

Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * <input type="text" value="68"/>	SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4	File No.* SR - <input type="text" value="2021"/> - * <input type="text" value="03"/> Amendment No. (req. for Amendments *) <input type="text"/>
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Filing by MIAX Emerald, LLC  
Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial * <input checked="" type="checkbox"/>	Amendment * <input type="checkbox"/>	Withdrawal <input type="checkbox"/>	Section 19(b)(2) * <input type="checkbox"/>	Section 19(b)(3)(A) * <input checked="" type="checkbox"/>	Section 19(b)(3)(B) * <input type="checkbox"/>
Pilot <input type="checkbox"/>			Rule		
Extension of Time Period for Commission Action * <input type="checkbox"/>		Date Expires * <input type="text"/>	<input type="checkbox"/> 19b-4(f)(1)	<input type="checkbox"/> 19b-4(f)(4)	
			<input checked="" type="checkbox"/> 19b-4(f)(2)	<input type="checkbox"/> 19b-4(f)(5)	
			<input type="checkbox"/> 19b-4(f)(3)	<input type="checkbox"/> 19b-4(f)(6)	

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010	Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 806(e)(1) * <input type="checkbox"/>	Section 806(e)(2) * <input type="checkbox"/>
	Section 3C(b)(2) * <input type="checkbox"/>

Exhibit 2 Sent As Paper Document <input type="checkbox"/>	Exhibit 3 Sent As Paper Document <input type="checkbox"/>
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**Description**

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

**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 \*  Last Name \*   
 Title \*   
 E-mail \*   
 Telephone \*  Fax

**Signature**

Pursuant to the requirements of the Securities Exchange Act of 1934,

has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

(Title \*)

Date  Senior Vice President and Deputy General Counsel  
 By    
 (Name \*)

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

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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

**Form 19b-4 Information \***

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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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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 Advance 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, security-based swap submission, or advance notice 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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Exhibit Sent As Paper Document

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 3 - Form, Report, or Questionnaire**

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Exhibit Sent As Paper Document

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 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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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) MIAX Emerald, LLC (“MIAX Emerald” or “Exchange”), pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> proposes to amend the MIAX Emerald Fee Schedule (the “Fee Schedule”) to establish monthly Trading Permit<sup>3</sup> fees for Exchange Members.<sup>4</sup>

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 MIAX Emerald Board of Directors on January 29, 2020. 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 Michael Slade, Counsel, at (609) 897-8499.

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

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

<sup>3</sup> The term "Trading Permit" means a permit issued by the Exchange that confers the ability to transact on the Exchange. See Exchange Rule 100.

<sup>4</sup> 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 and the Definitions Section of the Fee Schedule.

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

a. Purpose

The Exchange proposes to amend the Fee Schedule to adopt monthly Trading Permit fees (the “Proposed Access Fees”) depending on the Member’s status as either an Electronic Exchange Member (“EEM”)<sup>5</sup> or as a Market Maker.<sup>6</sup> MIAX Emerald commenced operations as a national securities exchange registered under Section 6 of the Act<sup>7</sup> on March 1, 2019.<sup>8</sup> The Exchange adopted its transaction fees and certain of its non-transaction fees in its filing SR-EMERALD-2019-15.<sup>9</sup> In that filing, the Exchange expressly waived, among other fees, the Proposed Access Fees for the Waiver Period<sup>10</sup>, to provide an incentive to prospective EEMs and Market Makers to become Members of the Exchange. When the Exchange adopted the

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<sup>5</sup> “Electronic Exchange Member” or “EEM” means the holder of a Trading Permit who is not a Market Maker. Electronic Exchange Members are deemed “members” under the Exchange Act. See Exchange Rule 100 and the Definitions Section of the Fee Schedule.

<sup>6</sup> The term “Market Makers” refers to “Lead Market Makers”, “Primary Lead Market Makers” and “Registered Market Makers” collectively. See Exchange Rule 100 and the Definitions Section of the Fee Schedule.

<sup>7</sup> 15 U.S.C. 78f.

<sup>8</sup> See Securities Exchange Act Release No. 84891 (December 20, 2018), 83 FR 67421 (December 28, 2018) (File No. 10-233) (order approving application of MIAX Emerald, LLC for registration as a national securities exchange).

<sup>9</sup> See Securities Exchange Act Release No. 85393 (March 21, 2019), 84 FR 11599 (March 27, 2019) (SR-EMERALD-2019-15) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Establish the MIAX Emerald Fee Schedule).

<sup>10</sup> “Waiver Period” means, for each applicable fee, the period of time from the initial effective date of the MIAX Emerald Fee Schedule until such time that the Exchange has an effective fee filing establishing the applicable fee. The Exchange will issue a Regulatory Circular announcing the establishment of an applicable fee that was subject to a Waiver Period at least fifteen (15) days prior to the termination of the Waiver Period and effective date of any such applicable fee. See the Definitions Section of the Fee Schedule.

framework for its fees, it stated that it would provide notice to market participants when the Exchange intended to terminate the Waiver Period for the Proposed Access Fees. Accordingly, on September 15, 2020, the Exchange issued a Regulatory Circular which announced that the Exchange would be ending the Waiver Period for the Proposed Access Fees, among other non-transaction fees, beginning October 1, 2020.<sup>11</sup>

The Exchange initially filed its proposal to establish the Proposed Access Fees on October 1, 2020.<sup>12</sup> The First Proposed Rule Change was published for comment in the Federal Register on October 21, 2020.<sup>13</sup> On November 25, 2020, the Exchange withdrew the First Proposed Rule Change<sup>14</sup> and refiled its proposal to establish monthly Trading Permit fees.<sup>15</sup> The Second Proposed Rule Change was published for comment in the Federal Register on December 14, 2020.<sup>16</sup> The Exchange notes that the Second Proposed Rule Change did not receive any

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<sup>11</sup> See MIAX Emerald Regulatory Circular 2020-41 available at [https://www.miaxoptions.com/sites/default/files/circular-files/MIAX\\_Emerald\\_RC\\_2020\\_41.pdf](https://www.miaxoptions.com/sites/default/files/circular-files/MIAX_Emerald_RC_2020_41.pdf).

<sup>12</sup> See Securities Exchange Act Release Nos. 90196 (October 15, 2020), 85 FR 67064 (October 21, 2020) (SR-EMERALD-2020-11) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fee Schedule To Adopt One-Time Membership Application Fees and Monthly Trading Permit Fees ) (the “First Proposed Rule Change”). The Exchange notes that it refiled its proposal to establish the one-time membership application fee in a separate filing. See SR-EMERALD-2021-01.

<sup>13</sup> See *id.*

<sup>14</sup> See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated November 20, 2020, notifying the Commission that the Exchange will withdraw the First Proposed Rule Change.

<sup>15</sup> See Securities Exchange Act Release Nos. 90601 (December 8, 2020), 85 FR 80864 (December 14, 2020) (SR-EMERALD-2020-18) (the “Second Proposed Rule Change”).

