it will provide dedicated 10Gb ULL connectivity to the Exchange and cease operating a shared 10Gb ULL network with MIAX Pearl.

infrastructure, monitoring and support the Exchange would be unable to provide the connectivity services. Much of the cost relates to monitoring and analysis of data and performance of the network via the subscriber's connection(s). The above cost, namely those associated with hardware, software, and human capital, enable the Exchange to measure network performance with nanosecond granularity. These same costs are also associated with time and money spent seeking to continuously improve the network performance, improving the subscriber's experience, based on monitoring and analysis activity. The Exchange routinely works to improve the performance of the network's hardware and software. The costs associated with maintaining and enhancing a state-of-the-art exchange network is a significant expense for the Exchange, and thus the Exchange believes that it is reasonable and appropriate to help offset those costs by amending fees for connectivity services. Subscribers, particularly those of 10Gb ULL connectivity, expect the Exchange to provide this level of support to connectivity so they continue to receive the performance they expect. This differentiates the Exchange from its competitors. As detailed above, the Exchange has five primary sources of revenue that it can potentially use to fund its operations: transaction fees, fees for connectivity services, membership and regulatory fees, and market data fees. Accordingly, the Exchange must cover its expenses from these five primary sources of revenue.

The Exchange's Cost Analysis estimates the annual cost to provide 10Gb ULL connectivity services at $12,034,554. Based on current 10Gb ULL connectivity services usage, the Exchange would generate annual revenue of approximately $15,066,000. This represents a modest profit of 20% when compared to the cost of providing 10Gb ULL connectivity services,

which will decrease over time.[127] The Exchange's Cost Analysis estimates the annual cost to provide Limited Service MEI Port services at $2,157,178. Based on current Limited Service MEI Port services usage, the Exchange would generate annual revenue of approximately $3,300,600. This represents an estimated profit margin of 35% when compared to the cost of providing Limited Service MEI Port services, which will decrease over time.[128] Even if the Exchange earns those amounts or incrementally more or less, the Exchange believes the proposed fees are fair and reasonable because they will not result in pricing that deviates from that of other exchanges or supra-competitive profit, when comparing the total expense of the Exchange associated with providing 10Gb ULL connectivity and Limited Service MEI Port services versus the total projected revenue of the Exchange associated with network 10Gb ULL connectivity and Limited Service MEI Port services.

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The Exchange has operated at a cumulative net annual loss since it launched operations in 2012.[129] The Exchange has operated at a net loss due to a number of factors, one of which is choosing to forgo revenue by offering certain products, such as connectivity, at lower rates than other options exchanges to attract order flow and encourage market participants to experience the high determinism, low latency, and resiliency of the Exchange's trading systems. The

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127 Assuming the U.S. inflation rate continues at its current rate, the projected profit margins in this proposal will decrease and may reach single to negative digit levels in approximately 18 to 24 months. See, e.g., https://www.usinflationcalculator.com/inflation/current-inflation-rates/ (last visited February 15, 2023).

128 Id.

129 The Exchange has incurred a cumulative loss of $121 million since its inception in 2012 through full year 2021. See Exchange's Form 1/A, Application for Registration or Exemption from Registration as a National Securities Exchange, filed June 29, 2022, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001163.pdf.

Exchange should not now be penalized for seeking to raise its fees in light of necessary technology changes and its increased costs after offering such products as discounted prices. Therefore, the Exchange believes the proposed fees are reasonable because they are based on both relative costs to the Exchange to provide dedicated 10Gb ULL connectivity and Limited Service MEI Ports, the extent to which the product drives the Exchange's overall costs and the relative value of the product, as well as the Exchange's objective to make access to its Systems broadly available to market participants. The Exchange also believes the proposed fees are reasonable because they are designed to generate annual revenue to recoup the Exchange's costs of providing dedicated 10Gb ULL connectivity and Limited Service MEI Ports.

The Exchange notes that its revenue estimate is based on projections and will only be realized to the extent customer activity actually produces the revenue estimated. As a competitor in the hyper-competitive exchange environment, and an exchange focused on driving competition, the Exchange does not yet know whether such projections will be realized. For instance, in order to generate the revenue expected from 10Gb ULL connectivity and Limited Service MEI Ports, the Exchange will have to be successful in retaining existing clients that wish to utilize 10Gb ULL connectivity and Limited Service MEI Ports and/or obtaining new clients that will purchase such access. To the extent the Exchange is successful in encouraging new clients to utilize 10Gb ULL connectivity and Limited Service MEI Ports, the Exchange does not believe it should be penalized for such success. To the extent the Exchange has mispriced and experiences a net loss in clients, the Exchange could experience a net reduction in revenue. While the Exchange believes in transparency around costs and potential revenue, the Exchange does not believe that these estimates should form the sole basis of whether or not a proposed fee is reasonable or can be adopted.

The Exchange is owned by a holding company that is the parent company of four exchange markets and, therefore, the Exchange and its affiliated markets must allocate shared costs across all of those markets accordingly, pursuant to the above-described allocation methodology. In contrast, the Investors Exchange LLC ("IEX") and MEMX, which are currently each operating only one exchange, in their recent non-transaction fee filings can allocate the entire amount of that same cost to a single exchange. This can result in lower profit margins for the non-transaction fees proposed by IEX and MEMX because the single allocated cost does not experience the efficiencies and synergies associated with shared costs across multiple platforms. The Exchange and its affiliated markets must share a single cost, which results in cost efficiencies that cause a broader gap between the allocated cost amount and projected revenue, even though the fee levels being proposed are lower or similar to competing markets (as described above). To the extent that the application of a cost-based standard results in Commission Staff making determinations as to the appropriateness of certain profit margins, the Commission Staff must consider whether the proposed fee level is comparable to, or on parity with, the same fee charged by competing exchanges and how different cost allocation methodologies (such as across multiple markets) may result in different profit margins for comparable fee levels. If it is the case that the Commission Staff is making determinations as to appropriate profit margins, the Exchange believes that Staff should be clear to all market participants as to what they determine is an appropriate profit margin and should apply such determinations consistently and, in the case of certain legacy exchanges, retroactively, if such standards are to avoid having a discriminatory effect.

Further, the proposal reflects the Exchange's efforts to control its costs, which the Exchange does on an ongoing basis as a matter of good business practice. A potential profit

margin should not be judged alone based on its size, but is also indicative of costs management and whether the ultimate fee reflects the value of the services provided. For example, a profit margin on one exchange should not be deemed excessive where that exchange has been successful in controlling its costs, but not excessive where on another exchange where that exchange is charging comparable fees but has a lower profit margin due to higher costs. Doing so could have the perverse effect of not incentivizing cost control where higher costs alone could be used to justify fees increases.

The Proposed Pricing is not Unfairly Discriminatory and Provides for the Equitable Allocation of Fees, Dues, and other Charges

The Exchange believes that the proposed fees are reasonable, fair, equitable, and not unfairly discriminatory because they are designed to align fees with services provided and will apply equally to all subscribers.

10Gb ULL Connectivity

The Exchange believes that the proposed fees are equitably allocated among users of the network connectivity and port alternatives, as the users of 10Gb ULL connections consume substantially more bandwidth and network resources than users of 1Gb ULL connection. Specifically, the Exchange notes that 10Gb ULL connection users account for more than 99% of message traffic over the network, driving other costs that are linked to capacity utilization, as described above, while the users of the 1Gb ULL connections account for less than 1% of message traffic over the network. In the Exchange's experience, users of the 1Gb connections do not have the same business needs for the high-performance network as 10Gb ULL users.

The Exchange's high-performance network and supporting infrastructure (including employee support), provides unparalleled system throughput with the network ability to support access to several distinct options markets. To achieve a consistent, premium network

performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages to satisfy its record keeping requirements under the Exchange Act.[130] Thus, as the number of messages an entity increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that the 10Gb ULL users pay for the vast majority of the shared network resources from which all market participants' benefit.

Limited Service MEI Ports

The Exchange believes that the proposed fees are equitably allocated among users of the network connectivity alternatives, as the users of the Limited Service MEI Ports consume the most bandwidth and resources of the network. Specifically, like above for the 10Gb ULL connectivity, the Exchange notes that the Market Makers who take the maximum amount of Limited Service MEI Ports account for approximately greater than 99% of message traffic over the network, while Market Makers with fewer Limited Service MEI Ports account for approximately less than 1% of message traffic over the network. In the Exchange's experience, Market Makers who only utilize the two free Limited Service MEI Ports do not have a business

130 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

need for the high performance network solutions required by Market Makers who take the maximum amount of Limited Service MEI Ports. The Exchange's high performance network solutions and supporting infrastructure (including employee support), provides unparalleled system throughput and the capacity to handle approximately 18 million quote messages per second. Based on November 2022 trading results, on an average day, the Exchange handles over approximately 8.8 billion quotes, and more than 185 billion quotes over the entire month. Of that total, Market Makers with the maximum amount of Limited Service MEI Ports generate approximately 5 billion quotes, and Market Makers who utilize the two free Limited Service MEI Ports generate approximately 1.5 billion quotes. Also for November 2022, Market Makers who utilized 3 to 4 Limited Service MEI ports submitted an average of 1,152,654,133 quotes per day and Market Makers who utilized 5 to 9 Limited Service MEI ports submitted an average of 1,172,105,181 quotes per day. To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[131] Thus, as the number of connections a Market Maker has increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. The

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[131] 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange. With this in mind, the Exchange proposes no fee or lower fees for those Market Makers who receive fewer Limited Service MEI Ports since those Market Makers generally tend to send the least amount of orders and messages over those connections. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers who take the most Limited Service MEI Ports pay for the vast majority of the shared network resources from which all Member and non-Member users benefit, but is designed and maintained from a capacity standpoint to specifically handle the message rate and performance requirements of those Market Makers.

To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. Billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[132] Thus, as the number of connections a Market Maker has increases, the related pull on Exchange resources also increases. The Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more

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[132] 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange.

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

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

Intra-Market Competition

The Exchange believes the proposed fees will not result in any burden on intra-market competition that is not necessary or appropriate in furtherance of the purposes of the Act because the proposed fees will allow the Exchange to recoup some of its costs in providing 10Gb ULL connectivity and Limited Service MEI Ports at below market rates to market participants since the Exchange launched operations. As described above, the Exchange has operated at a cumulative net annual loss since it launched operations in 2012[133] due to providing a low-cost alternative to attract order flow and encourage market participants to experience the high determinism and resiliency of the Exchange's trading Systems. To do so, the Exchange chose to waive the fees for some non-transaction related services and Exchange products or provide them at a very lower fee, which was not profitable to the Exchange. This resulted in the Exchange forgoing revenue it could have generated from assessing any fees or higher fees. The Exchange could have sought to charge higher fees at the outset, but that could have served to discourage participation on the Exchange. Instead, the Exchange chose to provide a low-cost exchange alternative to the options industry, which resulted in lower initial revenues. Examples of this are 10Gb ULL connectivity and Limited Service MEI Ports, for which the Exchange only now seeks to adopt fees at a level similar to or lower than those of other options exchanges.

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133 See supra note 129.

Further, the Exchange does not believe that the proposed fee increase for the 10Gb ULL connection 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. As is the case with the current proposed flat fee, the proposed fee would apply uniformly to all market participants regardless of the number of connections they choose to purchase. The proposed fee does not favor certain categories of market participants in a manner that would impose an undue burden on 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, Exchange personnel has been informally discussing potential fees for connectivity services with a diverse group of market participants that are connected to the Exchange (including large and small firms, firms with large connectivity service footprints and small connectivity service footprints, as well as extranets and service bureaus) for several months leading up to that time. The Exchange does not believe the proposed fees for connectivity services would negatively impact the ability of Members, non-Members (extranets or service bureaus), third-parties that purchase the Exchange's connectivity and resell it, and customers of those resellers to compete with other market participants or that they are placed at a disadvantage.

The Exchange does anticipate, however, that some market participants may reduce or discontinue use of connectivity services provided directly by the Exchange in response to the proposed fees. In fact, as mentioned above, one MIAX Pearl Market Maker terminated their MIAX Pearl membership on January 1, 2023 as a direct result of the similar proposed fee

changes by MIAX Pearl.[134] The Exchange does not believe that the proposed fees for connectivity services place certain market participants at a relative disadvantage to other market participants because the proposed connectivity pricing is associated with relative usage of the Exchange by each market participant and does not impose a barrier to entry to smaller participants. The Exchange believes its proposed pricing is reasonable and, when coupled with the availability of third-party providers that also offer connectivity solutions, that participation on the Exchange is affordable for all market participants, including smaller trading firms. As described above, the connectivity services purchased by market participants typically increase based on their additional message traffic and/or the complexity of their operations. The market participants that utilize more connectivity services typically utilize the most bandwidth, and those are the participants that consume the most resources from the network. Accordingly, the proposed fees for connectivity services do not favor certain categories of market participants in a manner that would impose a burden on competition; rather, the allocation of the proposed connectivity fees reflects the network resources consumed by the various size of market participants and the costs to the Exchange of providing such connectivity services.

Inter-Market Competition

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134 The Exchange acknowledges that IEX included in its proposal to adopt market data fees after offering market data for free an analysis of what its projected revenue would be if all of its existing customers continued to subscribe versus what its projected revenue would be if a limited number of customers subscribed due to the new fees. See Securities Exchange Act Release No. 94630 (April 7, 2022), 87 FR 21945 (April 13, 2022) (SR-IEX-2022-02). MEMX did not include a similar analysis in either of its recent non-transaction fee proposals. See, e.g., supra note 52. The Exchange does not believe a similar analysis would be useful here because it is amending existing fees, not proposing to charge a new fee where existing subscribers may terminate connections because they are no longer enjoying the service at no cost.

The Exchange also does not believe that the proposed rule change will result in any burden on inter-market competition that is not necessary or appropriate in furtherance of the purposes of the Act. As discussed above, options market participants are not forced to connect to all options exchanges. There is no reason to believe that our proposed price increase will harm another exchange's ability to compete. There are other options markets of which market participants may connect to trade options at higher rates than the Exchange's. There is also a range of alternative strategies, including routing to the exchange through another participant or market center or accessing the Exchange indirectly. Market participants are free to choose which exchange or reseller to use to satisfy their business needs. Accordingly, the Exchange does not believe its proposed fee changes impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

The Exchange also believes that the proposed fees for 10Gb connectivity are appropriate and warranted in light of it bifurcating 10Gb connectivity between the Exchange and MIAX Pearl and would not impose any burden on competition because this is a technology driven change that would assist the Exchange in recovering costs related to providing dedicating 10Gb connectivity to the Exchange while enabling it to continue to meet current and anticipated demands for connectivity by its Members and other market participants. Separating its 10Gb network from MIAX Pearl would enable the Exchange to better compete with other exchanges by ensuring it can continue to provide adequate connectivity to existing and new Members, which may increase in ability to compete for order flow and deepen its liquidity pool, improving the overall quality of its market.

The proposed rates for 10Gb ULL connectivity are also driven by the Exchange's need to bifurcate its 10Gb ULL network shared with MIAX Pearl so that it can continue to meet current

and anticipated connectivity demands of all market participants. Similarly, and also in connection with a technology change, Cboe Exchange, Inc. ("Cboe") amended access and connectivity fees, including port fees.[135] Specifically, Cboe adopted certain logical ports to allow for the delivery and/or receipt of trading messages – i.e., orders, accepts, cancels, transactions, etc. Cboe established tiered pricing for BOE and FIX logical ports, tiered pricing for BOE Bulk ports, and flat prices for DROP, Purge Ports, GRP Ports and Multicast PITCH/Top Spin Server Ports. Cboe argued in its fee proposal that the proposed pricing more closely aligned its access fees to those of its affiliated exchanges, and reasonably so, as the affiliated exchanges offer substantially similar connectivity and functionality and are on the same platform that Cboe migrated to.[136] Cboe also justified its proposal by stating that, "…the Exchange believes substitutable products and services are in fact available to market participants, including, among other things, other options exchanges a market participant may connect to in lieu of the Exchange, indirect connectivity to the Exchange via a third-party reseller of connectivity and/or trading of any options product, including proprietary products, in the Over- the-Counter (OTC) markets."[137] Cboe stated in its proposal that,

> The rule structure for options exchanges are also 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. 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. Additionally, in the options markets, the linkage routing and trade through protection are handled by the exchanges, not by the individual

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135 See Securities Exchange Act Release No. 90333 (November 4, 2020), 85 FR 71666 (November 10, 2020) (SR-CBOE-2020-105). The Exchange notes that Cboe submitted this filing after the Staff Guidance and contained no cost based justification.

136 Id. at 71676.

137 Id.

> 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. Gone are the days when the retail brokerage firms (such as Fidelity, Schwab, and eTrade) were members of the options exchanges – they are not members of the Exchange or its affiliates, they do not purchase connectivity to the Exchange, and they do not purchase market data from the Exchange. Accordingly, not only is there not an actual regulatory requirement to connect to every options exchange, the Exchange believes there is also no "de facto" or practical requirement as well, as further evidenced by the recent significant reduction in the number of broker-dealers that are members of all options exchanges.[138]

The proposal also referenced the National Market System Plan Governing the Consolidated Audit Trail ("CAT NMS Plan"),[139] wherein the Commission discussed the existence of competition in the marketplace generally, and particularly for exchanges with unique business models. The Commission acknowledged that, even if an exchange were to exit the marketplace due to its proposed fee-related change, it would not significantly impact competition in the market for exchange trading services because these markets are served by multiple competitors.[140] Further, the Commission explicitly stated that "[c]onsequently, demand for these services in the event of the exit of a competitor is likely to be swiftly met by existing competitors."[141] Finally, the Commission recognized that while some exchanges may have a unique business model that is not currently offered by competitors, a competitor could create similar business models if demand were adequate, and if a competitor did not do so, the Commission believes it would be likely that new entrants would do so if the exchange with that

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138 Id. at 71676.