<sup>16</sup> See *id.*

comment letters. Nonetheless, on January 22, 2021, the Exchange withdrew the Second Proposed Rule Change and resubmitted this proposal.<sup>17</sup>

Trading Permits are issued to Members who are either EEMs or Market Makers. Trading Permits grant access to the Exchange, thus providing the ability to quote and trade on the Exchange, in the manner defined in the relevant Trading Permit. Without a Trading Permit, a Member cannot directly trade on the Exchange. Therefore, a Trading Permit is a means to directly access the Exchange (which offers meaningful value), and the Exchange now proposes to adopt a monthly fee designed to recover a portion of the costs associated with directly accessing the Exchange. The Exchange proposes to assess the Proposed Access Fees depending upon the category of Member that is issued a Trading Permit. Members issued Trading Permits during a calendar month will be assessed monthly Trading Permit Fees. The Exchange notes that the Exchange's affiliate, Miami International Securities Exchange, LLC ("MIAX"), charges a similar, fixed trading permit fee to its EEMs, and a similar, varying trading permit fee to its Market Makers, based upon the number of assignments of option classes or the percentage of volume in option classes.<sup>18</sup>

The Exchange proposes that monthly Trading Permit fees will be assessed, with respect to the calculation of such fee to EEMs (other than clearing firms), in any month the EEM is certified in the membership system and is credentialed to use one or more Financial Information

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<sup>17</sup> See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated January 15, 2021, notifying the Commission that the Exchange will withdraw the Second Proposed Rule Change.

<sup>18</sup> See the MIAX Fee Schedule, Section 3)b).

Exchange (“FIX”)<sup>19</sup> ports in the production environment. Further, the Exchange proposes that monthly Trading Permit fees will be assessed with respect to EEM clearing firms in any month the clearing firm is certified in the membership system to clear transactions on the Exchange.

The Exchange proposes to assess EEMs a monthly fee of \$1,000 for each Trading Permit.

Below is the proposed table showing the Trading Permit fees for EEMs:

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee
Electronic Exchange Member	\$1,000.00

The Exchange proposes to assess monthly Trading Permit fees for Market Makers in any month the Market Maker (including a Registered Market Maker, Lead Market Maker, and Primary Lead Market Maker) is certified in the membership system, is credentialed to use one or more MIAX Emerald Express Interface (“MEI”)<sup>20</sup> ports in the production environment and is assigned to quote in one or more classes. Specifically, the Exchange proposes to adopt the following Trading Permit fees for Market Makers: (i) \$7,000 for Market Maker Assignments in up to 10 option classes or up to 20% of option classes by national average daily volume (“ADV”); (ii) \$12,000 for Market Maker Assignments in up to 40 option classes or up to 35% of option classes

<sup>19</sup> “FIX Port” means an interface with MIAX Emerald systems that enables the Port user to submit simple and complex orders electronically to MIAX Emerald. See the Definitions Section of the Fee Schedule.

<sup>20</sup> The MEI is a connection to the MIAX Emerald System that enables Market Makers to submit simple and complex electronic quotes to MIAX Emerald. The Exchange offers Full Service MEI Ports, which provide Market Makers with the ability to send Market Maker simple and complex quotes, eQuotes, and quote purge messages to the MIAX Emerald 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. The Exchange also offers Limited Service MEI Ports, which provide Market Makers with the ability to send simple and complex eQuotes and quote purge messages only, but not Market Maker Quotes, to the MIAX Emerald 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 the Definitions Section of the Fee Schedule.

by ADV; (iii) \$17,000 for Market Maker Assignments in up to 100 option classes or up to 50% of option classes by ADV; and (iv) \$22,000 for Market Maker Assignments in over 100 option classes or over 50% of option classes by ADV up to all option classes listed on MIAX Emerald.

The Exchange also proposes to adopt an alternative lower Trading Permit fee for Market Makers who fall within the following Trading Permit fee levels, which represent the 3<sup>rd</sup> and 4<sup>th</sup> levels of the Market Maker Trading Permit fee table: (i) Market Maker Assignments in up to 100 option classes or up to 50% of option classes by volume; and (ii) Market Maker Assignments in over 100 option classes or over 50% of option classes by volume up to all option classes listed on MIAX Emerald. Specifically, the Exchange proposes to adopt footnote “■” following the Market Maker Trading Permit fee table for these Monthly Trading Permit tier levels, if the Market Maker’s total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month, then the fee will be \$15,500 instead of the fee otherwise applicable to such level.

Below is the proposed table showing the Trading Permit fees for Market Makers:

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee	Market Maker Assignments (the lesser of the applicable measurements below)	
		Per Class	% of National Average Daily Volume
Market Maker (includes RMM, LMM, PLMM)	\$7,000.00	Up to 10 Classes	Up to 20% of Classes by volume
	\$12,000.00	Up to 40 Classes	Up to 35% of Classes by volume
	\$17,000.00 <sup>■</sup>	Up to 100 Classes	Up to 50% of Classes by volume
	\$22,000.00 <sup>■</sup>	Over 100 Classes	Over 50% of Classes by volume up to all Classes listed on MIAX Emerald

- For these Monthly MIAX Emerald Trading Permit tier levels, if the Market Maker’s total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month, then the fee will be \$15,500 instead of the fee otherwise applicable to such level.



For the calculation of the monthly Market Maker Trading Permit fees, the number of classes is defined as the greatest number of classes the Market Maker was assigned to quote in on any given day within the calendar month and the class volume percentage is based on the total national ADV in classes listed on MIAX Emerald in the prior calendar quarter. Newly listed option classes are excluded from the calculation of the monthly Market Maker Trading Permit fee until the calendar quarter following their listing, at which time the newly listed option classes will be included in both the per class count and the percentage of total national average daily volume. The Exchange proposes to assess MIAX Emerald Market Makers the monthly Market Maker Trading Permit fee based on the greatest number of classes listed on MIAX Emerald that the Market Maker was assigned to quote in on any given day within a calendar month and the applicable fee rate that is the lesser of either the per class basis or percentage of total national ADV measurement.

The purpose of the alternative lower fee designated in proposed footnote “■” is to provide a lower fixed cost to those Market Makers who are willing to quote the entire Exchange market (or substantial amount of the Exchange market), as objectively measured by either number of classes assigned or national ADV, but who do not otherwise execute a significant amount of volume on the Exchange. The Exchange believes that, by offering lower fixed costs to Market Makers that execute less volume, the Exchange will retain and attract smaller-scale Market Makers, which are an integral component of the option marketplace, but have been decreasing in number in recent years, due to industry consolidation and lower market maker profitability. Since these smaller-scale Market Makers utilize less Exchange capacity due to lower overall volume executed, the Exchange believes it is reasonable and equitable to offer such Market Makers a lower fixed cost. The Exchange notes that the Exchange’s affiliate, MIAX, provides a similar alternative lower Trading Permit fee for Market Makers who quote the entire MIAX market (or substantial

amount of the MIAX market), as objectively measured by either number of classes assigned or national ADV, but who do not otherwise execute a significant amount of volume on MIAX.<sup>21</sup> The Exchange also notes that other options exchanges assess certain of their membership fees at different rates, based upon a member's participation on that exchange,<sup>22</sup> and, as such, this concept is not new or novel. The proposed changes to the Trading Permit fees for Market Makers who fall within the 3<sup>rd</sup> and 4<sup>th</sup> levels of the fee table are based upon a business determination of current Market Maker assignments and trading volume.

MIAX Emerald 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 requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among members and markets. MIAX Emerald believes this high standard is especially important when an exchange imposes various access fees for market participants to access an exchange's marketplace. MIAX Emerald deems Trading Permit fees to be access fees. It records these fees as part of its "Access Fees" revenue in its

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<sup>21</sup> See supra note 18.

<sup>22</sup> See e.g., NYSE Arca Options Fees and Charges, p.1 (assessing market makers \$6,000 for up to 175 option issues, an additional \$5,000 for up to 350 option issues, an additional \$4,000 for up to 1,000 option issues, an additional \$3,000 for all option issues on the exchange, and an additional \$1,000 for the fifth trading permit and for each trading permit thereafter); NYSE American Options Fee Schedule, p. 23 (assessing market makers \$8,000 for up to 60 plus the bottom 45% of option issues, an additional \$6,000 for up to 150 plus the bottom 45% of option issues, an additional \$5,000 for up to 500 plus the bottom 45% of option issues, and additional \$4,000 for up to 1,100 plus the bottom 45% of option issues, an additional \$3,000 for all issues traded on the exchange, and an additional \$2,000 for 6<sup>th</sup> to 9<sup>th</sup> ATPs; plus an addition fee for premium products). See also Cboe BZX Options Exchange ("BZX Options") assesses the Participant Fee, which is a membership fee, according to a member's ADV. See Cboe BZX Options Exchange Fee Schedule under "Membership Fees". The Participant Fee is \$500 if the member ADV is less than 5000 contracts and \$1,000 if the member ADV is equal to or greater than 5000 contracts. Id.

financial statements. The Exchange believes that it is important to demonstrate that these fees are based on its costs and reasonable business needs. The Exchange believes the Proposed Access Fees will allow the Exchange to offset expense the Exchange has and will incur, and that the Exchange is providing sufficient transparency (as described below) into how the Exchange determined to charge such fees. Accordingly, the Exchange is providing an analysis of its revenues, costs, and profitability associated with the Proposed Access Fees. This analysis includes information regarding its methodology for determining the costs and revenues associated with the Proposed Access Fees.

In order to determine the Exchange's costs to provide the access services associated with the Proposed Access Fees, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the Proposed Access Fees, and, if such expense did so relate, what portion (or percentage) of such expense actually supports the access services. The sum of all such portions of expenses represents the total cost of the Exchange to provide the access services associated with the Proposed Access Fees. For the avoidance of doubt, no expense amount was allocated twice. The Exchange is also providing detailed information regarding the Exchange's cost allocation methodology – namely, information that explains the Exchange's rationale for determining that it was reasonable to allocate certain expenses described in this filing towards the cost to the Exchange to provide the access services associated with the Proposed Access Fees.

In order to determine the Exchange's projected revenues associated with the Proposed Access Fees, the Exchange analyzed the number of Members currently utilizing the Trading Permits, and, utilizing a recent monthly billing cycle representative of 2020 monthly revenue,

extrapolated annualized revenue on a going-forward basis. The Exchange does not believe it is appropriate to factor into its analysis future revenue growth or decline into its projections for purposes of these calculations, given the uncertainty of such projections due to the continually changing access needs of market participants, discounts that can be achieved due to lower trading volume and vice versa, market participant consolidation, etc. Additionally, the Exchange similarly does not factor into its analysis future cost growth or decline. The Exchange is presenting its revenue and expense associated with the Proposed Access Fees in this filing in a manner that is consistent with how the Exchange presents its revenue and expense in its Audited Unconsolidated Financial Statements. The Exchange's most recent Audited Unconsolidated Financial Statement is for 2019. However, since the revenue and expense associated with the Proposed Access Fees were not in place in 2019 or for the first three quarters of 2020, the Exchange believes its 2019 Audited Unconsolidated Financial Statement is not useful for analyzing the reasonableness of the total annual revenue and costs associated with the Proposed Access Fees. Accordingly, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 revenue and costs, as described herein, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements. Based on this analysis, the Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit when comparing the Exchange's total annual expense associated with providing the services associated with the Proposed Access Fees versus the total projected annual revenue the Exchange will collect for providing those services.

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On March 29, 2019, the Commission issued its Order Disapproving Proposed Rule Changes to Amend the Fee Schedule on the BOX Market LLC Options Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network (the “BOX Order”).<sup>23</sup> On May 21, 2019, the Commission issued the Staff Guidance on SRO Rule Filings Relating to Fees.<sup>24</sup> Accordingly, the Exchange believes that the Proposed Access Fees are consistent with the Act because they (i) are reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) are supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable because they not result in excessive pricing or supra-competitive profit; and (iv) utilize a cost-based justification framework that is substantially similar to a framework previously used by the Exchange to establish other non-transaction fees. Accordingly, the Exchange believes that the Commission should find that the Proposed Access Fees are consistent with the Act.

The proposed rule change is immediately effective upon filing with the Commission pursuant to Section 19(b)(3)(A) of the Act.

b. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act<sup>25</sup> in general, and furthers the objectives of Section 6(b)(4) of the Act<sup>26</sup> in particular, in that it is an equitable allocation of reasonable dues, fees and other charges among

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<sup>23</sup> 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).

<sup>24</sup> See Staff Guidance on SRO Rule Filings Relating to Fees (May 21, 2019), at <https://www.sec.gov/tm/staff-guidance-sro-rule-filings-fees> (the “Guidance”).

<sup>25</sup> 15 U.S.C. 78f(b).

<sup>26</sup> 15 U.S.C. 78f(b)(4) and (5).

its members and issuers and other persons using its facilities. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest and is not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange launched trading on March 1, 2019. For the month of December 2020, the Exchange had only a 3.58% market share of the U.S. options industry.<sup>27</sup> The Exchange is not aware of any evidence that a market share of approximately 3.6% provides the Exchange with anti-competitive pricing power. If the Exchange were to attempt to establish unreasonable pricing, then no market participant would join or connect, and existing market participants would disconnect.

Separately, the Exchange is not aware of any reason why market participants 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 participant, did not make business or economic sense for such market participant to access such exchange. No options market participant is required by rule, regulation, or competitive forces to be a Member of the Exchange. As evidence of the fact that market participants can and do drop their access to exchanges based on non-transaction fee pricing, R2G Services LLC (“R2G”) filed a comment letter after BOX’s proposed rule changes to increase its connectivity fees (SR-BOX-2018-24, SR-BOX-2018-37, and SR-BOX-2019-04). The R2G Letter stated,

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<sup>27</sup> See The Options Clearing Corporation (“OCC”) publishes options and futures volume in a variety of formats, including daily and monthly volume by exchange, available here: <https://www.theocc.com/market-data/volume/default.jsp>.