139 See Securities Exchange Act Release No. 86901 (September 9, 2019), 84 FR 48458 (September 13, 2019) (File No. S7-13-19).

140 Id.

141 Id.

unique business model was otherwise profitable.[142]

Cboe also filed to establish a monthly fee for Certification Logical Ports of $250 per Certification Logical Port.[143] Cboe reasoned that purchasing additional Certification Logical Ports, beyond the one Certification Logical Port per logical port type offered in the production environment free of charge, is voluntary and not required in order to participate in the production environment, including live production trading on the Exchange.[144]

In its statutory basis, Cboe justified the new port fee by stating that it believed the Certification Logical Port fee were reasonable because while such ports were no longer completely free, TPHs and non-TPHs would continue to be entitled to receive free of charge one Certification Logical Port for each type of logical port that is currently offered in the production environment.[145] Cboe noted that other exchanges assess similar fees and cited to NASDAQ LLC and MIAX.[146] Cboe also noted that the decision to purchase additional ports is optional and no market participant is required or under any regulatory obligation to purchase excess Certification Logical Ports in order to access the Exchange's certification

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142 Id.

143 See Securities Exchange Act Release No. 94512 (March 24, 2002), 87 FR 18425 (March 30, 2022) (SR-Cboe-2022-011). Cboe offers BOE and FIX Logical Ports, BOE Bulk Logical Ports, DROP Logical Ports, Purge Ports, GRP Ports and Multicast PITCH/Top Spin Server Ports. For each type of the aforementioned logical ports that are used in the production environment, the Exchange also offers corresponding ports which provide Trading Permit Holders and non-TPHs access to the Exchange's certification environment to test proprietary systems and applications (i.e., "Certification Logical Ports").

144 See Securities Exchange Act Release No. 94512 (March 24, 2002), 87 FR 18425 (March 30, 2022) (SR-Cboe-2022-011).

145 Id. at 18426.

146 Id.

environment.[147] Finally, similar proposals to adopt a Certification Logical Port monthly fee were filed by Cboe BYX Exchange, Inc.,[148] BZX,[149] and Cboe EDGA Exchange, Inc.[150]

The Cboe fee proposals described herein were filed subsequent to the D.C. Circuit decision in Susquehanna Int'l Grp., LLC v. SEC, 866 F.3d 442 (D.C. Cir. 2017), meaning that such fee filings were subject to the same (and current) standard for SEC review and approval as this proposal. In summary, the Exchange requests the Commission apply the same standard of review to this proposal which was applied to the various Cboe and Cboe affiliated markets' filings with respect to non-transaction fees. If the Commission were to apply a different standard of review to this proposal than it applied to other exchange fee filings it would create a burden on competition such that it would impair the Exchange's ability to make necessary technology driven changes, such as bifurcating its 10Gb ULL network, because it would be unable to monetize or recoup costs related to that change and compete with larger, non-legacy exchanges.

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In conclusion, as discussed thoroughly above, the Exchange regrettably believes that the application of the Revised Review Process and Staff Guidance has adversely affected inter-market competition among legacy and non-legacy exchanges by impeding the ability of non-legacy exchanges to adopt or increase fees for their market data and access services (including

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147 Id.

148 See Securities Exchange Act Release No. 94507 (March 24, 2002), 87 FR 18439 (March 30, 2022) (SR-CboeBYX-2022-004).

149 See Securities Exchange Act Release No. 94511 (March 24, 2002), 87 FR 18411 (March 30, 2022) (SR-CboeBZX-2022-021).

150 See Securities Exchange Act Release No. 94517 (March 25, 2002), 87 FR 18848 (March 31, 2022) (SR-CboeEDGA-2022-004).

connectivity and port products and services) that are on parity or commensurate with fee levels previously established by legacy exchanges. Since the adoption of the Revised Review Process and Staff Guidance, and even more so recently, it has become extraordinarily difficult to adopt or increase fees to generate revenue necessary to invest in systems, provide innovative trading products and solutions, and improve competitive standing to the benefit of non-legacy exchanges' market participants. Although the Staff Guidance served an important policy goal of improving disclosures and requiring exchanges to justify that their market data and access fee proposals are fair and reasonable, it has also negatively impacted non-legacy exchanges in particular in their efforts to adopt or increase fees that would enable them to more fairly compete with legacy exchanges, despite providing enhanced disclosures and rationale under both competitive and cost basis approaches provided for by the Revised Review Process and Staff Guidance to support their proposed fee changes.

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

The Exchange received one comment letter on the Initial Proposal.[151] In its letter, the sole commenter seeks to incorporate comments submitted on previous Exchange proposals to which the Exchange has previously responded. To the extent the sole commenter has attempted to raise new issues in its letter, the Exchange believes those issues are not germane to this proposal in particular, but rather raise larger issues with the current environment surrounding exchange non-transaction fee proposals that should be addressed by the Commission through rule making, or Congress, more holistically and not through an individual exchange fee filing. Among other things, the commenter is requesting additional data and information that is both

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151 See letter from Brian Sopinsky, General Counsel, Susquehanna International Group, LLP to Vanessa Countryman, Secretary, Commission, dated February 7, 2023.

opaque and a moving target and would constitute a level of disclosure materially over and above that provided by any competitor exchanges.

6. Extension of Time Period for Commission Action

The Exchange does not consent to an extension of the time period for Commission action.

7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)

Pursuant to Section 19(b)(3)(A)(ii) of the Act,[152] and Rule 19b-4(f)(2) thereunder[153] the Exchange has designated this proposal as establishing or changing a due, fee, or other charge imposed on any person, whether or not the person is a member of the self-regulatory organization, which renders the proposed rule change effective upon filing.

8. Proposed Rule Change Based on rules of Another Self-Regulatory Organization or of the Commission

The proposed rule change is not based on the rules of another self-regulatory organization or of the Commission.

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11. **Exhibits**

1. Completed notice of proposed rule change for publication in the Federal Register.

5. Copy of the applicable section of the Fee Schedule.

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152 15 U.S.C. 78s(b)(3)(A)(ii).

153 17 CFR 240.19b-4.

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION
(Release No. 34- ; File No. SR-MIAX-2023-08)

February __, 2023

Self-Regulatory Organizations: Notice of Filing and Immediate Effectiveness of a Proposed Rule Change by Miami International Securities Exchange, LLC to Amend Its Fee Schedule to Modify Certain Connectivity and Port Fees.

Pursuant to the provisions of 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 February ___, 2023, Miami International Securities Exchange, LLC ("MIAX" 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 Fee Schedule ("Fee Schedule") to amend certain connectivity and port fees.

The text of the proposed rule change is available on the Exchange's website at http://www.miaxoptions.com/rule-filings, at MIAX'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 the proposed rule change. The text of these statements may be examined at the places specified

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

2 17 CFR 240.19b-4.

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 as follows: (1) increase the fees for a 10 gigabit ("Gb") ultra-low latency ("ULL") fiber connection for Members[3] and non-Members; and (2) amend the fees for Limited Service MIAX Express Interface ("MEI") Ports[4] available to Market Makers.[5] The Exchange and its affiliate, MIAX PEARL, LLC ("MIAX Pearl") operated 10Gb ULL connectivity (for MIAX Pearl's options market) on a single shared network that provided access to both exchanges via a single 10Gb ULL connection. The Exchange last increased fees for 10Gb ULL connections from $9,300 to $10,000 per month on January 1, 2021.[6] At the same time, MIAX Pearl also increased its 10Gb ULL connectivity fee from $9,300 to $10,000 per month.[7] The Exchange and MIAX Pearl shared a combined cost analysis in those filings due to the single shared 10Gb ULL connectivity network for both exchanges. In

3 The term "Member" means an individual or organization approved to exercise the trading rights associated with a Trading Permit. Members are deemed "members" under the Exchange Act. See Exchange Rule 100.

4 MIAX Express Interface is a connection to MIAX systems that enables Market Makers to submit simple and complex electronic quotes to MIAX. See Fee Schedule, note 26.

5 The term "Market Makers" refers to Lead Market Makers ("LMMs"), Primary Lead Market Makers ("PLMMs"), and Registered Market Makers ("RMMs") collectively. See Exchange Rule 100.

6 See Securities Exchange Act Release No. 90980 (January 25, 2021), 86 FR 7602 (January 29, 2021) (SR-MIAX-2021-02).

7 See Securities Exchange Act Release No. 90981 (January 25, 2021), 86 FR 7582 (January 29, 2021) (SR-PEARL-2021-01).

those filings, the Exchange and MIAX Pearl allocated a combined total of $17.9 million in expenses to providing 10Gb ULL connectivity.[8]

Beginning in late January 2023, the Exchange also recently determined a substantial operational need to no longer operate 10Gb ULL connectivity on a single shared network with MIAX Pearl. The Exchange is bifurcating 10Gb ULL connectivity due to ever-increasing capacity constraints and to enable it to continue to satisfy the anticipated access needs for Members and other market participants.[9] Since the time of 2021 increase discussed above, the Exchange experienced ongoing increases in expenses, particularly internal expenses.[10] As discussed more fully below, the Exchange recently calculated increased annual aggregate costs of $12,034,554 for providing 10Gb ULL connectivity on a single unshared network (an overall increase over its prior cost to provide 10Gb ULL connectivity on a shared network with MIAX Pearl) and $2,157,178 for providing Limited Service MEI Ports.

Much of the cost relates to monitoring and analysis of data and performance of the network via the subscriber's connection with nanosecond granularity, and continuous

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8 See id.

9 See MIAX Options and MIAX Pearl Options - Announce planned network changes related to shared 10G ULL extranet, issued August 12, 2022, available at https://www.miaxoptions.com/alerts/2022/08/12/miax-options-and-miax-pearl-options-announce-planned-network-changes-related-0. The Exchange will continue to provide access to both the Exchange and MIAX Pearl over a single shared 1Gb connection. See Securities Exchange Act Release Nos. 96553 (December 20, 2022), 87 FR 79379 (December 27, 2022) (SR-PEARL-2022-60); 96545 (December 20, 2022) 87 FR 79393 (December 27, 2022) (SR-MIAX-2022-48).

10 For example, the New York Stock Exchange, Inc.'s ("NYSE") Secure Financial Transaction Infrastructure ("SFTI") network, which contributes to the Exchange's connectivity cost, increased its fees by approximately 9% since 2021. Similarly, since 2021, the Exchange, and its affiliates, experienced an increase in data center costs of approximately 17% and an increase in hardware and software costs of approximately 19%. These percentages are based on the Exchange's actual 2021 and proposed 2023 budgets.

improvements in network performance with the goal of improving the subscriber's experience. The costs associated with maintaining and enhancing a state-of-the-art network is a significant expense for the Exchange, and thus the Exchange believes that it is reasonable and appropriate to help offset those increased costs by amending fees for connectivity services. Subscribers expect the Exchange to provide this level of support so they continue to receive the performance they expect. This differentiates the Exchange from its competitors.

The Exchange now proposes to amend the Fee Schedule to amend the fees for 10Gb ULL connectivity and Limited Service MEI Ports in order to recoup cost related to bifurcating 10Gb connectivity to the Exchange and MIAX Pearl as well as the ongoing costs and increase in expenses set forth below in the Exchange's cost analysis.[11] The Exchange proposes to implement the changes to the Fee Schedule pursuant to this proposal immediately. The Exchange initially filed the proposal on December 30, 2022 (SR-MIAX-2022-50) (the "Initial Proposal").[12] The Exchange recently withdrew the Initial Proposal and replaced it with this current proposal (SR-MIAX-2023-08).

The Exchange previously included a cost analysis in the Initial Proposal. As described more fully below, the Exchange provides an updated cost analysis that includes, among other things, additional descriptions of how the Exchange allocated costs among it and its affiliated exchanges (MIAX Pearl (separately among MIAX Pearl Options and MIAX Pearl Equities) and MIAX Emerald, LLC ("MIAX Emerald," together with MIAX Pearl Options and MIAX Pearl Equities, the "affiliated markets")) to ensure no cost was allocated more than once, as well as additional detail supporting its cost allocation processes and explanations as to why a cost

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11 The Exchange notes that MIAX Pearl will make a similar filing to increase its 10Gb ULL connectivity fees.

12 See Securities Exchange Act Release No. 96629 (January 10, 2023), 88 FR 2729 (January 17, 2023) (SR-MIAX-2022-50).

allocation in this proposal may differ from the same cost allocation in a similar proposal submitted by one of its affiliated exchanges. Although the baseline cost analysis used to justify the proposed fees was made in the Initial Proposal, the fees themselves have not changed since the Initial Proposal and the Exchange still proposes fees that are intended to cover the Exchange's cost of providing 10Gb ULL connectivity and Limited Service MEI Ports with a reasonable mark-up over those costs.

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Starting in 2017, following the United States Court of Appeals for the District of Columbia's Susquehanna Decision[13] and various other developments, the Commission began to undertake a heightened review of exchange filings, including non-transaction fee filings that was substantially and materially different from it prior review process (hereinafter referred to as the "Revised Review Process"). In the Susquehanna Decision, the D.C. Circuit Court stated that the Commission could not maintain a practice of "unquestioning reliance" on claims made by a self-regulatory organization ("SRO") in the course of filing a rule or fee change with the Commission.[14] Then, on October 16, 2018, the Commission issued an opinion in Securities Industry and Financial Markets Association finding that exchanges failed both to establish that the challenged fees were constrained by significant competitive forces and that these fees were consistent with the Act.[15] On that same day, the Commission issued an order remanding to various exchanges and national market system ("NMS") plans challenges to over 400 rule changes and plan amendments that were asserted in 57 applications for review (the "Remand

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13 See Susquehanna International Group, LLP v. Securities & Exchange Commission, 866 F.3d 442 (D.C. Circuit 2017) (the "Susquehanna Decision").

14 Id.

15 See Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84432, 2018 WL 5023228 (October 16, 2018) (the "SIFMA Decision").

Order").[16] The Remand Order directed the exchanges to "develop a record," and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review."[17] The Commission denied requests by various exchanges and plan participants for reconsideration of the Remand Order.[18] However, the Commission did extend the deadlines in the Remand Order "so that they d[id] not begin to run until the resolution of the appeal of the SIFMA Decision in the D.C. Circuit and the issuance of the court's mandate."[19] Both the Remand Order and the Order Denying Reconsideration were appealed to the D.C. Circuit.

While the above appeal to the D.C. Circuit was pending, on March 29, 2019, the Commission issued an order disapproving a proposed fee change by BOX Exchange LLC ("BOX") to establish connectivity fees (the "BOX Order"), which significantly increased the level of information needed for the Commission to believe that an exchange's filing satisfied its obligations under the Act with respect to changing a fee.[20] Despite approving hundreds of access

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16 See Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84433, 2018 WL 5023230 (Oct. 16, 2018). See 15 U.S.C. §§ 78k-1, 78s; see also Rule 608(d) of Regulation NMS, 17 C.F.R. § 242.608(d) (asserted as an alternative basis of jurisdiction in some applications).

17 Id. at page 2.

18 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 85802, 2019 WL 2022819 (May 7, 2019) (the "Order Denying Reconsideration").

19 Order Denying Reconsideration, 2019 WL 2022819, at *13.

20 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) (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 Commission noted in the BOX Order that it "historically applied a 'market-based' test in its assessment of market data fees, which [the Commission] believe[s] present similar issues as the connectivity fees proposed herein." Id. at page 16. Despite this admission, the Commission disapproved BOX's proposal to begin charging $5,000 per month for 10Gb connections (while allowing legacy exchanges to charge rates equal to 3-4 times that amount utilizing

fee filings in the years prior to the BOX Order (described further below) utilizing a "market-based" test, the Commission changed course and disapproved BOX's proposal to begin charging connectivity at one-fourth the rate of competing exchanges' pricing.

Also while the above appeal was pending, on May 21, 2019, the Commission Staff issued guidance "to assist the national securities exchanges and FINRA … in preparing Fee Filings that meet their burden to demonstrate that proposed fees are consistent with the requirements of the Securities Exchange Act."[21] In the Staff Guidance, the Commission Staff states that, "[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces."[22] The Staff Guidance also states that, "… even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act."[23]

Following the BOX Order and Staff Guidance, on August 6, 2020, the D.C. Circuit vacated the Commission's SIFMA Decision in NASDAQ Stock Market, LLC v. SEC[24] and remanded for further proceedings consistent with its opinion.[25] That same day, the D.C. Circuit

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"market-based" fee filings from years prior).

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

22 Id.

23 Id.

24 NASDAQ Stock Mkt., LLC v. SEC, No 18-1324, --- Fed. App'x ----, 2020 WL 3406123 (D.C. Cir. June 5, 2020). The court's mandate was issued on August 6, 2020.

25 Nasdaq v. SEC, 961 F.3d 421, at 424, 431 (D.C. Cir. 2020). The court's mandate issued on August 6, 2020. The D.C. Circuit held that Exchange Act "Section 19(d) is not available as a means to challenge the reasonableness of generally-applicable fee rules." Id. The court held that "for a fee rule to be challengeable under Section 19(d), it must, at a minimum, be targeted at specific individuals or entities." Id. Thus, the court held that "Section 19(d) is not an available means to challenge the fees at issue" in the SIFMA Decision. Id.

issued an order remanding the Remand Order to the Commission for reconsideration in light of NASDAQ. The court noted that the Remand Order required the exchanges and NMS plan participants to consider the challenges that the Commission had remanded in light of the SIFMA Decision. The D.C. Circuit concluded that because the SIFMA Decision "has now been vacated, the basis for the [Remand Order] has evaporated."[26] Accordingly, on August 7, 2020, the Commission vacated the Remand Order and ordered the parties to file briefs addressing whether the holding in NASDAQ v. SEC that Exchange Act Section 19(d) does not permit challenges to generally applicable fee rules requiring dismissal of the challenges the Commission previously remanded.[27] The Commission further invited "the parties to submit briefing stating whether the challenges asserted in the applications for review … should be dismissed, and specifically identifying any challenge that they contend should not be dismissed pursuant to the holding of Nasdaq v. SEC."[28] Without resolving the above issues, on October 5, 2020, the Commission issued an order granting SIFMA and Bloomberg's request to withdraw their applications for review and dismissed the proceedings.[29]

As a result of the Commission's loss of the NASDAQ vs. SEC case noted above, the Commission never followed through with its intention to subject the over 400 fee filings to "develop a record," and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review."[30] As such, all of those fees remained in

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26 Id. at *2; see also id. ("[T]he sole purpose of the challenged remand has disappeared.").