“[w]hen BOX instituted a \$10,000/month price increase for connectivity; we had no choice but to terminate connectivity into them as well as terminate our market data relationship. The cost benefit analysis just didn’t make any sense for us at those new levels.” Since the Exchange issued its notice instituting the Proposed Access Fees, one Member dropped its access to the Exchange as a result of the Proposed Access Fees. Accordingly, these examples show that if an exchange sets too high of a fee for connectivity and/or other non-transaction fees for its relevant marketplace, market participants can choose to drop their access to such exchange.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the Proposed Access Fees will not result in excessive or supra-competitive profit. The costs associated with providing access to Exchange Members and non-Members, as well as the general expansion of a state-of-the-art infrastructure, are extensive, have increased year-over-year, and are projected to increase year-over-year in the future. In particular, the Exchange has experienced a material increase in its costs in 2020, in connection with a project to make its network environment more transparent and deterministic, based on customer demand. This project will allow the Exchange to enhance its network architecture with the intent of ensuring a best-in-class, transparent and deterministic trading system while maintaining its industry leading latency and throughput capabilities. In order to provide this greater amount of transparency and higher determinism, MIAX Emerald has made significant capital expenditures (“CapEx”), incurred increased ongoing operational expenditures (“OpEx”), and undertaken additional engineering research and development (“R&D”) in the following areas:

- (i) implementing an improved network design to ensure the minimum latency between multicast market data signals disseminated by the Exchange across the extranet switches, improving the unicast jitter profile to reduce the occurrence of message sequence inversions

from Members to the Exchange quoting gateway processors, and introducing a new optical fiber network infrastructure that ensures the optical fiber path for participants within extremely tight tolerances; (ii) introducing a re-architected and engineered participant quoting gateway that ensures the delivery of messages to the match engine with absolute determinism, eliminating the message processing inversions that can occur with messages received nanoseconds apart; and (iii) designing an improved monitoring platform to better measure the performance of the network and systems at extremely tight tolerances and to provide Members with reporting on the performance of their systems. The CapEx associated with only phase 1 of this project in 2020 was approximately \$1.85 million. This expense does not include the significant increase in employee time and other resources necessary to maintain and service this network, which expense is captured in the operating expense discussed below. This project, which results in a material increase in expense of the Exchange, is, among other things, intended to enhance the overall trading experience at the Exchange, making it a venue that market participants want to access.

The Exchange believes the proposed Trading Permit fees are equitably allocated between EEMs and Market Makers, when these fees are viewed in the context of the overall trading volume on the Exchange, as Market Makers: (1) consume the most bandwidth and resources of the network; (2) transact the vast majority of the volume on the Exchange; and (3) require the high touch network support services provided by the Exchange and its staff, including more costly network monitoring, reporting and support services, resulting in a much higher cost to the Exchange. Further, the Exchange believes the Proposed Access Fees are equitably allocated because of customer demand for an even more transparent and deterministic network, as described above, which has resulted in higher CapEx, increasingly higher OpEx, and increased



costs to engineering R&D. The Proposed Access Fees are equitably allocated in this regard because the majority of customer demand is coming from Market Makers, who transact the vast majority of volume on the Exchange. Accordingly, the Exchange believes it is reasonable, equitably allocated and not unfairly discriminatory to recoup the majority of its costs associated with providing Trading Permits from Market Makers quoting the most classes on the Exchange.

The Exchange believes that the proposed Trading Permit fees are equitably allocated between EEMs and Market Makers, as Market Makers consume the most bandwidth and resources of the network. Specifically, the Exchange notes that these users account for approximately greater than 99% of message traffic over the network, while EEMs account for approximately less than 1% of message traffic over the network. In the Exchange's experience, most EEMs do not have a business need for the high performance network solutions required by Market Makers. 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. On an average day, the Exchange handles over approximately 3 billion total messages. Of those, Market Makers generate approximately 3 billion messages, and EEMs generate 500,000 messages. However, in order 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 expense for storage and network transport capabilities. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers pay for the vast majority of the access costs designed to be recovered via Trading Permit fees.

In order to provide more detail and to quantify the Exchange's costs associated with providing access to the Exchange in general, the Exchange notes that there are material costs associated with providing the infrastructure and headcount to fully-support access to the Exchange. The Exchange incurs technology expense related to establishing and maintaining Information Security services, enhanced network monitoring and customer reporting, as well as Regulation SCI mandated processes, associated with its network technology. While some of the expense is fixed, much of the expense is not fixed, and thus increases as the services associated with the Proposed Access Fees increase. For example, new Market Makers to the Exchange may require the purchase of additional hardware to support those Members as well as enhanced monitoring and reporting of customer performance that MIAX Emerald and its affiliates provide. Further, as the total number Market Makers increase, MIAX Emerald and its affiliates may need to increase their data center footprint and consume more power, resulting in increased costs charged by their third-party data center provider. Accordingly, the cost to MIAX Emerald and its affiliates to provide access to its Members is not fixed. The Exchange believes the Proposed Access Fees are reasonable in order to offset a portion of the costs to the Exchange associated with providing access to its network infrastructure.

Market Makers account for the vast majority of network capacity utilization and volume executed on the Exchange, as discussed throughout. Accordingly, the Exchange believes that it is reasonable and appropriate to charge Market Makers more than EEMs for Trading Permits to access the Exchange.

The Exchange only has four primary sources of revenue: transaction fees, access fees (which includes the Proposed Access Fees), regulatory fees, and market data fees.

Accordingly, the Exchange must cover all of its expenses from these four primary sources of revenue.

The Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit, when comparing the total annual expense that the Exchange projects to incur in connection with providing these access services versus the total annual revenue that the Exchange projects to collect in connection with the associated Trading Permit fees. For 2020<sup>28</sup>, the total annual expense for providing the access services associated with the Proposed Access Fees for MIAX Emerald is projected to be approximately \$2.5 million. The \$2.5 million in projected total annual expense is comprised of the following, all of which are directly related to the access services associated with the Proposed Access Fees: (1) third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services; and (2) internal expense, relating to the internal costs of MIAX Emerald to provide the services associated with the Proposed Access Fees. As noted above, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 revenue and costs, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements.<sup>29</sup> The \$2.5 million in projected total annual expense is directly related to the access services associated with the Proposed Access Fees, and not any other product or service offered by the

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<sup>28</sup> The Exchange has not yet finalized its 2020 year end results.

<sup>29</sup> For example, the Exchange previously noted that all third-party expense described in its prior fee filing was contained in the information technology and communication costs line item under the section titled "Operating Expenses Incurred Directly or Allocated From Parent," in the Exchange's 2019 Form 1 Amendment containing its financial statements for 2018. See Securities Exchange Act Release No. 87877 (December 31, 2019), 85 FR 738 (January 7, 2020) (SR-EMERALD-2019-39). Accordingly, the third-part expense described in this filing is attributed to the same line item for the Exchange's 2020 Form 1 Amendment, which will be filed in 2021.

Exchange. It does not include general costs of operating matching systems and other trading technology, and no expense amount was allocated twice.

As discussed, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger (this includes over 150 separate and distinct expense items) to determine whether each such expense relates to the access services associated with the Proposed Access Fees, and, if such expense did so relate, what portion (or percentage) of such expense actually supports those services, and thus bears a relationship that is, "in nature and closeness," directly related to those services. The sum of all such portions of expenses represents the total cost of the Exchange to provide access services associated with the Proposed Access Fees.

For 2020, total third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services for the Exchange to be able to provide the access services associated with the Proposed Access Fees, is projected to be \$190,621. This includes, but is not limited to, a portion of the fees paid to: (1) Equinix, for data center services, for the primary, secondary, and disaster recovery locations of the MIAX Emerald trading system infrastructure; (2) Zayo Group Holdings, Inc. ("Zayo") for network services (fiber and bandwidth products and services) linking MIAX Emerald's office locations in Princeton, NJ and Miami, FL to all data center locations; (3) Secure Financial Transaction Infrastructure ("SFTI")<sup>30</sup>, which supports connectivity and feeds for the entire U.S. options industry; (4)

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<sup>30</sup> In fact, on October 22, 2019, the Exchange was notified by SFTI that it is again raising its fees charged to the Exchange by approximately 11%, without having to show that such fee change complies with the Act by being reasonable, equitably allocated, and not unfairly discriminatory. It is unfathomable to the Exchange that, given the critical nature of the infrastructure services provided by SFTI, that its fees are not required to be rule-filed with the Commission pursuant to Section 19(b)(1) of the Act and Rule 19b-4 thereunder. See 15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively.

various other services providers (including Thompson Reuters, NYSE, Nasdaq, and Internap), which provide content, connectivity services, and infrastructure services for critical components of options connectivity and network services; and (5) various other hardware and software providers (including Dell and Cisco, which support the production environment in which Members connect to the network to trade, receive market data, etc.).

For clarity, only a portion of all fees paid to such third-parties is included in the third-party expense herein, and no expense amount is allocated twice. Accordingly, MIAX Emerald does not allocate its entire information technology and communication costs to the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate such third-party expense described above towards the total cost to the Exchange to provide the access services associated with the Proposed Access Fees. In particular, the Exchange believes it is reasonable to allocate the identified portion of the Equinix expense because Equinix operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. This includes, among other things, the necessary storage space, which continues to expand and increase in cost, power to operate the network infrastructure, and cooling apparatuses to ensure the Exchange's network infrastructure maintains stability. Without these services from Equinix, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the Equinix expense toward the cost of providing the access services associated with the Proposed Access Fees, only that portion which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 10% of the total Equinix expense. The

Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portion of the Zayo expense because Zayo provides the internet, fiber and bandwidth connections with respect to the network, linking MIAX Emerald with its affiliates, MIAX and MIAX PEARL, LLC ("MIAX PEARL"), as well as the data center and disaster recovery locations. As such, all of the trade data, including the billions of messages each day per exchange, flow through Zayo's infrastructure over the Exchange's network. Without these services from Zayo, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees. The Exchange did not allocate all of the Zayo expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to providing the Proposed Access Fees, approximately 1% of the total Zayo expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portions of the SFTI expense and various other service providers' (including Thompson Reuters, NYSE, Nasdaq, and Internap) expense because those entities provide connectivity and feeds for the entire U.S. options industry, as well as the content, connectivity services, and infrastructure services for critical components of the network. Without these services from SFTI and various other service providers, the Exchange would not be able to operate and support the network and

provide access to its Members and their customers. The Exchange did not allocate all of the SFTI and other service providers' expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 1% of the total SFTI and other service providers' expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate the identified portion of the other hardware and software provider expense because this includes costs for dedicated hardware licenses for switches and servers, as well as dedicated software licenses for security monitoring and reporting across the network. Without this hardware and software, the Exchange would not be able to operate and support the network and provide access to its Members and their customers. The Exchange did not allocate all of the hardware and software provider expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 10% of the total hardware and software provider expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees.

For 2020, total projected internal expense, relating to the internal costs of MIAX Emerald to provide the access services associated with the Proposed Access Fees, is projected to be \$2,046,137. This includes, but is not limited to, costs associated with: (1) employee compensation and benefits for full-time employees that support the access services associated

with the Proposed Access Fees, including staff in network operations, trading operations, development, system operations, business, as well as staff in general corporate departments (such as legal, regulatory, and finance) that support those employees and functions (including an increase as a result of the higher determinism project); (2) depreciation and amortization of hardware and software used to provide the access services associated with the Proposed Access Fees, including equipment, servers, cabling, purchased software and internally developed software used in the production environment to support the network for trading; and (3) occupancy costs for leased office space for staff that provide the access services associated with the Proposed Access Fees. The breakdown of these costs is more fully-described below. For clarity, only a portion of all such internal expenses are included in the internal expense herein, and no expense amount is allocated twice. Accordingly, MIAX Emerald does not allocate its entire costs contained in those items to the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate such internal expense described above towards the total cost to the Exchange to provide the access services associated with the Proposed Access Fees. In particular, MIAX Emerald's employee compensation and benefits expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$1,403,101, which is only a portion of the \$9,354,009 total projected expense for employee compensation and benefits. The Exchange believes it is reasonable to allocate the identified portion of such expense because this includes the time spent by employees of several departments, including Technology, Back Office, Systems Operations, Networking, Business Strategy Development (who create the business requirement documents that the Technology staff use to develop network features and enhancements), Trade Operations, Finance (who



provide billing and accounting services relating to the network), and Legal (who provide legal services relating to the network, such as rule filings and various license agreements and other contracts). As part of the extensive cost review conducted by the Exchange, the Exchange reviewed the amount of time spent by each employee on matters relating to the provision of access services associated with the Proposed Access Fees. Without these employees, the Exchange would not be able to provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the employee compensation and benefits expense toward the cost of the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 15% of the total employee compensation and benefits expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX Emerald's depreciation and amortization expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$571,888, which is only a portion of the \$3,812,590 total projected expense for depreciation and amortization. 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 and provide the access services associated with the Proposed Access Fees. Without this equipment, the Exchange would not be able to operate the network and

provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 15% of the total depreciation and amortization expense, as these access services would not be possible without relying on such. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX Emerald's occupancy expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$71,148, which is only a portion of the \$474,323 total projected expense for occupancy. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense represents the portion of the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the network, including providing the access services associated with the Proposed Access Fees. This amount consists primarily of rent for the Exchange's Princeton, NJ office, as well as various related costs, such as physical security, property management fees, property taxes, and utilities. The Exchange operates its Network Operations Center ("NOC") and Security Operations Center ("SOC") from its Princeton, New Jersey office location. A centralized office space is required to house the staff that operates and supports the network. The Exchange currently has approximately 150 employees. Approximately two-thirds of the Exchange's staff are in the Technology department, and the majority of those staff have some role in the operation and performance of the access services associated with the proposed