27 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 89504, 2020 WL 4569089 (August 7, 2020) (the "Order Vacating Prior Order and Requesting Additional Briefs").

28 Id.

29 Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 90087 (October 5, 2020).

30 See supra note 16, at page 2.

place and amounted to a baseline set of fees for those exchanges that had the benefit of getting their fees in place before the Commission Staff's fee review process materially changed. The net result of this history and lack of resolution in the D.C. Circuit Court resulted in an uneven competitive landscape where the Commission subjects all new non-transaction fee filings to the new Revised Review Process, while allowing the previously challenged fee filings, mostly submitted by incumbent exchanges prior to 2019, to remain in effect and not subject to the "record" or "review" earlier intended by the Commission.

While the Exchange appreciates that the Staff Guidance articulates an important policy goal of improving disclosures and requiring exchanges to justify that their market data and access fee proposals are fair and reasonable, the practical effect of the Revised Review Process, Staff Guidance, and the Commission's related practice of continuous suspension of new fee filings, is anti-competitive, discriminatory, and has put in place an un-level playing field, which has negatively impacted smaller, nascent, non-legacy exchanges ("non-legacy exchanges"), while favoring larger, incumbent, entrenched, legacy exchanges ("legacy exchanges").[31] The legacy exchanges all established a significantly higher baseline for access and market data fees prior to the Revised Review Process. From 2011 until the issuance of the Staff Guidance in 2019, national securities exchanges filed, and the Commission Staff did not abrogate or suspend

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31 Commission Chair Gary Gensler recently reiterated the Commission's mandate to ensure competition in the equities markets. See "Statement on Minimum Price Increments, Access Fee Caps, Round Lots, and Odd-Lots", by Chair Gary Gensler, dated December 14, 2022 (stating "[i]n 1975, Congress tasked the Securities and Exchange Commission with responsibility to facilitate the establishment of the national market system and *enhance competition in the securities markets, including the equity markets*" (*emphasis added*)). In that same statement, Chair Gary Gensler cited the five objectives laid out by Congress in 11A of the Exchange Act (15 U.S.C. 78k-1), including ensuring "fair competition among brokers and dealers, among exchange markets, and *between exchange markets* and markets other than exchange markets… ." (*emphasis added*). Id. at note 1. See also Securities Acts Amendments of 1975, available at https://www.govtrack.us/congress/bills/94/s249.

(allowing such fees to become effective), at least 92 filings[32] to amend exchange connectivity or port fees (or similar access fees). The support for each of those filings was a simple statement by the relevant exchange that the fees were constrained by competitive forces.[33] These fees remain in effect today.

The net result is that the non-legacy exchanges are effectively now blocked by the Commission Staff from adopting or increasing fees to amounts comparable to the legacy exchanges (which were not subject to the Revised Review Process and Staff Guidance), despite providing enhanced disclosures and rationale to support their proposed fee changes that far exceed any such support provided by legacy exchanges. Simply put, legacy exchanges were able to increase their non-transaction fees during an extended period in which the Commission applied a "market-based" test that only relied upon the assumed presence of significant competitive forces, while exchanges today are subject to a cost-based test requiring extensive cost and revenue disclosures, a process that is complex, inconsistently applied, and rarely results in a successful outcome, i.e., non-suspension. The Revised Review Process and Staff Guidance changed decades-long Commission Staff standards for review, resulting in unfair discrimination

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32 This timeframe also includes challenges to over 400 rule filings by SIFMA and Bloomberg discussed above. Sec. Indus. & Fin. Mkts. Ass'n, Securities Exchange Act Release No. 84433, 2018 WL 5023230 (Oct. 16, 2018). Those filings were left to stand, while at the same time, blocking newer exchanges from the ability to establish competitive access and market data fees. See The Nasdaq Stock Market, LLC v. SEC, Case No. 18-1292 (D.C. Cir. June 5, 2020). The expectation at the time of the litigation was that the 400 rule flings challenged by SIFMA and Bloomberg would need to be justified under revised review standards.

33 See, e.g., Securities Exchange Act Release Nos. 74417 (March 3, 2015), 80 FR 12534 (March 9, 2015) (SR-ISE-2015-06); 83016 (April 9, 2018), 83 FR 16157 (April 13, 2018) (SR-PHLX-2018-26); 70285 (August 29, 2013), 78 FR 54697 (September 5, 2013) (SR-NYSEMKT-2013-71); 76373 (November 5, 2015), 80 FR 70024 (November 12, 2015) (SR-NYSEMKT-2015-90); 79729 (January 4, 2017), 82 FR 3061 (January 10, 2017) (SR-NYSEARCA-2016-172).

and placing an undue burden on inter-market competition between legacy exchanges and non-legacy exchanges.

Commission Staff now require exchange filings, including from non-legacy exchanges such as the Exchange, to provide detailed cost-based analysis in place of competition-based arguments to support such changes. However, even with the added detailed cost and expense disclosures, the Commission Staff continues to either suspend such filings and institute disapproval proceedings, or put the exchanges in the unenviable position of having to repeatedly withdraw and re-file with additional detail in order to continue to charge those fees.[34] By impeding any path forward for non-legacy exchanges to establish commensurate non-transaction fees, or by failing to provide any alternative means for smaller markets to establish "fee parity" with legacy exchanges, the Commission is stifling competition: non-legacy exchanges are, in effect, being deprived of the revenue necessary to compete on a level playing field with legacy exchanges. This is particularly harmful, given that the costs to maintain exchange systems and operations continue to increase. The Commission Staff's change in position impedes the ability of non-legacy exchanges to raise revenue to invest in their systems to compete with the legacy exchanges who already enjoy disproportionate non-transaction fee based revenue. For example, the Cboe Exchange, Inc. ("Cboe") reported "access and capacity fee" revenue of $70,893,000 for 2020[35] and $80,383,000 for 2021[36]. Cboe C2 Exchange, Inc. ("C2") reported "access and

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34 The Exchange has filed, and subsequently withdrawn, various forms of this proposed fee change numerous times since August 2021 with each proposal containing hundreds of cost and revenue disclosures never previously disclosed by legacy exchanges in their access and market data fee filings prior to 2019.

35 According to Cboe's 2021 Form 1 Amendment, access and capacity fees represent fees assessed for the opportunity to trade, including fees for trading-related functionality. See Cboe 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000465.pdf.

36 See Cboe 2022 Form 1 Amendment, available at

capacity fee" revenue of $19,016,000 for 2020[37] and $22,843,000 for 2021[38]. Cboe BZX Exchange, Inc. ("BZX") reported "access and capacity fee" revenue of $38,387,000 for 2020[39] and $44,800,000 for 2021[40]. Cboe EDGX Exchange, Inc. ("EDGX") reported "access and capacity fee" revenue of $26,126,000 for 2020[41] and $30,687,000 for 2021[42]. For 2021, the affiliated Cboe, C2, BZX, and EDGX (the four largest exchanges of the Cboe exchange group) reported $178,712,000 in "access and capacity fees" in 2021. NASDAQ Phlx, LLC ("NASDAQ Phlx") reported "Trade Management Services" revenue of $20,817,000 for 2019.[43] The Exchange notes it is unable to compare "access fee" revenues with NASDAQ Phlx (or other affiliated NASDAQ exchanges) because after 2019, the "Trade Management Services" line item was bundled into a much larger line item in PHLX's Form 1, simply titled "Market services."[44]

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https://www.sec.gov/Archives/edgar/vprr/2200/22001155.pdf.

37 See C2 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000469.pdf.

38 See C2 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001156.pdf.

39 See BZX 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000465.pdf.

40 See BZX 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001152.pdf.

41 See EDGX 2021 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000467.pdf.

42 See EDGX 2022 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001154.pdf.

43 According to PHLX, "Trade Management Services" includes "a wide variety of alternatives for connectivity to and accessing [the PHLX] markets for a fee. These participants are charged monthly fees for connectivity and support in accordance with [PHLX's] published fee schedules." See PHLX 2020 Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2001/20012246.pdf.

44 See PHLX Form 1 Amendment, available at https://www.sec.gov/Archives/edgar/vprr/2100/21000475.pdf. The Exchange notes that this type of Form 1 accounting appears to be designed to obfuscate the true financials of such exchanges and has the effect of perpetuating fee and revenue advantages of legacy exchanges.

The much higher non-transaction fees charged by the legacy exchanges provides them with two significant competitive advantages. First, legacy exchanges are able to use their additional non-transaction revenue for investments in infrastructure, vast marketing and advertising on major media outlets,[45] new products and other innovations. Second, higher non-transaction fees provide the legacy exchanges with greater flexibility to lower their transaction fees (or use the revenue from the higher non-transaction fees to subsidize transaction fee rates), which are more immediately impactful in competition for order flow and market share, given the variable nature of this cost on member firms. The prohibition of a reasonable path forward denies the Exchange (and other non-legacy exchanges) this flexibility, eliminates the ability to remain competitive on transaction fees, and hinders the ability to compete for order flow and market share with legacy exchanges. While one could debate whether the pricing of non-transaction fees are subject to the same market forces as transaction fees, there is little doubt that subjecting one exchange to a materially different standard than that historically applied to legacy exchanges for non-transaction fees leaves that exchange at a disadvantage in its ability to compete with its pricing of transaction fees.

While the Commission has clearly noted that the Staff Guidance is merely guidance and "is not a rule, regulation or statement of the…Commission…the Commission has neither approved nor disapproved its content…",[46] this is not the reality experienced by exchanges such as MIAX. As such, non-legacy exchanges are forced to rely on an opaque cost-based justification standard. However, because the Staff Guidance is devoid of detail on what must be contained in cost-based justification, this standard is nearly impossible to meet despite repeated

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45 See, e.g., CNBC Debuts New Set on NYSE Floor, available at https://www.cnbc.com/id/46517876.

46 See supra note 21, at note 1.

good-faith efforts by the Exchange to provide substantial amount of cost-related details. The Exchange has attempted to increase fees using a cost-based justification numerous times, having submitted over six filings.[47] However, despite providing 100+ page filings describing in extensive detail its costs associated with providing the services described in the filings, Commission Staff continues to suspend such filings, with the rationale that the Exchange has not provided sufficient detail of its costs and without ever being precise about what additional data points are required. The Commission Staff appears to be interpreting the reasonableness standard set forth in Section 6(b)(4) of the Act[48] in a manner that is not possible to achieve. This essentially nullifies the cost-based approach for exchanges as a legitimate alternative as laid out in the Staff Guidance. By refusing to accept a reasonable cost-based argument to justify non-transaction fees (in addition to refusing to accept a competition-based argument as described above), or by failing to provide the detail required to achieve that standard, the Commission Staff is effectively preventing non-legacy exchanges from making any non-transaction fee changes, which benefits the legacy exchanges and is anticompetitive to the non-legacy exchanges. This does not meet the fairness standard under the Act and is discriminatory.

Because of the un-level playing field created by the Revised Review Process and Staff Guidance, the Exchange believes that the Commission Staff, at this point, should either (a)

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47 See Securities Exchange Act Release Nos. 94890 (May 11, 2022), 87 FR 29945 (May 17, 2022) (SR-MIAX-2022-20); 94720 (April 14, 2022), 87 FR 23586 (April 20, 2022) (SR-MIAX-2022-16); 94719 (April 14, 2022), 87 FR 23600 (April 20, 2022) (SR-MIAX-2022-14); 94259 (February 15, 2022), 87 FR 9747 (February 22, 2022) (SR-MIAX-2022-08); 94256 (February 15, 2022), 87 FR9711 (February 22, 2022) (SR-MIAX-2022-07); 93771 (December 14, 2021), 86 FR 71940 (December 20, 2021) (SR-MIAX-2021-60); 93775 (December 14, 2021), 86 FR 71996 (December 20, 2021) (SR-MIAX-2021-59); 93185 (September 29, 2021), 86 FR 55093 (October 5, 2021) (SR-MIAX-2021-43); 93165 (September 28, 2021), 86 FR 54750 (October 4, 2021) (SR-MIAX-2021-41); 92661 (August 13, 2021), 86 FR 46737 (August 19, 2021) (SR-MIAX-2021-37); 92643 (August 11, 2021), 86 FR 46034 (August 17, 2021) (SR-MIAX-2021-35).

48 15 U.S.C. 78f(b)(4).

provide sufficient clarity on how its cost-based standard can be met, including a clear and exhaustive articulation of required data and its views on acceptable margins,[49] to the extent that this is pertinent; (b) establish a framework to provide for commensurate non-transaction based fees among competing exchanges to ensure fee parity;[50] or (c) accept that certain competition-based arguments are applicable given the linkage between non-transaction fees and transaction fees, especially where non-transaction fees among exchanges are based upon disparate standards of review, lack parity, and impede fair competition. Considering the absence of any such framework or clarity, the Exchange believes that the Commission does not have a reasonable basis to deny the Exchange this change in fees, where the proposed change would result in fees meaningfully lower than comparable fees at competing exchanges and where the associated non-transaction revenue is meaningfully lower than competing exchanges.

In light of the above, disapproval of this would not meet the fairness standard under the Act, would be discriminatory and places a substantial burden on competition. The Exchange would be uniquely disadvantaged by not being able to increase its access fees to comparable levels (or lower levels than current market rates) to those of other options exchanges for connectivity. If the Commission Staff were to disapprove this proposal, that action, and not market forces, would substantially affect whether the Exchange can be successful in its

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49 To the extent that the cost-based standard includes Commission Staff making determinations as to the appropriateness of certain profit margins, the Exchange believes that Staff should be clear as to what they determine is an appropriate profit margin.

50 In light of the arguments above regarding disparate standards of review for historical legacy non-transaction fees and current non-transaction fees for non-legacy exchanges, a fee parity alternative would be one possible way to avoid the current unfair and discriminatory effect of the Staff Guidance and Revised Review Process. See, e.g., CSA Staff Consultation Paper 21-401, Real-Time Market Data Fees, available at https://www.bcsc.bc.ca/-/media/PWS/Resources/Securities_Law/Policies/Policy2/21401_Market_Data_Fee_CSA_Staff_Consulation_Paper.pdf.

competition with other options exchanges. Disapproval of this filing could also be viewed as an arbitrary and capricious decision should the Commission Staff continue to ignore its past treatment of non-transaction fee filings before implementation of the Revised Review Process and Staff Guidance and refuse to allow such filings to be approved despite significantly enhanced arguments and cost disclosures.[51]

Lastly, the Exchange notes that the Commission Staff has allowed similar fee increases by other exchanges to remain in effect by publishing those filings for comment and allowing the exchange to withdraw and re-file numerous times.[52] Recently, the Commission Staff has not afforded the Exchange the same flexibility.[53] This again is evidence that the Commission Staff

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51 The Exchange's costs have clearly increased and continue to increase, particularly regarding capital expenditures, as well as employee benefits provided by third parties (e.g., healthcare and insurance). Yet, practically no fee change proposed by the Exchange to cover its ever-increasing costs has been acceptable to the Commission Staff since 2021. The only other fair and reasonable alternative would be to require the numerous fee filings unquestioningly approved before the Staff Guidance and Revised Review Process to "develop a record," and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review," and to ensure a comparable review process with the Exchange's filing.

52 See, e.g., Securities Exchange Act Release Nos. 93937 (January 10, 2022), 87 FR 2466 (January 14, 2022) (SR-MEMX-2021-22); 94419 (March 15, 2022), 87 FR 16046 (March 21, 2022) (SR-MEMX-2022-02); SR-MEMX-2022-12 (withdrawn before being noticed); 94924 (May 16, 2022), 87 FR 31026 (May 20, 2022) (SR-MEMX-2022-13); 95299 (July 15, 2022), 87 FR 43563 (July 21, 2022) (SR-MEMX-2022-17); SR-MEMX-2022-24 (withdrawn before being noticed); 95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26); 94901 (May 12, 2022), 87 FR 30305 (May 18, 2022) (SR-MRX-2022-04); SR-MRX-2022-06 (withdrawn before being noticed); 95262 (July 12, 2022), 87 FR 42780 (July 18, 2022) (SR-MRX-2022-09); 95710 (September 8, 2022), 87 FR 56464 (September 14, 2022) (SR-MRX-2022-12); 96046 (October 12, 2022), 87 FR 63119 (October 18, 2022) (SR-MRX-2022-20); 95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26); and 96430 (December 1, 2022), 87 FR 75083 (December 7, 2022) (SR-MEMX-2022-32).

53 See Securities Exchange Act Release Nos. 94719 (April 14, 2022), 87 FR 23600 (April 20, 2022) (SR-MIAX-2022-14) and 94720 (April 14, 2022), 87 FR 23586 (April 20, 2022) (SR-MIAX-2022-16).

is not treating non-transaction fee filings in a consistent manner and is holding exchanges to different levels of scrutiny in reviewing filings.

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10Gb ULL Connectivity Fee Change

The Exchange recently filed a proposal to no longer operate 10Gb connectivity to the Exchange on a single shared network with its affiliate, MIAX Pearl. This change is an operational necessity due to ever-increasing capacity constraints and to accommodate anticipated access needs for Members and other market participants.[54] This proposal: (i) sets forth the applicable fees for the bifurcated 10Gb ULL network; and (ii) removes provisions in the Fee Schedule that provides for a shared 10Gb ULL network; and (iii) specifies that market participants may continue to connect to both the Exchange and MIAX Pearl via the 1Gb network.

The Exchange bifurcated the Exchange and MIAX Pearl 10Gb ULL networks on January 23, 2023. The Exchange issued an alert on August 12, 2022 publicly announcing the planned network change and implementation plan and dates to provide market participants adequate time to prepare.[55] Upon bifurcation of the 10Gb ULL network, subscribers would need to purchase separate connections to the Exchange and MIAX at the applicable rate. The Exchange's proposed amended rate for 10Gb ULL connectivity is described below. Until the 10Gb ULL network is bifurcated, subscribers to 10Gb ULL connectivity would be able to connect to both the Exchange and MIAX Pearl at the applicable rate set forth below.

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54 See supra note 9.

55 Id.

The Exchange, therefore, proposes to amend the Fee Schedule to increase the fees for Members and non-Members to access the Exchange's system networks[56] via a 10Gb ULL fiber connection and to specify that this fee is for a dedicated connection to the Exchange and no longer provides access to MIAX Pearl. Specifically, the Exchange proposes to amend Sections 5)a)-b) of the Fee Schedule to increase the 10Gb ULL connectivity fee for Members and non-Members from $10,000 per month to $13,500 per month ("10Gb ULL Fee").[57] The Exchange also proposes to amend the Fee Schedule to reflect the bifurcation of the 10Gb ULL network and specify that only the 1Gb network provides access to both the Exchange and MIAX Pearl.

The Exchange proposes to make the following changes to reflect the bifurcated 10Gb ULL network for the Exchange and MIAX Pearl. The Exchange proposes to amend the explanatory paragraphs below the network connectivity fee tables in Sections 5)a)-b) of the Fee Schedule to specify that, with the bifurcated 10Gb ULL network, 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 Pearl via a single, can only do so via a shared 1Gb connection.

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56 The Exchange's system networks consist of the Exchange's extranet, internal network, and external network.

57 Market participants that purchase additional 10Gb ULL connections as a result of this change will not be subject to the Exchange's Member Network Connectivity Testing and Certification Fee under Section 4)c) of the Exchange's fee schedule. See Section 4)c) of the Exchange's fee schedule available at https://www.miaxoptions.com/sites/default/files/fee_schedule-files/MIAX_Options_Fee_Schedule_10192022.pdf (providing that "Network Connectivity Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange's system that requires testing and certification. Member Network Connectivity Testing and Certification Fees will not be assessed for testing and certification of connectivity to the Exchange's Disaster Recovery Facility.").

The Exchange will continue to assess monthly Member and non-Member network connectivity fees for connectivity to the primary and secondary facilities in any month the Member or non-Member is credentialed to use any of the Exchange APIs or market data feeds in the production environment. The Exchange will continue to pro-rate the fees when a Member or non-Member makes a change to the connectivity (by adding or deleting connections) with such pro-rated fees based on the number of trading days that the Member or non-Member has been credentialed to utilize any of the Exchange APIs or market data feeds in the production environment through such connection, divided by the total number of trading days in such month multiplied by the applicable monthly rate.

Limited Service MEI Ports

Background

The Exchange also proposes to amend Section 5)d) of the Fee Schedule to adopt a tiered-pricing structure for Limited Service MEI Ports available to Market Makers. The Exchange allocates two (2) Full Service MEI Ports[58] and two (2) Limited Service MEI Ports[59] per matching engine[60] to which each Market Maker connects. Market Makers may also request additional

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58 Full Service MEI Ports provide Market Makers with the ability to send Market Maker quotes, eQuotes, and quote purge messages to the MIAX System. Full Service MEI Ports are also capable of receiving administrative information. Market Makers are limited to two Full Service MEI Ports per matching engine. See Fee Schedule, Section 5)d)ii), note 27.

59 Limited Service MEI Ports provide Market Makers with the ability to send eQuotes and quote purge messages only, but not Market Maker Quotes, to the MIAX System. Limited Service MEI Ports are also capable of receiving administrative information. Market Makers initially receive two Limited Service MEI Ports per matching engine. See Fee Schedule, Section 5)d)ii), note 28.

60 A "matching engine" is a part of the MIAX electronic system that processes options quotes and trades on a symbol-by-symbol basis. Some matching engines will process option classes with multiple root symbols, and other matching engines will be dedicated to one single option root symbol (for example, options on SPY will be processed by one single matching engine that is dedicated only to SPY). A particular root symbol may

Limited Service MEI Ports for each matching engine to which they connect. The Full Service MEI Ports and Limited Service MEI Ports all include access to the Exchange's primary and secondary data centers and its disaster recovery center. Market Makers may request additional Limited Service MEI Ports. Currently, Market Makers are assessed a $100 monthly fee for each Limited Service MEI Port for each matching engine above the first two Limited Service MEI Ports that are included for free. This fee was unchanged since 2016.[61]

Limited Service MEI Port Fee Changes

The Exchange now proposes to move from a flat monthly fee per Limited Service MEI Port for each matching engine to a tiered-pricing structure for Limited Service MEI Ports for each matching engine under which the monthly fee would vary depending on the number of Limited Service MEI Ports each Market Maker elects to purchase. Specifically, the Exchange will continue to provide the first and second Limited Service MEI Ports for each matching engine free of charge. For Limited Service MEI Ports, the Exchange proposes to adopt the following tiered-pricing structure: (i) the third and fourth Limited Service MEI Ports for each matching engine will increase from the current flat monthly fee of $100 to $150 per port; (ii) the fifth and sixth Limited Service MEI Ports for each matching engine will increase from the current flat monthly fee of $100 to $200 per port; and (iii) the seventh or more Limited Service MEI Ports will increase from the current monthly flat fee of $100 to $250 per port. The Exchange believes a tiered-pricing structure will encourage Market Makers to be more efficient when determining how to connect to the Exchange. This should also enable the Exchange to better monitor and provide access to the Exchange's network to ensure sufficient capacity and

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only be assigned to a single designated matching engine. A particular root symbol may not be assigned to multiple matching engines. See Fee Schedule, Section 5)d)ii), note 29.

61 See Securities Exchange Act Release No. 79666 (December 22, 2016), 81 FR 96133 (December 29, 2016) (SR-MIAX-2016-47).

headroom in the System[62] in accordance with its fair access requirements under Section 6(b)(5) of the Act.[63]

The Exchange offers various types of ports with differing prices because each port accomplishes different tasks, are suited to different types of Members, and consume varying capacity amounts of the network. For instance, Market Makers who take the maximum amount of Limited Service MEI Ports account for approximately greater than 99% of message traffic over the network, while Market Makers with fewer Limited Service MEI Ports account for approximately less than 1% of message traffic over the network. In the Exchange's experience, Market Makers who only utilize the two free Limited Service MEI Ports do not have a business need for the high performance network solutions required by Market Makers who take the maximum amount of Limited Service MEI Ports. The Exchange's high performance network solutions and supporting infrastructure (including employee support), provides unparalleled system throughput and the capacity to handle approximately 18 million quote messages per second. Based on November 2022 trading results, on an average day, the Exchange handles over approximately 8.8 billion quotes, and more than 185 billion quotes over the entire month. Of that total, Market Makers with the maximum amount of Limited Service MEI Ports generated approximately 5 billion quotes, and Market Makers who utilized the two free Limited Service MEI Ports generated approximately 1.5 billion quotes. Also for November 2022, Market Makers who utilized 3 to 4 Limited Service MEI ports submitted an average of

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62 The term "System" means the automated trading system used by the Exchange for the trading of securities. See the Definitions Section of the Fee Schedule and Exchange Rule 100.

63 See 15 U.S.C. 78f(b). The Exchange may offer access on terms that are not unfairly discriminatory among its Members, and ensure sufficient capacity and headroom in the System. The Exchange monitors the System's performance and makes adjustments to its System based on market conditions and Member demand.

1,152,654,133 quotes per day and Market Makers who utilized 5 to 9 Limited Service MEI ports submitted an average of 1,172,105,181 quotes per day. To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[64] Thus, as the number of connections a Market Maker has increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. The Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange. With this in mind, the Exchange proposes no fee or lower fees for those Market Makers who receive fewer Limited Service MEI Ports since those Market Makers generally tend to send the least amount of orders and messages over those connections. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers who take the most Limited Service MEI Ports pay for the vast majority of the shared network resources from which all Member and non-Member users benefit, but is designed and maintained from a

64 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

capacity standpoint to specifically handle the message rate and performance requirements of those Market Makers.

The Exchange proposes to increase its monthly Limited Service MEI Port fees since it has not done so since 2016,[65] which is designed to recover a portion of the costs associated with directly accessing the Exchange.

Implementation. The proposed fee changes are immediately effective.

2. Statutory Basis

The Exchange believes that the proposed fees are consistent with Section 6(b) of the Act[66] in general, and furthers the objectives of Section 6(b)(4) of the Act[67] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Members and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposed fees further the objectives of Section 6(b)(5) of the Act[68] in that they are designed to promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general protect investors and the public interest and are not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange believes that the information provided to justify the proposed fees meets or exceeds the amount of detail required in respect of proposed fee changes under the Revised Review Process and as set forth in recent Staff Guidance. Based on both the BOX Order[69] and

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65 See Securities Exchange Act Release No. 79666 (December 22, 2016), 81 FR 96133 (December 29, 2016) (SR-MIAX-2016-47).

66 15 U.S.C. 78f(b).

67 15 U.S.C. 78f(b)(4).

68 15 U.S.C. 78f(b)(5).

69 See supra note 20.

the Staff Guidance[70], the Exchange believes that the proposed fees are consistent with the Act because they are: (i) reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Staff Guidance; and (iii) supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable and will not result in excessive pricing or supra-competitive profit.

The Exchange believes that exchanges, in setting fees of all types, should meet high standards of transparency to demonstrate why each new fee or fee amendment meets the requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among market participants. The Exchange believes this high standard is especially important when an exchange imposes various fees for market participants to access an exchange's marketplace.

In the Staff Guidance, the Commission Staff states that, "[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces."[71] The Staff Guidance further states that, "… even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act."[72] In the Staff Guidance, the Commission Staff further states that, "[i]f an SRO seeks to support its claims that a proposed fee is fair and reasonable because it will permit recovery of the SRO's costs, . . . , specific information, including quantitative information, should be provided to support that argument."[73]

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70 See supra note 21.

71 Id.

72 Id.

73 Id.

The proposed fees are reasonable because they promote parity among exchange pricing for access, which promotes competition, including in the Exchanges' ability to competitively price transaction fees, invest in infrastructure, new products and other innovations, all while allowing the Exchange to recover its costs to provide dedicated access via 10Gb ULL connectivity (driven by the bifurcation of the 10Gb ULL network) and Limited Service MEI Ports. As discussed above, the Revised Review Process and Staff Guidance have created an uneven playing field between legacy and non-legacy exchanges by severely restricting non-legacy exchanges from being able to increase non-transaction related fees to provide them with additional necessary revenue to better compete with legacy exchanges, which largely set fees prior to the Revised Review Process. The much higher non-transaction fees charged by the legacy exchanges provides them with two significant competitive advantages: (i) additional non-transaction revenue that may be used to fund areas other than the non-transaction service related to the fee, such as investments in infrastructure, advertising, new products and other innovations; and (ii) greater flexibility to lower their transaction fees by using the revenue from the higher non-transaction fees to subsidize transaction fee rates. The latter is more immediately impactful in competition for order flow and market share, given the variable nature of this cost on Member firms. The absence of a reasonable path forward to increase non-transaction fees to comparable (or lower rates) limits the Exchange's flexibility to, among other things, make additional investments in infrastructure and advertising, diminishes the ability to remain competitive on transaction fees, and hinders the ability to compete for order flow and market share. Again, while one could debate whether the pricing of non-transaction fees are subject to the same market forces as transaction fees, there is little doubt that subjecting one exchange to a materially different standard than that applied to other exchanges for non-transaction fees leaves that exchange at a disadvantage in its ability to compete with its pricing of transaction fees.

The Proposed Fees Ensure Parity Among Exchange Access Fees, Which Promotes Competition

The Exchange commenced operations in 2012 and adopted its initial fee schedule, with all connectivity and port fees set at $0.00 (the Exchange originally had a non-ULL 10Gb connectivity option, which it has since removed).[74] As a new exchange entrant, the Exchange chose to offer connectivity and ports free of charge to encourage market participants to trade on the Exchange and experience, among things, the quality of the Exchange's technology and trading functionality. This practice is not uncommon. New exchanges often do not charge fees or charge lower fees for certain services such as memberships/trading permits to attract order flow to an exchange, and later amend their fees to reflect the true value of those services, absorbing all costs to provide those services in the meantime. Allowing new exchange entrants time to build and sustain market share through various pricing incentives before increasing non-transaction fees encourages market entry and fee parity, which promotes competition among exchanges. It also enables new exchanges to mature their markets and allow market participants to trade on the new exchanges without fees serving as a potential barrier to attracting memberships and order flow.[75]

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74 See Securities Exchange Act Release No. 68415 (December 12, 2012), 77 FR 74905 (December 18, 2012) (SR-MIAX-2012-01).

75 See Securities Exchange Act Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17) (stating, "[t]he Exchange established this lower (when compared to other options exchanges in the industry) Participant Fee in order to encourage market participants to become Participants of BOX…"). See also Securities Exchange Act Release No. 90076 (October 2, 2020), 85 FR 63620 (October 8, 2020) (SR-MEMX-2020-10) (proposing to adopt the initial fee schedule and stating that "[u]nder the initial proposed Fee Schedule, the Exchange proposes to make clear that it does not charge any fees for membership, market data products, physical connectivity or application sessions."). MEMX's market share has increased and recently proposed to adopt numerous non-transaction fees, including fees for membership, market data, and connectivity. See Securities Exchange Act Release Nos. 93927 (January 7, 2022), 87 FR 2191 (January 13, 2022) (SR-MEMX-2021-19) (proposing to adopt membership fees); 96430 (December 1, 2022), 87 FR 75083 (December 7, 2022) (SR-MEMX-2022-32) and

Later in 2013, as the Exchange's market share increased,[76] the Exchange adopted a nominal $10 fee for each additional Limited Service MEI Port.[77] The Exchange last increased the fees for its 10Gb ULL fiber connections from $9,300 to $10,000 per month on January 1, 2021.[78] The Exchange balanced business and competitive concerns with the need to financially compete with the larger incumbent exchanges that charge higher fees for similar connectivity and use that revenue to invest in their technology and other service offerings.

The proposed changes to the Fee Schedule are reasonable in several respects. As a threshold matter, the Exchange is subject to significant competitive forces, which constrains its pricing determinations for transaction fees as well as non-transaction fees. The fact that the market for order flow is competitive has long been recognized by the courts. In NetCoalition v. Securities and Exchange Commission, the D.C. Circuit stated, "[n]o one disputes that competition for order flow is 'fierce.' … As the SEC explained, '[i]n the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange

95936 (September 27, 2022), 87 FR 59845 (October 3, 2022) (SR-MEMX-2022-26) (proposing to adopt fees for connectivity). See also, e.g., Securities Exchange Act Release No. 88211 (February 14, 2020), 85 FR 9847 (February 20, 2020) (SR-NYSENAT-2020-05), available at https://www.nyse.com/publicdocs/nyse/markets/nyse-national/rule-filings/filings/2020/SR-NYSENat-2020-05.pdf (initiating market data fees for the NYSE National exchange after initially setting such fees at zero).

[76] The Exchange experienced a monthly average equity options trading volume of 1.87% for the month of November 2013. See Market at a Glance, available at www.miaxoptions.com.

[77] See Securities Exchange Act Release No. 70903 (November 20, 2013), 78 FR 70615 (November 26, 2013) (SR-MIAX-2013-52).

[78] See Securities Exchange Act Release No. 90980 (January 25, 2021), 86 FR 7602 (January 29, 2021) (SR-MIAX-2021-02).

can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers'…."[79]

The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention to determine prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining 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."[80]

Congress directed the Commission to "rely on 'competition, whenever possible, in meeting its regulatory responsibilities for overseeing the SROs and the national market system.'"[81] As a result, and as evidenced above, the Commission has historically relied on competitive forces to determine whether a fee proposal is equitable, fair, reasonable, and not unreasonably or unfairly discriminatory. "If competitive forces are operative, the self-interest of the exchanges themselves will work powerfully to constrain unreasonable or unfair behavior."[82] Accordingly, "the existence of significant competition provides a substantial basis for finding that the terms of an exchange's fee proposal are equitable, fair, reasonable, and not unreasonably

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79 See NetCoalition, 615 F.3d at 539 (D.C. Cir. 2010) (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782-83 (December 9, 2008) (SR-NYSEArca-2006-21)).

80 See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) ("Regulation NMS Adopting Release").

81 See NetCoalition, 615 F.3d at 534-35; see also H.R. Rep. No. 94-229 at 92 (1975) ("[I]t is the intent of the conferees that the national market system evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed.").

82 See Securities Exchange Act Release No. 59039 (December 2, 2008), 73 Fed. Reg. 74,770 (December 9, 2008) (SR-NYSEArca-2006-21).

or unfairly discriminatory."[83] In the Revised Review Process and Staff Guidance, Commission Staff indicated that they would look at factors beyond the competitive environment, such as cost, only if a "proposal lacks persuasive evidence that the proposed fee is constrained by significant competitive forces."[84]

The Exchange believes the competing exchanges' 10Gb connectivity and port fees are useful examples of alternative approaches to providing and charging for access and demonstrating how such fees are competitively set and constrained. To that end, the Exchange believes the proposed fees are competitive and reasonable because the proposed fees are similar to or less than fees charged for similar connectivity and port access provided by other options exchanges with comparable market shares. As such, the Exchange believes that denying its ability to institute fees that allow us to recoup our costs and some margin in a manner that is closer to parity with legacy exchanges, in effect, impedes its ability to compete, including in its pricing of transaction fees and ability to invest in competitive infrastructure and other offerings.

The following table shows how the Exchange's proposed fees remain similar to or less than fees charged for similar connectivity and port access provided by other options exchanges with similar market share. Each of the market data rates in place at competing options exchanges were filed with the Commission for immediate effectiveness and remain in place today.