Trading Permit fees. Without this office space, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees to its Members and their customers. Accordingly, the Exchange believes it is reasonable to allocate the identified portion of its occupancy expense because such amount represents the Exchange's actual cost to house the equipment and personnel who operate and support the Exchange's network infrastructure and the access services associated with the Proposed Access Fees. The Exchange did not allocate all of the occupancy expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to operating and supporting the network, approximately 15% of the total occupancy expense. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange notes that a material portion of its total overall expense is allocated to the provision of access services (including connectivity, ports, and trading permits). The Exchange believes this is reasonable and in line, as the Exchange operates a technology-based business that differentiates itself from its competitors based on its trading systems that rely on access to a high performance network, resulting in significant technology expense. Over two-thirds of Exchange staff are technology-related employees. The majority of the Exchange's expense is technology-based. As described above, the Exchange has only four primary sources of fees in to recover its costs, thus the Exchange believes it is reasonable to allocate a material portion of its total overall expense towards access fees.

Accordingly, based on the facts and circumstances presented, the Exchange believes that its provision of the access services associated with the Proposed Access Fees will not result

in excessive pricing or supra-competitive profit. To illustrate, on a going-forward, fully-annualized basis, the Exchange projects that its annualized revenue for providing the access services associated with the Proposed Access Fees would be approximately \$2.5 million per annum, based on a recent billing cycle. The Exchange projects that its annualized expense for providing the access services associated with the Proposed Access Fees would be approximately \$2,236,758 per annum. Accordingly, on a fully-annualized basis, the Exchange believes its total projected revenue for the providing the access services associated with the Proposed Access Fees will not result in excessive pricing or supra-competitive profit, as the Exchange will make only a 10% profit margin on the Proposed Access Fees (\$2.5 million – \$2,236,758 = \$263,242 per annum). The Exchange notes that the fee charged to each Market Maker for Trading Permits can vary from month to month depending on the number of classes in which the Market Maker was assigned to quote on any given day within the calendar month, and upon certain class volume percentages. The Exchange also provides a further discount for a Market Maker's Trading Permit fees if the Market Maker's total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month. As such, the revenue projection is not a static number, with monthly Trading Permit fees likely to fluctuate month to month.

For the avoidance of doubt, none of the expenses included herein relating to the access services associated with the Proposed Access Fees relate to the provision of any other services offered by MIAX Emerald. Stated differently, no expense amount of the Exchange is allocated twice. The Exchange notes that, with respect to the MIAX Emerald expenses included herein, those expenses only cover the MIAX Emerald market; expenses associated with the

Exchange's affiliate exchanges, MIAX and MIAX PEARL, are accounted for separately and are not included within the scope of this filing. Stated differently, no expense amount of the Exchange is also allocated to MIAX or MIAX PEARL.

The Exchange believes it is reasonable, equitable and not unfairly discriminatory to allocate the respective percentages of each expense category described above towards the total cost to the Exchange of operating and supporting the network, including providing the access services associated with the Proposed Access Fees because the Exchange performed a line-by-line item analysis of all the expenses of the Exchange, and has determined the expenses that directly relate to providing access to the Exchange. Further, the Exchange notes that, without the specific third-party and internal items listed above, the Exchange would not be able to provide the access services associated with the Proposed Access Fees to its Members and their customers. Each of these expense items, including physical hardware, software, employee compensation and benefits, occupancy costs, and the depreciation and amortization of equipment, have been identified through a line-by-line item analysis to be integral to providing access services. The Proposed Access Fees are intended to recover the Exchange's costs of providing access to Exchange Systems. Accordingly, the Exchange believes that the Proposed Access Fees are fair and reasonable because they do not result in excessive pricing or supra-competitive profit, when comparing the actual costs to the Exchange versus the projected annual revenue from the Proposed Access Fees.

Further, the Exchange no longer believes it is necessary to waive these fees to attract market participants to MIAX Emerald since this market is now established and MIAX Emerald no longer needs to rely on such waivers to attract market participants. The Exchange believes that the proposal is equitable and not unfairly discriminatory because the elimination of the fee

waiver for the Proposed Access Fees will uniformly apply to all EEMs and Market Makers of the Exchange. The Exchange also notes that the Exchange's affiliate, MIAX, charges a similar, fixed trading permit fee to its EEMs, and a similar, varying trading permit fee to its Market Makers, based upon the number of assignments of option classes or the percentage of volume in option classes.<sup>31</sup>

The Exchange believes that the Proposed Access Fees are reasonable, equitable and not unfairly discriminatory because they are within the range of comparable fees at other competing options exchanges.<sup>32</sup> The Proposed Access Fees are fair and equitable and not unreasonably discriminatory because they apply equally to all Market Makers regardless of type and access to the Exchange is offered on terms that are not unfairly discriminatory. The Exchange designed the fee rates in order to provide objective criteria for Market Makers of different sizes and business models that best matches their quoting activity on the Exchange. The Exchange notes that trading volume and quoting activity in the options market tends to be concentrated in the top ranked options classes; with the vast majority of options classes being thinly quoted and traded. The Exchange believes that the proposed fee rates and criteria provide an objective and flexible framework that will encourage Market Makers to be assigned and quote in option classes with lower total national average daily volume while also equitably allocating the fees in a reasonable manner amongst Market Maker assignments to account for quoting and trading activity.

Finally, the Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive. In such an environment, the Exchange must continually adjust its fees for

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<sup>31</sup> See supra note 18.

<sup>32</sup> See supra note 22.

services and products, in addition to order flow, to remain competitive with other exchanges. The Exchange believes that the proposed changes reflect this competitive environment.

The Exchange also points out that it is not seeking to recoup any of its past costs associated with the provision of any Trading Permits during the Waiver Period. The Exchange currently has 35 Members,<sup>33</sup> all of whom did not pay Trading Permit fees during the Waiver Period from the time these firms all became Members of the Exchange. Further, the majority of firms that are Members of the Exchange's affiliate options exchanges, MIAX and MIAX PEARL, also became Members of those exchanges during similar Waiver Periods for the MIAX and MIAX PEARL Trading Permit fees. Accordingly, the Exchange (and MIAX and MIAX PEARL) have assumed approximately 100% of the costs associated with providing Trading Permits for the majority of Member firms of the Exchange, MIAX, and MIAX PEARL during their respective Waiver Periods. Accordingly, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory to now adopt Trading Permit fees that are reasonably related to (and designed to recover) the Exchange's cost associated with the provision of such Trading Permits.

#### **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 not necessary or appropriate in furtherance of the purposes of the Act.