Exchange	**Type of Connection or Port**	**Monthly Fee (per connection or per port)**
MIAX (as proposed)	10Gb ULL connection	$13,500
	Limited Service MEI Ports	1-2 ports: FREE (not changed in this proposal) 3-4 ports: $150 each 5-6 ports: $200 each

83 Id.

84 See supra note 21.

(equity options market share of 5.64% for the month of November 2022)[85]		7 or more ports: $250 each
NASDAQ[86] (equity options market share of 6.61% for the month of November 2022)[87]	10Gb Ultra fiber connection	$15,000 per connection
	SQF Port[88]	1-5 ports: $1,500 per port 6-20 ports: $1,000 per port 21 or more ports: $500 per port
NASDAQ ISE LLC ("ISE")[89] (equity options market share of 5.76% for the month of November 2022)[90]	10Gb Ultra fiber connection	$15,000 per connection
	SQF Port	$1,100 per port
NYSE American LLC ("NYSE American")[91] (equity options market share of 6.41% for the month of November 2022)[92]	10Gb LX LCN connection	$22,000 per connection
	Order/Quote Entry Port	1-40 ports: $450 per port 41 or more ports: $150 per port
NASDAQ GEMX, LLC ("GEMX")[93] (equity options market share of 1.79% for the month of November 2022)[94]	10Gb Ultra connection	$15,000 per connection
	SQF Port	$1,250 per port

85 See supra note 76.

86 See NASDAQ Pricing Schedule, Options 7, Section 3, Ports and Other Services and NASDAQ Rules, General 8: Connectivity, Section 1. Co-Location Services.

87 See supra note 76.

88 Similar to the Exchange's MEI Ports, SQF ports are primarily utilized by Market Makers.

89 See ISE Pricing Schedule, Options 7, Section 7, Connectivity Fees and ISE Rules, General 8: Connectivity.

90 See supra note 76.

91 See NYSE American Options Fee Schedule, Section V.A. Port Fees and Section V.B. Co-Location Fees.

92 See supra note 76.

93 See GEMX Pricing Schedule, Options 7, Section 6, Connectivity Fees and GEMX Rules, General 8: Connectivity.

94 See supra note 76.

There is no requirement, regulatory or otherwise, that any broker-dealer connect to and access any (or all of) the available options exchanges. Market participants may choose to become a member of one or more options exchanges based on the market participant's assessment of the business opportunity relative to the costs of the Exchange. With this, there is elasticity of demand for exchange membership. As an example, the Exchange's affiliate, MIAX PEARL, LLC ("MIAX Pearl"), experienced a decrease in membership as the result of similar fees proposed herein. One MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023, as a direct result of the proposed connectivity and port fee changes on MIAX Pearl.

It is not a requirement for market participants to become members of all options exchanges, in fact, certain market participants conduct an options business as a member of only one options market.[95] A very small number of market participants choose to become a member of all sixteen options exchanges. Most firms that actively trade on options markets are not currently Members of the Exchange and do not purchase connectivity or port services at the Exchange. Connectivity and ports are only available to Members or service bureaus, and only a

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95 BOX recently adopted an electronic market maker trading permit fee. See Securities Exchange Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17). In that proposal, BOX stated that, "… it is not aware of any reason why Market Makers could not simply drop their access to an exchange (or not initially access an exchange) if an exchange were to establish prices for its non-transaction fees that, in the determination of such Market Maker, did not make business or economic sense for such Market Maker to access such exchange. [BOX] again notes that no market makers are required by rule, regulation, or competitive forces to be a Market Maker on [BOX]." Also in 2022, MEMX established a monthly membership fee. See Securities Exchange Act Release No. 93927 (January 7, 2022), 87 FR 2191 (January 13, 2022) (SR-MEMX-2021-19). In that proposal, MEMX reasoned that that there is value in becoming a member of the exchange and stated that it believed that the proposed membership fee "is not unfairly discriminatory because no broker-dealer is required to become a member of the Exchange" and that "neither the trade-through requirements under Regulation NMS nor broker-dealers' best execution obligations require a broker-dealer to become a member of every exchange."

Member may utilize a port.[96]

One other exchange recently noted in a proposal to amend their own trading permit fees that of the 62 market making firms that are registered as Market Makers across Cboe, MIAX, and BOX, 42 firms access only one of the three exchanges.[97] The Exchange and its affiliates, MIAX Pearl and MIAX Emerald, have a total of 47 members. Of those 47 total members, 35 are members of all three affiliated exchanges, four are members of only two (2) affiliated exchanges, and eight (8) are members of only one affiliated exchange. The Exchange also notes that no firm is a Member of the Exchange only. The above data evidences that a broker-dealer need not have direct connectivity to all options exchanges, let alone the Exchange and its two affiliates, and broker-dealers may elect to do so based on their own business decisions and need to directly access each exchange's liquidity pool.

Not only is there not an actual regulatory requirement to connect to every options exchange, the Exchange believes there is also no "de facto" or practical requirement as well, as further evidenced by the broker-dealer membership analysis of the options exchanges discussed above. As noted above, this is evidenced by the fact that one MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023 as a direct result of the proposed connectivity and port fee changes on MIAX Pearl (which are similar to the changes proposed herein). Indeed, broker-dealers choose if and how to access a particular exchange and because it is a choice, the Exchange must set reasonable pricing, otherwise prospective

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96 Service Bureaus may obtain ports on behalf of Members.

97 See Securities Exchange Act Release No. 94894 (May 11, 2022), 87 FR 29987 (May 17, 2022) (SR-BOX-2022-17) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the Fee Schedule on the BOX Options Market LLC Facility To Adopt Electronic Market Maker Trading Permit Fees). The Exchange believes that BOX's observation demonstrates that market making firms can, and do, select which exchanges they wish to access, and, accordingly, options exchanges must take competitive considerations into account when setting fees for such access.

members would not connect and existing members would disconnect from the Exchange. The decision to become a member of an exchange, particularly for registered market makers, is complex, and not solely based on the non-transactional costs assessed by an exchange. As noted herein, specific factors include, but are not limited to: (i) an exchange's available liquidity in options series; (ii) trading functionality offered on a particular market; (iii) product offerings; (iv) customer service on an exchange; and (v) transactional pricing. Becoming a member of the exchange does not "lock" a potential member into a market or diminish the overall competition for exchange services.

In lieu of becoming a member at each options exchange, a market participant may join one exchange and elect to have their orders routed in the event that a better price is available on an away market. Nothing in the Order Protection Rule requires a firm to become a Member at – or establish connectivity to – the Exchange.[98] If the Exchange is not at the NBBO, the Exchange will route an order to any away market that is at the NBBO to ensure that the order was executed at a superior price and prevent a trade-through.[99]

With respect to the submission of orders, Members may also choose not to purchase any connection at all from the Exchange, and instead rely on the port of a third party to submit an order. For example, a third-party broker-dealer Member of the Exchange may be utilized by a retail investor to submit orders into an Exchange. An institutional investor may utilize a broker-

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98 See Options Order Protection and Locked/Crossed Market Plan (August 14, 2009), available at https://www.theocc.com/getmedia/7fc629d9-4e54-4b99-9f11-c0e4db1a2266/options_order_protection_plan.pdf.

99 Members may elect to not route their orders by utilizing the Do Not Route order type. See Exchange Rule 516(g).

dealer, a service bureau,[100] or request sponsored access[101] through a member of an exchange in order to submit a trade directly to an options exchange.[102] A market participant may either pay the costs associated with becoming a member of an exchange or, in the alternative, a market participant may elect to pay commissions to a broker-dealer, pay fees to a service bureau to submit trades, or pay a member to sponsor the market participant in order to submit trades directly to an exchange.

Non-Member third-parties, such as service bureaus and extranets, resell the Exchange's connectivity. This indirect connectivity is another viable alternative for market participants to trade on the Exchange without connecting directly to the Exchange (and thus not pay the Exchange's connectivity fees), which alternative is already being used by non-Members and further constrains the price that the Exchange is able to charge for connectivity and other access fees to its market. The Exchange notes that it could, but chooses not to, preclude market participants from reselling its connectivity. Unlike other exchanges, the Exchange also does not currently assess fees on third-party resellers on a per customer basis (i.e., fees based on the number of firms that connect to the Exchange indirectly via the third-party).[103] Indeed, the

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100 Service Bureaus provide access to market participants to submit and execute orders on an exchange. On the Exchange, a Service Bureau may be a Member. Some Members utilize a Service Bureau for connectivity and that Service Bureau may not be a Member. Some market participants utilize a Service Bureau who is a Member to submit orders.

101 Sponsored Access is an arrangement whereby a Member permits its customers to enter orders into an exchange's system that bypass the Member's trading system and are routed directly to the Exchange, including routing through a service bureau or other third-party technology provider.

102 This may include utilizing a floor broker and submitting the trade to one of the five options trading floors.

103 See, e.g., Nasdaq Price List – U.S. Direct Connection and Extranet Fees, available at, US Direct-Extranet Connection (nasdaqtrader.com); and Securities Exchange Act Release Nos. 74077 (January 16, 2022), 80 FR 3683 (January 23, 2022) (SR-NASDAQ-2015-002); and 82037 (November 8, 2022), 82 FR 52953 (November 15, 2022) (SR-NASDAQ-2017-114).

Exchange does not receive any connectivity revenue when connectivity is resold by a third-party, which often is resold to multiple customers, some of whom are agency broker-dealers that have numerous customers of their own.[104] Particularly, in the event that a market participant views the Exchange's direct connectivity and access fees as more or less attractive than competing markets, that market participant can choose to connect to the Exchange indirectly or may choose not to connect to the Exchange and connect instead to one or more of the other 16 options markets. Accordingly, the Exchange believes that the proposed fees are fair and reasonable and constrained by competitive forces.

The Exchange is obligated to regulate its Members and secure access to its environment. In order to properly regulate its Members and secure the trading environment, the Exchange takes measures to ensure access is monitored and maintained with various controls. Connectivity and ports are methods utilized by the Exchange to grant Members secure access to communicate with the Exchange and exercise trading rights. When a market participant elects to be a Member, and is approved for membership by the Exchange, the Member is granted trading rights to enter orders and/or quotes into Exchange through secure connections.

Again, there is no legal or regulatory requirement that a market participant become a Member of the Exchange. This is again evidenced by the fact that one MIAX Pearl Market Maker terminated their MIAX Pearl membership effective January 1, 2023 as a direct result of the proposed connectivity and port fee changes on MIAX Pearl. If a market participant chooses to become a Member, they may then choose to purchase connectivity beyond the one connection

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104 The Exchange notes that resellers, such as SFTI, are not required to publicize, let alone justify or file with the Commission their fees, and as such could charge the market participant any fees it deems appropriate (including connectivity fees higher than the Exchange's connectivity fees), even if such fees would otherwise be considered potentially unreasonable or uncompetitive fees.

that is necessary to quote or submit orders on the Exchange. Members may freely choose to rely on one or many connections, depending on their business model.

Bifurcation of 10Gb ULL Connectivity and Related Fees

The Exchange began to operate on a single shared network with MIAX Pearl when MIAX Pearl commenced operations as a national securities exchange on February 7, 2017.[105] The Exchange and MIAX Pearl have operated on a single shared network to provide Members with a single convenient set of access points for both exchanges. Both the Exchange and MIAX Pearl offer two methods of connectivity, 1Gb and 10Gb ULL connections. The 1Gb connection services are supported by a discrete set of switches providing 1Gb access ports to Members. The 10Gb ULL connection services are supported by a second and mutually exclusive set of switches providing 10Gb ULL access ports to Members. Previously, both the 1Gb and 10Gb ULL shared extranet ports allow Members to use one connection to access both exchanges, namely their trading platforms, market data systems, test systems, and disaster recovery facilities.

The Exchange stresses that bifurcating the 10Gb ULL connectivity between the Exchange and MIAX Pearl was not designed with the objective to generate an overall increase in access fee revenue. Rather, the proposed change was necessitated by 10Gb ULL connectivity experiencing a significant decrease in port availability mostly driven by connectivity demands of latency sensitive Members that seek to maintain multiple 10Gb ULL connections on every switch in the network. Operating two separate national securities exchanges on a single shared network provided certain benefits, such as streamlined connectivity to multiple exchanges, and

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105 See Securities Exchange Act Release No. 80061 (February 17, 2017), 82 FR 11676 (February 24, 2017) (establishing MIAX Pearl Fee Schedule and establishing that the MENI can also be configured to provide network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facility of the MIAX Pearl's affiliate, MIAX, via a single, shared connection).

simplified exchange infrastructure. However, doing so was no longer sustainable due to ever-increasing capacity constraints and current system limitations. The network is not an unlimited resource. As described more fully in the proposal to bifurcate the 10Gb ULL network,[106] the connectivity needs of Members and market participants has increased every year since the launch of MIAX Pearl and the operations of the Exchange and MIAX Pearl on a single shared 10Gb ULL network is no longer feasible. This required constant System expansion to meet Member demand for additional ports and 10Gb ULL connections has resulted in limited available System headroom, which eventually became operationally problematic for both the Exchange and its customers.

As stated above, the shared network is not an unlimited resource and its expansion was constrained by MIAX's and MIAX Pearl's ability to provide fair and equitable access to all market participants of both markets. Due to the ever-increasing connectivity demands, the Exchange found it necessary to bifurcate 10Gb ULL connectivity to the Exchange's and MIAX Pearl's Systems and networks to be able to continue to meet ongoing and future 10Gb ULL connectivity and access demands.[107]

Unlike the switches that provide 1Gb connectivity, the availability for additional 10Gb ULL connections on each switch had significantly decreased. This was mostly driven by the connectivity demands of latency sensitive Members (e.g., Market Makers and liquidity removers) that sought to maintain connectivity across multiple 10Gb ULL switches. Based on the Exchange's experience, such Members did not typically use a shared 10Gb ULL connection

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106 See Securities Exchange Act Release Nos. 96553 (December 20, 2022), 87 FR 79379 (December 27, 2022) (SR-PEARL-2022-60); 96545 (December 20, 2022) 87 FR 79393 (December 27, 2022) (SR-MIAX-2022-48).

107 Currently, the Exchange maintains sufficient headroom to meet ongoing and future requests for 1Gb connectivity. Therefore, the Exchange did not propose to alter 1Gb connectivity and continues to provide 1Gb connectivity over a shared network.

to reach both the Exchange and MIAX Pearl due to related latency concerns. Instead, those Members maintain dedicated separate 10Gb ULL connections for the Exchange and separate dedicated 10Gb ULL connections for MIAX Pearl. This resulted in a much higher 10Gb ULL usage per switch by those Members on the shared 10Gb ULL network than would otherwise be needed if the Exchange and MIAX Pearl had their own dedicated 10Gb ULL networks. Separation of the Exchange and MIAX Pearl 10Gb ULL networks naturally lends itself to reduced 10Gb ULL port consumption on each switch and, therefore, increased 10Gb ULL port availability for current Members and new Members.

Prior to bifurcating the 10Gb ULL network, the Exchange and MIAX Pearl continued to add switches to meet ongoing demand for 10Gb ULL connectivity. That was no longer sustainable because simply adding additional switches to expand the current shared 10Gb ULL network would not adequately alleviate the issue of limited available port connectivity. While it would have resulted in a gain in overall port availability, the existing switches on the shared 10Gb ULL network in use would have continued to suffer from lack of port headroom given many latency sensitive Members' needs for a presence on each switch to reach both the Exchange and MIAX Pearl. This was because those latency sensitive Members sought to have a presence on each switch to maximize the probability of experiencing the best network performance. Those Members routinely decide to rebalance orders and/or messages over their various connections to ensure each connection is operating with maximum efficiency. Simply adding switches to the extranet would not have resolved the port availability needs on the shared 10Gb ULL network since many of the latency sensitive Members were unwilling to relocate their connections to a new switch due to the potential detrimental performance impact. As such, the impact of adding new switches and rebalancing ports would not have been effective or responsive to customer needs. The Exchange has found that ongoing and continued rebalancing

once additional switches are added has had, and would have continued to have had, a diminishing return on increasing available 10Gb ULL connectivity.

Based on its experience and expertise, the Exchange found the most practical way to increase connectivity availability on its switches was to bifurcate the existing 10Gb ULL networks for the Exchange and MIAX Pearl by migrating the exchanges' connections from the shared network onto their own set of switches. Such changes accordingly necessitated a review of the Exchange's previous 10Gb ULL connectivity fees and related costs. The proposed fees are necessary to allow the Exchange to cover ongoing costs related to providing and maintaining such connectivity, described more fully below. The ever increasing connectivity demands that necessitated this change further support that the proposed fees are reasonable because this demand reflects that Members and non-Members believe they are getting value from the 10Gb ULL connections they purchase.

The Exchange announced on August 12, 2022 the planned network change and the January 23, 2023 implementation date to provide market participants adequate time to prepare.[108] Since August 12, 2022, the Exchange has worked with current 10Gb ULL subscribers to address their connectivity needs ahead of the January 23, 2023 date. Based on those interactions and subscriber feedback, the Exchange experienced a minimal net increase of approximately six (6) overall 10Gb ULL connectivity subscriptions across the Exchange and MIAX Pearl. This anticipated immaterial increase in overall connections reflect a minimal fee impact for all types of subscribers and reflects that subscribers elected to reallocate existing 10Gb ULL connectivity directly to the Exchange or MIAX Pearl, or chose to decrease or cease connectivity as a result of the change.

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[108] See supra note 9.

Should the Commission Staff disapprove such fees, it would effectively dictate how an exchange manages its technology and would hamper the Exchange's ability to continue to invest in and fund access services in a manner that allows it to meet existing and anticipated access demands of market participants. Disapproval could also have the adverse effect of discouraging exchanges from optimizing its operations and deploying innovative technology to the benefit of market participants if it believes the Commission would later prevent that exchange from covering its costs and monetizing operational enhancements, thus adversely impacting competition. Also, as noted above, the economic consequences of not being able to better establish fee parity with other exchanges for non-transaction fees hampers the Exchange's ability to compete on transaction fees.

Cost Analysis

In general, the Exchange believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee increase meets the Exchange Act requirements that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among members and markets. In particular, the Exchange believes that each exchange should take extra care to be able to demonstrate that these fees are based on its costs and reasonable business needs.

In proposing to charge fees for connectivity services, the Exchange is especially diligent in assessing those fees in a transparent way against its own aggregate costs of providing the related service, and in carefully and transparently assessing the impact on Members – both generally and in relation to other Members, i.e., to assure the fee will not create a financial burden on any participant and will not have an undue impact in particular on smaller Members and competition among Members in general. The Exchange believes that this level of diligence

and transparency is called for by the requirements of Section 19(b)(1) under the Act,[109] and Rule 19b-4 thereunder,[110] with respect to the types of information SROs should provide when filing fee changes, and Section 6(b) of the Act,[111] which requires, among other things, that exchange fees be reasonable and equitably allocated,[112] not designed to permit unfair discrimination,[113] and that they not impose a burden on competition not necessary or appropriate in furtherance of the purposes of the Act.[114] This rule change proposal addresses those requirements, and the analysis and data in each of the sections that follow are designed to clearly and comprehensively show how they are met.[115] The Exchange reiterates that the legacy exchanges with whom the Exchange vigorously competes for order flow and market share, were not subject to any such diligence or transparency in setting their baseline non-transaction fees, most of which were put in place before the Revised Review Process and Staff Guidance.

As detailed below, the Exchange recently calculated its aggregate annual costs for providing physical 10Gb ULL connectivity to the Exchange at $12,034,554 (or approximately $1,002,880 per month, rounded up to the nearest dollar when dividing the annual cost by 12 months) and its aggregate annual costs for providing Limited Service MEI Ports at $2,157,178 (or approximately $179,765 per month, rounded down to the nearest dollar when dividing the annual cost by 12 months). In order to cover the aggregate costs of providing connectivity to its

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109 15 U.S.C. 78s(b)(1).

110 17 CFR 240.19b-4.

111 15 U.S.C. 78f(b).

112 15 U.S.C. 78f(b)(4).

113 15 U.S.C. 78f(b)(5).

114 15 U.S.C. 78f(b)(8).

115 See supra note 21.

Users (both Members and non-Members[116]) going forward and to make a modest profit, as described below, the Exchange proposes to modify its Fee Schedule to charge a fee of $13,500 per month for each physical 10Gb ULL connection and to remove language providing for a shared 10Gb ULL network between the Exchange and MIAX Pearl. The Exchange also proposes to modify its Fee Schedule to charge tiered rates for additional Limited Service MEI Ports.

In 2019, the Exchange completed a study of its aggregate costs to produce market data and connectivity (the "Cost Analysis").[117] The Cost Analysis required a detailed analysis of the Exchange's aggregate baseline costs, including a determination and allocation of costs for core services provided by the Exchange – transaction execution, market data, membership services, physical connectivity, and port access (which provide order entry, cancellation and modification functionality, risk functionality, the ability to receive drop copies, and other functionality). The Exchange separately divided its costs between those costs necessary to deliver each of these core services, including infrastructure, software, human resources (i.e., personnel), and certain general and administrative expenses ("cost drivers").

As an initial step, the Exchange determined the total cost for the Exchange and the affiliated markets). That total cost was then divided among the Exchange and each of its affiliated markets based on a number of factors, including server counts, additional hardware and software utilization, current or anticipated functional or non-functional development projects,

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116 Types of market participants that obtain connectivity services from the Exchange but are not Members include service bureaus and extranets. Service bureaus offer technology-based services to other companies for a fee, including order entry services, and thus, may access Limited Service MEI Ports on behalf of one or more Members. Extranets offer physical connectivity services to Members and non-Members.

117 The Exchange frequently updates it Cost Analysis as strategic initiatives change, costs increase or decrease, and market participant needs and trading activity changes. The Exchange's most recent Cost Analysis was conducted ahead of this filing.

capacity needs, end-of-life or end-of-service intervals, number of members, market model (e.g., price time or pro-rata), which may impact message traffic, individual system architectures that impact platform size,[118] storage needs, dedicated infrastructure versus shared infrastructure allocated per platform based on the resources required to support each platform, number of available connections, and employees allocated time. This will result in different allocation percentages among the Exchange and its affiliated markets. Meanwhile this allocation methodology ensures that no portion of any cost was allocated twice or double-counted between the Exchange and its affiliated markets.

Next, the Exchange adopted an allocation methodology with thoughtful and consistently applied principles to guide how much of a particular cost amount allocated to the Exchange pursuant to the above methodology should be allocated within the Exchange to each core service. For instance, fixed costs that are not driven by client activity (e.g., message rates), such as data center costs, were allocated more heavily to the provision of physical 1Gb and 10Gb ULL connectivity (62%), with smaller allocations to all ports (15%), and the remainder to the provision of transaction execution, membership services and market data services (23%). This next level of the allocation methodology at the individual exchange level also took into account a number of factors similar to those set forth under the first allocation methodology described above, to determine the appropriate allocation to connectivity or market data versus what is to be allocated to providing other services. The allocation methodology was developed through an assessment of costs with senior management intimately familiar with each area of the Exchange's operations. After adopting this allocation methodology, the Exchange then applied

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118 For example, the Exchange maintains 24 matching engines, MIAX Pearl Options maintains 12 matching engines, MIAX Pearl Equities maintains 24 matching engines, and MIAX Emerald maintains 12 matching engines.

an estimated allocation of each cost driver to each core service, resulting in the cost allocations described below. Each of the below cost allocations is unique to the Exchange and represents a percentage of overall cost that was allocated to the Exchange pursuant to the initial allocation described above.

By allocating segmented costs to each core service, the Exchange was able to estimate by core service the potential margin it might earn based on different fee models. The Exchange notes that as a non-listing venue it has five primary sources of revenue that it can potentially use to fund its operations: transaction fees, fees for connectivity and port services, membership fees, regulatory fees, and market data fees. Accordingly, the Exchange must cover its expenses from these five primary sources of revenue. The Exchange also notes that as a general matter each of these sources of revenue is based on services that are interdependent. For instance, the Exchange's system for executing transactions is dependent on physical hardware and connectivity; only Members and parties that they sponsor to participate directly on the Exchange may submit orders to the Exchange; many Members (but not all) consume market data from the Exchange in order to trade on the Exchange; and, the Exchange consumes market data from external sources in order to comply with regulatory obligations. Accordingly, given this interdependence, the allocation of costs to each service or revenue source required judgment of the Exchange and was weighted based on estimates of the Exchange that the Exchange believes are reasonable, as set forth below. While there is no standardized and generally accepted methodology for the allocation of an exchange's costs, the Exchange's methodology is the result of an extensive review and analysis and will be consistently applied going forward for any other potential fee proposals. In the absence of the Commission attempting to specify a methodology for the allocation of exchanges' interdependent costs, the Exchange will continue to be left with its best efforts to attempt to conduct such an allocation in a thoughtful and reasonable manner.

Through the Exchange's extensive updated Cost Analysis, the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the provision of connectivity services, and, if such expense did so relate, what portion (or percentage) of such expense actually supports the provision of connectivity services, and thus bears a relationship that is, "in nature and closeness," directly related to network connectivity services. In turn, the Exchange allocated certain costs more to physical connectivity and others to ports, while certain costs were only allocated to such services at a very low percentage or not at all, using consistent allocation methodologies as described above. Based on this analysis, the Exchange estimates that the cost drivers to provide 10Gb ULL connectivity and Limited Service MEI Port services, including both physical 10Gb connections and Limited Service MEI Ports, result in an aggregate monthly cost of approximately $1,182,645 (utilizing the rounded numbers when dividing the annual cost for 10Gb ULL connectivity and annual cost for Limited Service MEI Ports by 12 months, then adding both numbers together), as further detailed below.

Costs Related to Offering Physical 10Gb ULL Connectivity

The following chart details the individual line-item costs considered by the Exchange to be related to offering physical dedicated 10Gb ULL connectivity via an unshared network as well as the percentage of the Exchange's overall costs that such costs represent for such area (e.g., as set forth below, the Exchange allocated approximately 25.6% of its overall Human Resources cost to offering physical connectivity).

COST DRIVERS	ANNUAL COST[119]	MONTHLY COST[120]	% OF ALL
Human Resources	$3,867,297	$322,275	25%
Connectivity (external fees, cabling, switches, etc.)	$70,163	$5,847	60.6%

119 The Annual Cost includes figures rounded to the nearest dollar.

120 The Monthly Cost was determined by dividing the Annual Cost for each line item by twelve (12) months and rounding up or down to the nearest dollar.

Internet Services, including External Market Data	$424,584	$35,382	73.3%
Data Center	$718,950	$59,912	60.6%
Hardware and Software Maintenance and Licenses	$727,734	$60,645	49.8%
Depreciation	$2,310,898	$192,575	61.6%
Allocated Shared Expenses	$3,914,928	$326,244	49.1%
TOTAL	**$12,034,554**	**$1,002,880**	**39.4%**

Below are additional details regarding each of the line-item costs considered by the Exchange to be related to offering physical 10Gb ULL connectivity.

Human Resources

For personnel costs (Human Resources), the Exchange calculated an allocation of employee time for employees whose functions include providing and maintaining physical connectivity and performance thereof (primarily the Exchange's network infrastructure team, which spends most of their time performing functions necessary to provide physical connectivity) and for which the Exchange allocated a percentage of 42% of each employee's time. The Exchange also allocated Human Resources costs to provide physical connectivity to a limited subset of personnel with ancillary functions related to establishing and maintaining such connectivity (such as information security and finance personnel), for which the Exchange allocated cost on an employee-by-employee basis (i.e., only including those personnel who do support functions related to providing physical connectivity) and then applied a smaller allocation to such employees (less than 18%). The Exchange notes that it and its affiliated markets have 184 employees and each department leader has direct knowledge of the time spent by those spent by each employee with respect to the various tasks necessary to operate the Exchange. Specifically, twice a year and as needed with additional new hires and new project initiatives, in consultation with employees as needed, managers and department heads assign a percentage of time to every employee and then allocate that time amongst the Exchange and its

affiliated markets to determine that market's individual Human Resources expense. Then, again managers and department heads assign a percentage of each employee's time allocated to the Exchange into buckets including network connectivity, ports, market data, and other exchange services. This process ensures that every employee is 100% allocated, ensuring there is no double counting between the Exchange and its affiliated markets.

The estimates of Human Resources cost were therefore determined by consulting with such department leaders, determining which employees are involved in tasks related to providing physical connectivity, and confirming that the proposed allocations were reasonable based on an understanding of the percentage of their time such employees devote to tasks related to providing physical connectivity. The Exchange notes that senior level executives were only allocated Human Resources costs to the extent the Exchange believed they are involved in overseeing tasks related to providing physical connectivity. The Human Resources cost was calculated using a blended rate of compensation reflecting salary, equity and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions.

Connectivity and Internet Services

The Connectivity cost includes external fees paid to connect to other exchanges and third parties, cabling and switches required to operate the Exchange. The Connectivity line-item is more narrowly focused on technology used to complete connections to the Exchange and to connect to external markets. The Exchange notes that its connectivity to external markets is required in order to receive market data to run the Exchange's matching engine and basic operations compliant with existing regulations, primarily Regulation NMS.

The Exchange relies on various connectivity and content service providers for connectivity and data feeds for the entire U.S. options industry, as well as content, connectivity, and infrastructure services for critical components of the network that are necessary to provide

and maintain its System Networks and access to its System Networks via 10Gb ULL connectivity. Specifically, the Exchange utilizes connectivity and content service providers to connect to other national securities exchanges, the Options Price Reporting Authority ("OPRA"), and to receive market data from other exchanges and market data providers. The Exchange understands that these service providers provide services to most, if not all, of the other U.S. exchanges and other market participants. Connectivity and market data provided these service providers is critical to the Exchanges daily operations and performance of its System Networks to which market participants connect to via 10Gb ULL connectivity. Without these services providers, the Exchange would not be able to connect to other national securities exchanges, market data providers, or OPRA and, therefore, would not be able to operate and support its System Networks. The Exchange does not employ a separate fee to cover its connectivity and content service provider expense and recoups that expense, in part, by charging for 10Gb ULL connectivity.

Data Center

Data Center costs includes an allocation of the costs the Exchange incurs to provide physical connectivity in the third-party data centers where it maintains its equipment (such as dedicated space, security services, cooling and power). The Exchange notes that it does not own the Primary Data Center or the Secondary Data Center, but instead, leases space in data centers operated by third parties. The Exchange has allocated a high percentage of the Data Center cost (60.6%) to physical 10Gb ULL connectivity because the third-party data centers and the Exchange's physical equipment contained therein is the most direct cost in providing physical access to the Exchange. In other words, for the Exchange to operate in a dedicated space with connectivity of participants to a physical trading platform, the data centers are a very tangible cost, and in turn, if the Exchange did not maintain such a presence then physical connectivity

would be of no value to market participants.

External Market Data

External Market Data includes fees paid to third parties, including other exchanges, to receive and consume market data from other markets. The Exchange included External Market Data fees to the provision of 10Gb ULL connectivity as such market data is necessary here to offer certain services related to such connectivity, such as certain risk checks that are performed prior to execution, and checking for other conditions (e.g., re-pricing of orders to avoid lock or crossed markets, trading collars). This allocation was included as part of the Internet Services cost described above. Thus, as market data from other exchanges is consumed at the matching engine level, (to which 10Gb ULL connectivity provides access to) in order to validate orders before additional entering the matching engine or being executed, the Exchange believes it is reasonable to allocate a small amount of such costs to 10Gb ULL connectivity.

Hardware and Software Maintenance and Licenses

Hardware and Software Licenses includes hardware and software licenses used to operate and monitor physical assets necessary to offer physical connectivity to the Exchange.[121]

Monthly Depreciation

All physical assets and software, which also includes assets used for testing and monitoring of Exchange infrastructure, were valued at cost, depreciated or leased over periods ranging from three to five years. Thus, the depreciation cost primarily relates to servers necessary to operate the Exchange, some of which are owned by the Exchange and some of

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[121] This expense may be less than the Exchange's affiliated markets, specifically MIAX Pearl, because, unlike the Exchange, MIAX Pearl (the options and equities markets) maintains an additional gateway to accommodate its member's access and connectivity needs. This added gateway contributes to the difference in allocations between the Exchange and MIAX Pearl.

which are leased by the Exchange in order to allow efficient periodic technology refreshes. As noted above, the Exchange allocated 61.6% of all depreciation costs to providing physical 10Gb ULL connectivity. The Exchange notes, however, that it did not allocate depreciation costs for any depreciated software necessary to operate the Exchange to physical connectivity, as such software does not impact the provision of physical connectivity. The Exchange also notes that this allocation differs from its affiliated markets due to a number of factors, such as the age of physical assets and software (e.g., older physical assets and software were previously depreciated and removed from the allocation), or certain system enhancements that required new physical assets and software, thus providing a higher contribution to the depreciated cost.

Allocated Shared Expenses

Finally, a limited portion of general shared expenses was allocated to overall physical connectivity costs as without these general shared costs the Exchange would not be able to operate in the manner that it does and provide physical connectivity. The costs included in general shared expenses include general expenses of the Exchange, including office space and office expenses (e.g., occupancy and overhead expenses), utilities, recruiting and training, marketing and advertising costs, professional fees for legal, tax and accounting services (including external and internal audit expenses), and telecommunications costs. The Exchange notes that the cost of paying directors to serve on its Board of Directors is also included in the Exchange's general shared expenses.[122] The Exchange notes that the 49.1% allocation of general shared expenses for physical 10Gb ULL connectivity is higher than that allocated to general shared expenses for Limited Service MEI Ports based on its allocation methodology that

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122 The Exchange notes that MEMX allocated a precise amount of 10% of the overall cost for directors to providing physical connectivity. The Exchange does not calculate is expenses at that granular a level. Instead, director costs are included as part of the overall general allocation.

weighted costs attributable to each Core Service based on an understanding of each area. While physical connectivity has several areas where certain tangible costs are heavily weighted towards providing such service (e.g., Data Centers, as described above), Limited Service MEI Ports do not require as many broad or indirect resources as other Core Services. The total monthly cost for 10Gb ULL connectivity of $1,002,880 was divided by the number of physical 10Gb ULL connections the Exchange maintained at the time that proposed pricing was determined (93), to arrive at a cost of approximately $10,784 per month, per physical 10Gb ULL connection.

Costs Related to Offering Limited Service MEI Ports

The following chart details the individual line-item costs considered by the Exchange to be related to offering Limited Service MEO Ports as well as the percentage of the Exchange's overall costs such costs represent for such area (e.g., as set forth below, the Exchange allocated approximately 5.8% of its overall Human Resources cost to offering Limited Service MEI Ports).

COST DRIVERS	ANNUAL COST[123]	MONTHLY COST[124]	% OF ALL
Human Resources	$898,480	$74,873	5.8%
Connectivity (external fees, cabling, switches, etc.)	$4,435	$370	3.8%
Internet Services, including External Market Data	$41,601	$3,467	7.2%
Data Center	$85,214	$7,101	7.2%
Hardware and Software Maintenance and Licenses	$104,859	$8,738	7.2%
Depreciation	$237,335	$19,778	6.3%
Allocated Shared Expenses	$785,254	$65,438	9.8%
TOTAL	**$2,157,178**	**$179,765**	**7.1%**

Human Resources

With respect to Limited Service MEI Ports, the Exchange calculated Human Resources cost by taking an allocation of employee time for employees whose functions include providing

123 See supra note 119 (describing rounding of Annual Costs).

124 See supra note 120 (describing rounding of Monthly Costs based on Annual Costs).

Limited Service MEI Ports and maintaining performance thereof (including a broader range of employees such as technical operations personnel, market operations personnel, and software engineering personnel) as well as a limited subset of personnel with ancillary functions related to maintaining such connectivity (such as sales, membership, and finance personnel). Just as described above for 10Gb ULL connectivity, the estimates of Human Resources cost were again determined by consulting with department leaders, determining which employees are involved in tasks related to providing Limited Service MEI Ports and maintaining performance thereof, and confirming that the proposed allocations were reasonable based on an understanding of the percentage of their time such employees devote to tasks related to providing Limited Service MEI Ports and maintaining performance thereof. The Exchange notes that senior level executives were only allocated Human Resources costs to the extent the Exchange believed they are involved in overseeing tasks related to providing Limited Service MEI Ports and maintaining performance thereof. The Human Resources cost was again calculated using a blended rate of compensation reflecting salary, equity and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions.