##### Intra-Market Competition

The Exchange believes that the Proposed Access Fees do not place certain market participants at a relative disadvantage to other market participants because the Proposed Access Fees do not favor certain categories of market participants in a manner that would impose a

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<sup>33</sup> See <https://www.miaxoptions.com/exchange-members/emerald>.

burden on competition; rather, the fee rates are designed in order to provide objective criteria for Market Makers of different sizes and business models that best matches their quoting activity on the Exchange. The Exchange notes that trading volume and quoting activity in the options market tends to be concentrated in the top ranked options classes; with the vast majority of options classes being thinly quoted and traded. The Exchange believes that the proposed fee rates and criteria provide an objective and flexible framework that will encourage Market Makers to be assigned and quote in option classes with lower total national average daily volume while also equitably allocating the fees in a reasonable manner amongst Market Maker assignments to account for quoting and trading activity.

#### Inter-Market Competition

The Exchange believes the Proposed Access Fees do not place an undue burden on competition on other SROs that is not necessary or appropriate. In particular, options market participants are not forced to become members of all options exchanges. The Exchange notes that it has far less Members as compared to the much greater number of members at other options exchanges. There are a number of large market makers and broker-dealers that are members of other options exchange but not Members of MIAX Emerald. The Exchange is also unaware of any assertion that its existing fee levels or the Proposed Access Fees would somehow unduly impair its competition with other options exchanges. To the contrary, if the fees charged are deemed too high by market participants, they can simply discontinue their membership with the Exchange.

The Exchange operates in a highly competitive market in which market participants can readily favor one of the 15 competing options venues if they deem fee levels at a particular venue to be excessive. Based on publicly-available information, and excluding index-based



options, no single exchange has more than 16% market share. Therefore, no exchange possesses significant pricing power in the execution of multiply-listed equity and ETF options order flow. For the month of December 2020, the Exchange had a market share of approximately 3.6% of executed multiply-listed equity options<sup>34</sup> and the Exchange believes that the ever-shifting market share among exchanges from month to month demonstrates that market participants can discontinue or reduce use of certain categories of products, or shift order flow, in response to fee changes. In such an environment, the Exchange must continually adjust its fees and fee waivers to remain competitive with other exchanges and to attract order flow to the Exchange.

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

No written comments were either solicited or received.

**6. Extension of Time Period for Commission Action**

Not applicable.

**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,<sup>35</sup> and Rule 19b-4(f)(2) thereunder<sup>36</sup> 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 exchange or of the

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<sup>34</sup> See *supra* note 27.

<sup>35</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>36</sup> 17 CFR 240.19b-4.

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 MIAX Emerald Fee Schedule.

**EXHIBIT 1**SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34- ; File No. SR-EMERALD-2021-03)

January \_\_, 2021

Self-Regulatory Organizations: Notice of Filing and Immediate Effectiveness of a  
Proposed Rule Change by MIAX Emerald, LLC to Amend Its Fee Schedule

Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on January 22, 2021, MIAX Emerald, LLC (“MIAX Emerald” 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 Emerald Fee Schedule (the “Fee Schedule”) to establish monthly Trading Permit<sup>3</sup> fees for Exchange Members.<sup>4</sup>

The text of the proposed rule change is available on the Exchange’s website at <http://www.miaxoptions.com/rule-filings/emerald>, 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

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

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

<sup>3</sup> The term "Trading Permit" means a permit issued by the Exchange that confers the ability to transact on the Exchange. See Exchange Rule 100.

<sup>4</sup> 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 and the Definitions Section of the Fee Schedule.

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

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

1. Purpose

The Exchange proposes to amend the Fee Schedule to adopt monthly Trading Permit fees (the “Proposed Access Fees”) depending on the Member’s status as either an Electronic Exchange Member (“EEM”)<sup>5</sup> or as a Market Maker.<sup>6</sup> MIAX Emerald commenced operations as a national securities exchange registered under Section 6 of the Act<sup>7</sup> on March 1, 2019.<sup>8</sup> The Exchange adopted its transaction fees and certain of its non-transaction fees in its filing SR-EMERALD-2019-15.<sup>9</sup> In that filing, the Exchange expressly waived, among other fees, the Proposed Access Fees for the Waiver Period<sup>10</sup>, to provide an incentive to prospective EEMs and

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<sup>5</sup> “Electronic Exchange Member” or “EEM” means the holder of a Trading Permit who is not a Market Maker. Electronic Exchange Members are deemed “members” under the Exchange Act. See Exchange Rule 100 and the Definitions Section of the Fee Schedule.

<sup>6</sup> The term “Market Makers” refers to “Lead Market Makers”, “Primary Lead Market Makers” and “Registered Market Makers” collectively. See Exchange Rule 100 and the Definitions Section of the Fee Schedule.

<sup>7</sup> 15 U.S.C. 78f.

<sup>8</sup> See Securities Exchange Act Release No. 84891 (December 20, 2018), 83 FR 67421 (December 28, 2018) (File No. 10-233) (order approving application of MIAX Emerald, LLC for registration as a national securities exchange).

<sup>9</sup> See Securities Exchange Act Release No. 85393 (March 21, 2019), 84 FR 11599 (March 27, 2019) (SR-EMERALD-2019-15) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Establish the MIAX Emerald Fee Schedule).

<sup>10</sup> “Waiver Period” means, for each applicable fee, the period of time from the initial effective date of the MIAX Emerald Fee Schedule until such time that the Exchange has

Market Makers to become Members of the Exchange. When the Exchange adopted the framework for its fees, it stated that it would provide notice to market participants when the Exchange intended to terminate the Waiver Period for the Proposed Access Fees. Accordingly, on September 15, 2020, the Exchange issued a Regulatory Circular which announced that the Exchange would be ending the Waiver Period for the Proposed Access Fees, among other non-transaction fees, beginning October 1, 2020.<sup>11</sup>

The Exchange initially filed its proposal to establish the Proposed Access Fees on October 1, 2020.<sup>12</sup> The First Proposed Rule Change was published for comment in the Federal Register on October 21, 2020.<sup>13</sup> On November 25, 2020, the Exchange withdrew the First Proposed Rule Change<sup>14</sup> and refiled its proposal to establish monthly Trading Permit fees.<sup>15</sup> The Second Proposed Rule Change was published for comment in the Federal Register on December

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an effective fee filing establishing the applicable fee. The Exchange will issue a Regulatory Circular announcing the establishment of an applicable fee that was subject to a Waiver Period at least fifteen (15) days prior to the termination of the Waiver Period and effective date of any such applicable fee. See the Definitions Section of the Fee Schedule.

<sup>11</sup> See MIAX Emerald Regulatory Circular 2020-41 available at [https://www.miaxoptions.com/sites/default/files/circular-files/MIAX\\_Emerald\\_RC\\_2020\\_41.pdf](https://www.miaxoptions.com/sites/default/files/circular-files/MIAX_Emerald_RC_2020_41.pdf).

<sup>12</sup> See Securities Exchange Act Release Nos. 90196 (October 15, 2020), 85 FR 67064 (October 21, 2020) (SR-EMERALD-2020-11) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fee Schedule To Adopt One-Time Membership Application Fees and Monthly Trading Permit Fees ) (the “First Proposed Rule Change”). The Exchange notes that it refiled its proposal to establish the one-time membership application fee in a separate filing. See SR-EMERALD-2021-01.