Connectivity and Internet Services

The Connectivity cost includes external fees paid to connect to other exchanges, cabling and switches, as described above. For purposes of Limited Service MEI Ports, the Exchange also includes a portion of its costs related to External Market Data, as described below.

Data Center

Data Center costs includes an allocation of the costs the Exchange incurs to provide physical connectivity in the third-party data centers where it maintains its equipment as well as related costs (the Exchange does not own the Primary Data Center or the Secondary Data Center, but instead, leases space in data centers operated by third parties).

External Market Data

External Market Data includes fees paid to third parties, including other exchanges, to receive and consume market data from other markets. The Exchange included External Market Data fees to the provision of Limited Service MEI Ports as such market data is also necessary here (in addition to physical connectivity) to offer certain services related to such ports, such as validating orders on entry against the national best bid and national best offer and checking for other conditions (e.g., whether a symbol is halted). This allocation was included as part of the Internet Services cost described above.[125] Thus, as market data from other Exchanges is consumed at the Limited Service MEI Port level in order to validate orders before additional processing occurs with respect to such orders, the Exchange believes it is reasonable to allocate a small amount of such costs to Limited Service MEI Ports.

Hardware and Software Maintenance and Licenses

Hardware and Software Licenses includes hardware and software licenses used to monitor the health of the order entry services provided by the Exchange, as described above.

Monthly Depreciation

All physical assets and software, which also includes assets used for testing and monitoring of order entry infrastructure, were valued at cost, depreciated or leased over periods ranging from three to five years. Thus, the depreciation cost primarily relates to servers necessary to operate the Exchange, some of which is owned by the Exchange and some of which is leased by the Exchange in order to allow efficient periodic technology refreshes. The Exchange allocated 6.3% of all depreciation costs to providing Limited Service MEI Ports. In contrast to physical connectivity, described above, the Exchange did allocate depreciation costs

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125 The Exchange notes that MEMX separately allocated 7.5% of its external market data costs to providing physical connectivity.

for depreciated software necessary to operate the Exchange to Limited Service MEI Ports because such software is related to the provision of such connectivity. The Exchange also notes that this allocation differs from its affiliated markets due to a number of factors, such as the age of physical assets and software (e.g., older physical assets and software were previously depreciated and removed from the allocation), or certain system enhancements that required new physical assets and software, thus providing a higher contribution to the depreciated cost.

Allocated Shared Expenses

Finally, a limited portion of general shared expenses was allocated to overall Limited Service MEI Ports costs as without these general shared costs the Exchange would not be able to operate in the manner that it does and provide Limited Service MEI Ports. The costs included in general shared expenses include general expenses of the Exchange, including office space and office expenses (e.g., occupancy and overhead expenses), utilities, recruiting and training, marketing and advertising costs, professional fees for legal, tax and accounting services (including external and internal audit expenses), and telecommunications costs. The Exchange again notes that the cost of paying directors to serve on its Board of Directors is included in the calculation of Allocated Shared Expenses, and thus a portion of such overall cost amounting to less than 10% of the overall cost for directors was allocated to providing Limited Service MEI Ports. The Exchange notes that the 9.8% allocation of general shared expenses for Limited Service MEI Ports is lower than that allocated to general shared expenses for physical connectivity based on its allocation methodology that weighted costs attributable to each Core Service based on an understanding of each area. While Limited Service MEI Ports have several areas where certain tangible costs are heavily weighted towards providing such service (e.g., Data Centers, as described above), 10Gb ULL connectivity requires a broader level of support from Exchange personnel in different areas, which in turn leads to a broader general level of cost

to the Exchange. The total monthly cost of $179,765 was divided by the number of chargeable Limited Service MEI Ports (excluding the two free Limited Service MEI Ports per matching engine that each Member receives) the Exchange maintained at the time that proposed pricing was determined (1303), to arrive at a cost of approximately $138 per month, per charged Limited Service MEI Port.

Cost Analysis – Additional Discussion

In conducting its Cost Analysis, the Exchange did not allocate any of its expenses in full to any core services (including physical connectivity or Limited Service MEI Ports) and did not double-count any expenses. Instead, as described above, the Exchange allocated applicable cost drivers across its core services and used the same Cost Analysis to form the basis of this proposal and the filings the Exchange submitted proposing fees for proprietary data feeds offered by the Exchange. For instance, in calculating the Human Resources expenses to be allocated to physical connections based upon the above described methodology, the Exchange has a team of employees dedicated to network infrastructure and with respect to such employees the Exchange allocated network infrastructure personnel with a high percentage of the cost of such personnel (42%) given their focus on functions necessary to provide physical connections. The salaries of those same personnel were allocated only 8.4% to Limited Service MEI Ports and the remaining 49.6% was allocated to 1Gb connectivity, other port services, transaction services, membership services and market data. The Exchange did not allocate any other Human Resources expense for providing physical connections to any other employee group, outside of a smaller allocation of 17.8% for 10Gb ULL connectivity or 18.2% for the entire network, of the cost associated with certain specified personnel who work closely with and support network infrastructure personnel. In contrast, the Exchange allocated much smaller percentages of costs (5% or less) across a wider range of personnel groups in order to allocate Human Resources costs to providing

Limited Service MEI Ports. This is because a much wider range of personnel are involved in functions necessary to offer, monitor and maintain Limited Service MEI Ports but the tasks necessary to do so are not a primary or full-time function.

In total, the Exchange allocated 25.6% of its personnel costs to providing physical connections and 5.8% of its personnel costs to providing Limited Service MEI Ports, for a total allocation of 31.4% Human Resources expense to provide these specific connectivity services. In turn, the Exchange allocated the remaining 68.6% of its Human Resources expense to membership services, transaction services, other port services and market data. Thus, again, the Exchange's allocations of cost across core services were based on real costs of operating the Exchange and were not double-counted across the core services or their associated revenue streams.

As another example, the Exchange allocated depreciation expense to all core services, including physical connections and Limited Service MEI Ports, but in different amounts. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense includes the actual cost of the computer equipment, such as dedicated servers, computers, laptops, monitors, information security appliances and storage, and network switching infrastructure equipment, including switches and taps that were purchased to operate and support the network. Without this equipment, the Exchange would not be able to operate the network and provide connectivity services to its Members and non-Members and their customers. However, the Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing connectivity services, but instead allocated approximately 67.9% of the Exchange's overall depreciation and amortization expense to connectivity services (61.6% attributed to 10Gb ULL physical connections and 6.3% to Limited Service MEI Ports). The Exchange allocated the remaining depreciation and amortization expense (approximately

32.1%) toward the cost of providing transaction services, membership services, other port services and market data.

The Exchange notes that its revenue estimates are based on projections across all potential revenue streams and will only be realized to the extent such revenue streams actually produce the revenue estimated. The Exchange does not yet know whether such expectations will be realized. For instance, in order to generate the revenue expected from connectivity, the Exchange will have to be successful in retaining existing clients that wish to maintain physical connectivity and/or Limited Service MEI Ports or in obtaining new clients that will purchase such services. Similarly, the Exchange will have to be successful in retaining a positive net capture on transaction fees in order to realize the anticipated revenue from transaction pricing.

The Exchange notes that the Cost Analysis is based on the Exchange's 2023 fiscal year of operations and projections. It is possible however that such costs will either decrease or increase. To the extent the Exchange sees growth in use of connectivity services it will receive additional revenue to offset future cost increases.

However, if use of connectivity services is static or decreases, the Exchange might not realize the revenue that it anticipates or needs in order to cover applicable costs. Accordingly, the Exchange is committing to conduct a one-year review after implementation of these fees. The Exchange expects that it may propose to adjust fees at that time, to increase fees in the event that revenues fail to cover costs and a reasonable mark-up of such costs. Similarly, the Exchange would propose to decrease fees in the event that revenue materially exceeds our current projections. In addition, the Exchange will periodically conduct a review to inform its decision making on whether a fee change is appropriate (e.g., to monitor for costs increasing/decreasing or subscribers increasing/decreasing, etc. in ways that suggest the then-current fees are becoming dislocated from the prior cost-based analysis) and would propose to increase fees in the event

that revenues fail to cover its costs and a reasonable mark-up, or decrease fees in the event that revenue or the mark-up materially exceeds our current projections. In the event that the Exchange determines to propose a fee change, the results of a timely review, including an updated cost estimate, will be included in the rule filing proposing the fee change. More generally, the Exchange believes that it is appropriate for an exchange to refresh and update information about its relevant costs and revenues in seeking any future changes to fees, and the Exchange commits to do so.

Projected Revenue[126]

The proposed fees will allow the Exchange to cover certain costs incurred by the Exchange associated with providing and maintaining necessary hardware and other network infrastructure as well as network monitoring and support services; without such hardware, infrastructure, monitoring and support the Exchange would be unable to provide the connectivity services. Much of the cost relates to monitoring and analysis of data and performance of the network via the subscriber's connection(s). The above cost, namely those associated with hardware, software, and human capital, enable the Exchange to measure network performance with nanosecond granularity. These same costs are also associated with time and money spent seeking to continuously improve the network performance, improving the subscriber's experience, based on monitoring and analysis activity. The Exchange routinely works to improve the performance of the network's hardware and software. The costs associated with maintaining and enhancing a state-of-the-art exchange network is a significant expense for the Exchange, and thus the Exchange believes that it is reasonable and appropriate to help offset

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126 For purposes of calculating revenue for 10Gb ULL connectivity, the Exchange used projected revenues for February 2023, the first full month for which it will provide dedicated 10Gb ULL connectivity to the Exchange and cease operating a shared 10Gb ULL network with MIAX Pearl.

those costs by amending fees for connectivity services. Subscribers, particularly those of 10Gb ULL connectivity, expect the Exchange to provide this level of support to connectivity so they continue to receive the performance they expect. This differentiates the Exchange from its competitors. As detailed above, the Exchange has five primary sources of revenue that it can potentially use to fund its operations: transaction fees, fees for connectivity services, membership and regulatory fees, and market data fees. Accordingly, the Exchange must cover its expenses from these five primary sources of revenue.

The Exchange's Cost Analysis estimates the annual cost to provide 10Gb ULL connectivity services at $12,034,554. Based on current 10Gb ULL connectivity services usage, the Exchange would generate annual revenue of approximately $15,066,000. This represents a modest profit of 20% when compared to the cost of providing 10Gb ULL connectivity services, which will decrease over time.[127] The Exchange's Cost Analysis estimates the annual cost to provide Limited Service MEI Port services at $2,157,178. Based on current Limited Service MEI Port services usage, the Exchange would generate annual revenue of approximately $3,300,600. This represents an estimated profit margin of 35% when compared to the cost of providing Limited Service MEI Port services, which will decrease over time.[128] Even if the Exchange earns those amounts or incrementally more or less, the Exchange believes the proposed fees are fair and reasonable because they will not result in pricing that deviates from that of other exchanges or supra-competitive profit, when comparing the total expense of the Exchange associated with providing 10Gb ULL connectivity and Limited Service MEI Port

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127 Assuming the U.S. inflation rate continues at its current rate, the projected profit margins in this proposal will decrease and may reach single to negative digit levels in approximately 18 to 24 months. See, e.g., https://www.usinflationcalculator.com/inflation/current-inflation-rates/ (last visited February 15, 2023).

128 Id.

services versus the total projected revenue of the Exchange associated with network 10Gb ULL connectivity and Limited Service MEI Port services.

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The Exchange has operated at a cumulative net annual loss since it launched operations in 2012.[129] The Exchange has operated at a net loss due to a number of factors, one of which is choosing to forgo revenue by offering certain products, such as connectivity, at lower rates than other options exchanges to attract order flow and encourage market participants to experience the high determinism, low latency, and resiliency of the Exchange's trading systems. The Exchange should not now be penalized for seeking to raise its fees in light of necessary technology changes and its increased costs after offering such products as discounted prices. Therefore, the Exchange believes the proposed fees are reasonable because they are based on both relative costs to the Exchange to provide dedicated 10Gb ULL connectivity and Limited Service MEI Ports, the extent to which the product drives the Exchange's overall costs and the relative value of the product, as well as the Exchange's objective to make access to its Systems broadly available to market participants. The Exchange also believes the proposed fees are reasonable because they are designed to generate annual revenue to recoup the Exchange's costs of providing dedicated 10Gb ULL connectivity and Limited Service MEI Ports.

The Exchange notes that its revenue estimate is based on projections and will only be realized to the extent customer activity actually produces the revenue estimated. As a competitor in the hyper-competitive exchange environment, and an exchange focused on driving competition, the Exchange does not yet know whether such projections will be realized. For

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[129] The Exchange has incurred a cumulative loss of $121 million since its inception in 2012 through full year 2021. See Exchange's Form 1/A, Application for Registration or Exemption from Registration as a National Securities Exchange, filed June 29, 2022, available at https://www.sec.gov/Archives/edgar/vprr/2200/22001163.pdf.

instance, in order to generate the revenue expected from 10Gb ULL connectivity and Limited Service MEI Ports, the Exchange will have to be successful in retaining existing clients that wish to utilize 10Gb ULL connectivity and Limited Service MEI Ports and/or obtaining new clients that will purchase such access. To the extent the Exchange is successful in encouraging new clients to utilize 10Gb ULL connectivity and Limited Service MEI Ports, the Exchange does not believe it should be penalized for such success. To the extent the Exchange has mispriced and experiences a net loss in clients, the Exchange could experience a net reduction in revenue. While the Exchange believes in transparency around costs and potential revenue, the Exchange does not believe that these estimates should form the sole basis of whether or not a proposed fee is reasonable or can be adopted.

The Exchange is owned by a holding company that is the parent company of four exchange markets and, therefore, the Exchange and its affiliated markets must allocate shared costs across all of those markets accordingly, pursuant to the above-described allocation methodology. In contrast, the Investors Exchange LLC ("IEX") and MEMX, which are currently each operating only one exchange, in their recent non-transaction fee filings can allocate the entire amount of that same cost to a single exchange. This can result in lower profit margins for the non-transaction fees proposed by IEX and MEMX because the single allocated cost does not experience the efficiencies and synergies associated with shared costs across multiple platforms. The Exchange and its affiliated markets must share a single cost, which results in cost efficiencies that cause a broader gap between the allocated cost amount and projected revenue, even though the fee levels being proposed are lower or similar to competing markets (as described above). To the extent that the application of a cost-based standard results in Commission Staff making determinations as to the appropriateness of certain profit margins, the Commission Staff must consider whether the proposed fee level is comparable to, or on

parity with, the same fee charged by competing exchanges and how different cost allocation methodologies (such as across multiple markets) may result in different profit margins for comparable fee levels. If it is the case that the Commission Staff is making determinations as to appropriate profit margins, the Exchange believes that Staff should be clear to all market participants as to what they determine is an appropriate profit margin and should apply such determinations consistently and, in the case of certain legacy exchanges, retroactively, if such standards are to avoid having a discriminatory effect.

Further, the proposal reflects the Exchange's efforts to control its costs, which the Exchange does on an ongoing basis as a matter of good business practice. A potential profit margin should not be judged alone based on its size, but is also indicative of costs management and whether the ultimate fee reflects the value of the services provided. For example, a profit margin on one exchange should not be deemed excessive where that exchange has been successful in controlling its costs, but not excessive where on another exchange where that exchange is charging comparable fees but has a lower profit margin due to higher costs. Doing so could have the perverse effect of not incentivizing cost control where higher costs alone could be used to justify fees increases.

The Proposed Pricing is not Unfairly Discriminatory and Provides for the Equitable Allocation of Fees, Dues, and other Charges

The Exchange believes that the proposed fees are reasonable, fair, equitable, and not unfairly discriminatory because they are designed to align fees with services provided and will apply equally to all subscribers.

10Gb ULL Connectivity

The Exchange believes that the proposed fees are equitably allocated among users of the network connectivity and port alternatives, as the users of 10Gb ULL connections consume substantially more bandwidth and network resources than users of 1Gb ULL connection.

Specifically, the Exchange notes that 10Gb ULL connection users account for more than 99% of message traffic over the network, driving other costs that are linked to capacity utilization, as described above, while the users of the 1Gb ULL connections account for less than 1% of message traffic over the network. In the Exchange's experience, users of the 1Gb connections do not have the same business needs for the high-performance network as 10Gb ULL users.

The Exchange's high-performance network and supporting infrastructure (including employee support), provides unparalleled system throughput with the network ability to support access to several distinct options markets. To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages to satisfy its record keeping requirements under the Exchange Act.[130] Thus, as the number of messages an entity increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that the 10Gb ULL users pay for the vast majority of the shared network resources from which all market participants' benefit.

Limited Service MEI Ports

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130 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

The Exchange believes that the proposed fees are equitably allocated among users of the network connectivity alternatives, as the users of the Limited Service MEI Ports consume the most bandwidth and resources of the network. Specifically, like above for the 10Gb ULL connectivity, the Exchange notes that the Market Makers who take the maximum amount of Limited Service MEI Ports account for approximately greater than 99% of message traffic over the network, while Market Makers with fewer Limited Service MEI Ports account for approximately less than 1% of message traffic over the network. In the Exchange's experience, Market Makers who only utilize the two free Limited Service MEI Ports do not have a business need for the high performance network solutions required by Market Makers who take the maximum amount of Limited Service MEI Ports. The Exchange's high performance network solutions and supporting infrastructure (including employee support), provides unparalleled system throughput and the capacity to handle approximately 18 million quote messages per second. Based on November 2022 trading results, on an average day, the Exchange handles over approximately 8.8 billion quotes, and more than 185 billion quotes over the entire month. Of that total, Market Makers with the maximum amount of Limited Service MEI Ports generate approximately 5 billion quotes, and Market Makers who utilize the two free Limited Service MEI Ports generate approximately 1.5 billion quotes. Also for November 2022, Market Makers who utilized 3 to 4 Limited Service MEI ports submitted an average of 1,152,654,133 quotes per day and Market Makers who utilized 5 to 9 Limited Service MEI ports submitted an average of 1,172,105,181 quotes per day. To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase

additional storage capacity on an ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[131] Thus, as the number of connections a Market Maker has increases, certain other costs incurred by the Exchange that are correlated to, though not directly affected by, connection costs (e.g., storage costs, surveillance costs, service expenses) also increase. The Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange. With this in mind, the Exchange proposes no fee or lower fees for those Market Makers who receive fewer Limited Service MEI Ports since those Market Makers generally tend to send the least amount of orders and messages over those connections. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers who take the most Limited Service MEI Ports pay for the vast majority of the shared network resources from which all Member and non-Member users benefit, but is designed and maintained from a capacity standpoint to specifically handle the message rate and performance requirements of those Market Makers.

To achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. Billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. The Exchange must also purchase additional storage capacity on an

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131 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

ongoing basis to ensure it has sufficient capacity to store these messages as part of it surveillance program and to satisfy its record keeping requirements under the Exchange Act.[132] Thus, as the number of connections a Market Maker has increases, the related pull on Exchange resources also increases. The Exchange sought to design the proposed tiered-pricing structure to set the amount of the fees to relate to the number of connections a firm purchases. The more connections purchased by a Market Maker likely results in greater expenditure of Exchange resources and increased cost to the Exchange.

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

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

Intra-Market Competition

The Exchange believes the proposed fees will not result in any burden on intra-market competition that is not necessary or appropriate in furtherance of the purposes of the Act because the proposed fees will allow the Exchange to recoup some of its costs in providing 10Gb ULL connectivity and Limited Service MEI Ports at below market rates to market participants since the Exchange launched operations. As described above, the Exchange has operated at a cumulative net annual loss since it launched operations in 2012[133] due to providing a low-cost alternative to attract order flow and encourage market participants to experience the high determinism and resiliency of the Exchange's trading Systems. To do so, the Exchange chose to waive the fees for some non-transaction related services and Exchange products or provide them at a very lower fee, which was not profitable to the Exchange. This resulted in the Exchange

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132 17 CFR 240.17a-1 (recordkeeping rule for national securities exchanges, national securities associations, registered clearing agencies and the Municipal Securities Rulemaking Board).

133 See supra note 129.

forgoing revenue it could have generated from assessing any fees or higher fees. The Exchange could have sought to charge higher fees at the outset, but that could have served to discourage participation on the Exchange. Instead, the Exchange chose to provide a low-cost exchange alternative to the options industry, which resulted in lower initial revenues. Examples of this are 10Gb ULL connectivity and Limited Service MEI Ports, for which the Exchange only now seeks to adopt fees at a level similar to or lower than those of other options exchanges.

Further, the Exchange does not believe that the proposed fee increase for the 10Gb ULL connection 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. As is the case with the current proposed flat fee, the proposed fee would apply uniformly to all market participants regardless of the number of connections they choose to purchase. The proposed fee does not favor certain categories of market participants in a manner that would impose an undue burden on 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, Exchange personnel has been informally discussing potential fees for connectivity services with a diverse group of market participants that are connected to the Exchange (including large and small firms, firms with large connectivity service footprints and small connectivity service footprints, as well as extranets and service bureaus) for several months leading up to that time. The Exchange does not believe the proposed fees for connectivity services would negatively impact the ability of Members, non-Members (extranets or service bureaus), third-parties that purchase the Exchange's connectivity and resell it, and customers of those resellers to compete with other market participants or that they are placed at a disadvantage.

The Exchange does anticipate, however, that some market participants may reduce or discontinue use of connectivity services provided directly by the Exchange in response to the proposed fees. In fact, as mentioned above, one MIAX Pearl Market Maker terminated their MIAX Pearl membership on January 1, 2023 as a direct result of the similar proposed fee changes by MIAX Pearl.[134] The Exchange does not believe that the proposed fees for connectivity services place certain market participants at a relative disadvantage to other market participants because the proposed connectivity pricing is associated with relative usage of the Exchange by each market participant and does not impose a barrier to entry to smaller participants. The Exchange believes its proposed pricing is reasonable and, when coupled with the availability of third-party providers that also offer connectivity solutions, that participation on the Exchange is affordable for all market participants, including smaller trading firms. As described above, the connectivity services purchased by market participants typically increase based on their additional message traffic and/or the complexity of their operations. The market participants that utilize more connectivity services typically utilize the most bandwidth, and those are the participants that consume the most resources from the network. Accordingly, the proposed fees for connectivity services do not favor certain categories of market participants in a manner that would impose a burden on competition; rather, the allocation of the proposed

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134 The Exchange acknowledges that IEX included in its proposal to adopt market data fees after offering market data for free an analysis of what its projected revenue would be if all of its existing customers continued to subscribe versus what its projected revenue would be if a limited number of customers subscribed due to the new fees. See Securities Exchange Act Release No. 94630 (April 7, 2022), 87 FR 21945 (April 13, 2022) (SR-IEX-2022-02). MEMX did not include a similar analysis in either of its recent non-transaction fee proposals. See, e.g., supra note 52. The Exchange does not believe a similar analysis would be useful here because it is amending existing fees, not proposing to charge a new fee where existing subscribers may terminate connections because they are no longer enjoying the service at no cost.

connectivity fees reflects the network resources consumed by the various size of market participants and the costs to the Exchange of providing such connectivity services.

Inter-Market Competition

The Exchange also does not believe that the proposed rule change will result in any burden on inter-market competition that is not necessary or appropriate in furtherance of the purposes of the Act. As discussed above, options market participants are not forced to connect to all options exchanges. There is no reason to believe that our proposed price increase will harm another exchange's ability to compete. There are other options markets of which market participants may connect to trade options at higher rates than the Exchange's. There is also a range of alternative strategies, including routing to the exchange through another participant or market center or accessing the Exchange indirectly. Market participants are free to choose which exchange or reseller to use to satisfy their business needs. Accordingly, the Exchange does not believe its proposed fee changes impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

The Exchange also believes that the proposed fees for 10Gb connectivity are appropriate and warranted in light of it bifurcating 10Gb connectivity between the Exchange and MIAX Pearl and would not impose any burden on competition because this is a technology driven change that would assist the Exchange in recovering costs related to providing dedicating 10Gb connectivity to the Exchange while enabling it to continue to meet current and anticipated demands for connectivity by its Members and other market participants. Separating its 10Gb network from MIAX Pearl would enable the Exchange to better compete with other exchanges by ensuring it can continue to provide adequate connectivity to existing and new Members, which may increase in ability to compete for order flow and deepen its liquidity pool, improving the overall quality of its market.

The proposed rates for 10Gb ULL connectivity are also driven by the Exchange's need to bifurcate its 10Gb ULL network shared with MIAX Pearl so that it can continue to meet current and anticipated connectivity demands of all market participants. Similarly, and also in connection with a technology change, Cboe Exchange, Inc. ("Cboe") amended access and connectivity fees, including port fees.[135] Specifically, Cboe adopted certain logical ports to allow for the delivery and/or receipt of trading messages – i.e., orders, accepts, cancels, transactions, etc. Cboe established tiered pricing for BOE and FIX logical ports, tiered pricing for BOE Bulk ports, and flat prices for DROP, Purge Ports, GRP Ports and Multicast PITCH/Top Spin Server Ports. Cboe argued in its fee proposal that the proposed pricing more closely aligned its access fees to those of its affiliated exchanges, and reasonably so, as the affiliated exchanges offer substantially similar connectivity and functionality and are on the same platform that Cboe migrated to.[136] Cboe also justified its proposal by stating that, "…the Exchange believes substitutable products and services are in fact available to market participants, including, among other things, other options exchanges a market participant may connect to in lieu of the Exchange, indirect connectivity to the Exchange via a third-party reseller of connectivity and/or trading of any options product, including proprietary products, in the Over- the-Counter (OTC) markets."[137] Cboe stated in its proposal that,

> The rule structure for options exchanges are also 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. 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

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135 See Securities Exchange Act Release No. 90333 (November 4, 2020), 85 FR 71666 (November 10, 2020) (SR-CBOE-2020-105). The Exchange notes that Cboe submitted this filing after the Staff Guidance and contained no cost based justification.

136 Id. at 71676.

137 Id.

> exchanges in order to properly execute those orders in compliance with best execution obligations. 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. Gone are the days when the retail brokerage firms (such as Fidelity, Schwab, and eTrade) were members of the options exchanges – they are not members of the Exchange or its affiliates, they do not purchase connectivity to the Exchange, and they do not purchase market data from the Exchange. Accordingly, not only is there not an actual regulatory requirement to connect to every options exchange, the Exchange believes there is also no "de facto" or practical requirement as well, as further evidenced by the recent significant reduction in the number of broker-dealers that are members of all options exchanges.[138]

The proposal also referenced the National Market System Plan Governing the Consolidated Audit Trail ("CAT NMS Plan"),[139] wherein the Commission discussed the existence of competition in the marketplace generally, and particularly for exchanges with unique business models. The Commission acknowledged that, even if an exchange were to exit the marketplace due to its proposed fee-related change, it would not significantly impact competition in the market for exchange trading services because these markets are served by multiple competitors.[140] Further, the Commission explicitly stated that "[c]onsequently, demand for these services in the event of the exit of a competitor is likely to be swiftly met by existing competitors."[141] Finally, the Commission recognized that while some exchanges may have a unique business model that is not currently offered by competitors, a competitor could create similar business models if demand were adequate, and if a competitor did not do so, the Commission believes it would be likely that new entrants would do so if the exchange with that

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138 Id. at 71676.

139 See Securities Exchange Act Release No. 86901 (September 9, 2019), 84 FR 48458 (September 13, 2019) (File No. S7-13-19).

140 Id.

141 Id.

unique business model was otherwise profitable.[142]

Cboe also filed to establish a monthly fee for Certification Logical Ports of $250 per Certification Logical Port.[143] Cboe reasoned that purchasing additional Certification Logical Ports, beyond the one Certification Logical Port per logical port type offered in the production environment free of charge, is voluntary and not required in order to participate in the production environment, including live production trading on the Exchange.[144]

In its statutory basis, Cboe justified the new port fee by stating that it believed the Certification Logical Port fee were reasonable because while such ports were no longer completely free, TPHs and non-TPHs would continue to be entitled to receive free of charge one Certification Logical Port for each type of logical port that is currently offered in the production environment.[145] Cboe noted that other exchanges assess similar fees and cited to NASDAQ LLC and MIAX.[146] Cboe also noted that the decision to purchase additional ports is optional and no market participant is required or under any regulatory obligation to purchase excess Certification Logical Ports in order to access the Exchange's certification environment.[147] Finally, similar proposals to adopt a Certification Logical Port monthly fee

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142 Id.

143 See Securities Exchange Act Release No. 94512 (March 24, 2002), 87 FR 18425 (March 30, 2022) (SR-Cboe-2022-011). Cboe offers BOE and FIX Logical Ports, BOE Bulk Logical Ports, DROP Logical Ports, Purge Ports, GRP Ports and Multicast PITCH/Top Spin Server Ports. For each type of the aforementioned logical ports that are used in the production environment, the Exchange also offers corresponding ports which provide Trading Permit Holders and non-TPHs access to the Exchange's certification environment to test proprietary systems and applications (i.e., "Certification Logical Ports").

144 See Securities Exchange Act Release No. 94512 (March 24, 2002), 87 FR 18425 (March 30, 2022) (SR-Cboe-2022-011).

145 Id. at 18426.

146 Id.

147 Id.

were filed by Cboe BYX Exchange, Inc.,[148] BZX,[149] and Cboe EDGA Exchange, Inc.[150]

The Cboe fee proposals described herein were filed subsequent to the D.C. Circuit decision in Susquehanna Int'l Grp., LLC v. SEC, 866 F.3d 442 (D.C. Cir. 2017), meaning that such fee filings were subject to the same (and current) standard for SEC review and approval as this proposal. In summary, the Exchange requests the Commission apply the same standard of review to this proposal which was applied to the various Cboe and Cboe affiliated markets' filings with respect to non-transaction fees. If the Commission were to apply a different standard of review to this proposal than it applied to other exchange fee filings it would create a burden on competition such that it would impair the Exchange's ability to make necessary technology driven changes, such as bifurcating its 10Gb ULL network, because it would be unable to monetize or recoup costs related to that change and compete with larger, non-legacy exchanges.

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In conclusion, as discussed thoroughly above, the Exchange regrettably believes that the application of the Revised Review Process and Staff Guidance has adversely affected inter-market competition among legacy and non-legacy exchanges by impeding the ability of non-legacy exchanges to adopt or increase fees for their market data and access services (including connectivity and port products and services) that are on parity or commensurate with fee levels previously established by legacy exchanges. Since the adoption of the Revised Review Process

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148 See Securities Exchange Act Release No. 94507 (March 24, 2002), 87 FR 18439 (March 30, 2022) (SR-CboeBYX-2022-004).

149 See Securities Exchange Act Release No. 94511 (March 24, 2002), 87 FR 18411 (March 30, 2022) (SR-CboeBZX-2022-021).

150 See Securities Exchange Act Release No. 94517 (March 25, 2002), 87 FR 18848 (March 31, 2022) (SR-CboeEDGA-2022-004).

and Staff Guidance, and even more so recently, it has become extraordinarily difficult to adopt or increase fees to generate revenue necessary to invest in systems, provide innovative trading products and solutions, and improve competitive standing to the benefit of non-legacy exchanges' market participants. Although the Staff Guidance served an important policy goal of improving disclosures and requiring exchanges to justify that their market data and access fee proposals are fair and reasonable, it has also negatively impacted non-legacy exchanges in particular in their efforts to adopt or increase fees that would enable them to more fairly compete with legacy exchanges, despite providing enhanced disclosures and rationale under both competitive and cost basis approaches provided for by the Revised Review Process and Staff Guidance to support their proposed fee changes.

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

The Exchange received one comment letter on the Initial Proposal.[151] In its letter, the sole commenter seeks to incorporate comments submitted on previous Exchange proposals to which the Exchange has previously responded. To the extent the sole commenter has attempted to raise new issues in its letter, the Exchange believes those issues are not germane to this proposal in particular, but rather raise larger issues with the current environment surrounding exchange non-transaction fee proposals that should be addressed by the Commission through rule making, or Congress, more holistically and not through an individual exchange fee filing. Among other things, the commenter is requesting additional data and information that is both opaque and a moving target and would constitute a level of disclosure materially over and above that provided by any competitor exchanges.

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

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151 See letter from Brian Sopinsky, General Counsel, Susquehanna International Group, LLP to Vanessa Countryman, Secretary, Commission, dated February 7, 2023.

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,[152] and Rule 19b-4(f)(2)[153] 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:

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-MIAX-2023-08 on the subject line.

Paper comments:

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

All submissions should refer to File Number SR-MIAX-2023-08. This file number should be included on the subject line if e-mail is used. To help the Commission process and

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152 15 U.S.C. 78s(b)(3)(A)(ii).

153 17 CFR 240.19b-4(f)(2).

review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (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; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly.

All submissions should refer to File Number SR-MIAX-2023-08 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.[154]

Vanessa Countryman
Secretary

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154 17 CFR 200.30-3(a)(12).

Exhibit 5

New text is underlined;
Deleted text is in [brackets]

MIAX Options Exchange Fee Schedule

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5) System Connectivity Fees

a) Monthly Member Network Connectivity Fee

Member Network Connectivity Per Month	Primary/ Secondary Facility 1 Gigabit Per Connection	Disaster Recovery Facility 1 Gigabit Per Connection	Disaster Recovery Facility 10 Gigabit Per Connection	Primary/ Secondary Facility 10 Gigabit ULL Per Connection
Individual Firm	No change	No change	No change	[$10,000.00] $13,500.00

* * * * *

Members utilizing the MENI to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange and MIAX Pearl via a single, shared 1Gb connection will only be assessed one Monthly Member Network Connectivity Fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

b) Monthly Non-Member Network Connectivity Fee

Non-Member Network Connectivity Per Month	Primary/ Secondary Facility 1 Gigabit Per Connection	Disaster Recovery Facility 1 Gigabit Per Connection	Disaster Recovery Facility 10 Gigabit Per Connection	Primary/ Secondary Facility 10 Gigabit ULL Per Connection
Service Bureau/ Extranet Provider and other non-Members	No change	No change	No change	[$10,000.00] $13,500.00

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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 Pearl via a single, shared 1Gb connection will only be assessed one Monthly Non-Member Network Connectivity Fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

c) No change

d) Port Fees

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ii) MEI Port Fees

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MIAX will assess monthly MEI Port Fees on Market Makers in each month the Member has been credentialed to use the MEI Port in the production environment and has been assigned to quote in at least one class.

MEI Port users will be allocated two (2) Full Service MEI Ports[27] and two (2) Limited Service MEI Ports[28] per matching engine[29] to which they connect. MEI Port Fees include MEI Ports at the Primary, Secondary and Disaster Recovery data centers. MIAX Market Makers may request additional Limited Service MEI Ports for which MIAX will assess MIAX Market Makers [$100 per month per additional] Limited Service MEI Port fees per month for each engine as follows: 1st and 2nd $0 each, per the allocation described above; 3rd and 4th $150 each; 5th and 6th $200 each; 7th or more $250 each.

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[27] (No change.)
[28] (No change.)
[29] (No change.)