<sup>13</sup> See id.

<sup>14</sup> See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated November 20, 2020, notifying the Commission that the Exchange will withdraw the First Proposed Rule Change.

<sup>15</sup> See Securities Exchange Act Release Nos. 90601 (December 8, 2020), 85 FR 80864 (December 14, 2020) (SR-EMERALD-2020-18) (the “Second Proposed Rule Change”).

14, 2020.<sup>16</sup> The Exchange notes that the Second Proposed Rule Change did not receive any comment letters. Nonetheless, on January 22, 2021, the Exchange withdrew the Second Proposed Rule Change and resubmitted this proposal.<sup>17</sup>

Trading Permits are issued to Members who are either EEMs or Market Makers. Trading Permits grant access to the Exchange, thus providing the ability to quote and trade on the Exchange, in the manner defined in the relevant Trading Permit. Without a Trading Permit, a Member cannot directly trade on the Exchange. Therefore, a Trading Permit is a means to directly access the Exchange (which offers meaningful value), and the Exchange now proposes to adopt a monthly fee designed to recover a portion of the costs associated with directly accessing the Exchange. The Exchange proposes to assess the Proposed Access Fees depending upon the category of Member that is issued a Trading Permit. Members issued Trading Permits during a calendar month will be assessed monthly Trading Permit Fees. The Exchange notes that the Exchange's affiliate, Miami International Securities Exchange, LLC ("MIAX"), charges a similar, fixed trading permit fee to its EEMs, and a similar, varying trading permit fee to its Market Makers, based upon the number of assignments of option classes or the percentage of volume in option classes.<sup>18</sup>

The Exchange proposes that monthly Trading Permit fees will be assessed, with respect to the calculation of such fee to EEMs (other than clearing firms), in any month the EEM is certified in the membership system and is credentialed to use one or more Financial Information

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<sup>16</sup> See id.

<sup>17</sup> See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated January 15, 2021, notifying the Commission that the Exchange will withdraw the Second Proposed Rule Change.

<sup>18</sup> See the MIAX Fee Schedule, Section 3)b).

Exchange (“FIX”)<sup>19</sup> ports in the production environment. Further, the Exchange proposes that monthly Trading Permit fees will be assessed with respect to EEM clearing firms in any month the clearing firm is certified in the membership system to clear transactions on the Exchange.

The Exchange proposes to assess EEMs a monthly fee of \$1,000 for each Trading Permit.

Below is the proposed table showing the Trading Permit fees for EEMs:

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee
Electronic Exchange Member	\$1,000.00

The Exchange proposes to assess monthly Trading Permit fees for Market Makers in any month the Market Maker (including a Registered Market Maker, Lead Market Maker, and Primary Lead Market Maker) is certified in the membership system, is credentialed to use one or more MIAX Emerald Express Interface (“MEI”)<sup>20</sup> ports in the production environment and is assigned to quote in one or more classes. Specifically, the Exchange proposes to adopt the following Trading Permit fees for Market Makers: (i) \$7,000 for Market Maker Assignments in up to 10 option classes or up to 20% of option classes by national average daily volume (“ADV”); (ii) \$12,000 for Market Maker Assignments in up to 40 option classes or up to 35% of option classes

<sup>19</sup> “FIX Port” means an interface with MIAX Emerald systems that enables the Port user to submit simple and complex orders electronically to MIAX Emerald. See the Definitions Section of the Fee Schedule.

<sup>20</sup> The MEI is a connection to the MIAX Emerald System that enables Market Makers to submit simple and complex electronic quotes to MIAX Emerald. The Exchange offers Full Service MEI Ports, which provide Market Makers with the ability to send Market Maker simple and complex quotes, eQuotes, and quote purge messages to the MIAX Emerald 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. The Exchange also offers Limited Service MEI Ports, which provide Market Makers with the ability to send simple and complex eQuotes and quote purge messages only, but not Market Maker Quotes, to the MIAX Emerald 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 the Definitions Section of the Fee Schedule.

by ADV; (iii) \$17,000 for Market Maker Assignments in up to 100 option classes or up to 50% of option classes by ADV; and (iv) \$22,000 for Market Maker Assignments in over 100 option classes or over 50% of option classes by ADV up to all option classes listed on MIAX Emerald.

The Exchange also proposes to adopt an alternative lower Trading Permit fee for Market Makers who fall within the following Trading Permit fee levels, which represent the 3<sup>rd</sup> and 4<sup>th</sup> levels of the Market Maker Trading Permit fee table: (i) Market Maker Assignments in up to 100 option classes or up to 50% of option classes by volume; and (ii) Market Maker Assignments in over 100 option classes or over 50% of option classes by volume up to all option classes listed on MIAX Emerald. Specifically, the Exchange proposes to adopt footnote “■” following the Market Maker Trading Permit fee table for these Monthly Trading Permit tier levels, if the Market Maker’s total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month, then the fee will be \$15,500 instead of the fee otherwise applicable to such level.

Below is the proposed table showing the Trading Permit fees for Market Makers:

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee	Market Maker Assignments (the lesser of the applicable measurements below)	
		Per Class	% of National Average Daily Volume
Market Maker (includes RMM, LMM, PLMM)	\$7,000.00	Up to 10 Classes	Up to 20% of Classes by volume
	\$12,000.00	Up to 40 Classes	Up to 35% of Classes by volume
	\$17,000.00 <sup>■</sup>	Up to 100 Classes	Up to 50% of Classes by volume
	\$22,000.00 <sup>■</sup>	Over 100 Classes	Over 50% of Classes by volume up to all Classes listed on MIAX Emerald

- For these Monthly MIAX Emerald Trading Permit tier levels, if the Market Maker’s total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month, then the fee will be \$15,500 instead of the fee otherwise applicable to such level.



For the calculation of the monthly Market Maker Trading Permit fees, the number of classes is defined as the greatest number of classes the Market Maker was assigned to quote in on any given day within the calendar month and the class volume percentage is based on the total national ADV in classes listed on MIAX Emerald in the prior calendar quarter. Newly listed option classes are excluded from the calculation of the monthly Market Maker Trading Permit fee until the calendar quarter following their listing, at which time the newly listed option classes will be included in both the per class count and the percentage of total national average daily volume. The Exchange proposes to assess MIAX Emerald Market Makers the monthly Market Maker Trading Permit fee based on the greatest number of classes listed on MIAX Emerald that the Market Maker was assigned to quote in on any given day within a calendar month and the applicable fee rate that is the lesser of either the per class basis or percentage of total national ADV measurement.

The purpose of the alternative lower fee designated in proposed footnote “■” is to provide a lower fixed cost to those Market Makers who are willing to quote the entire Exchange market (or substantial amount of the Exchange market), as objectively measured by either number of classes assigned or national ADV, but who do not otherwise execute a significant amount of volume on the Exchange. The Exchange believes that, by offering lower fixed costs to Market Makers that execute less volume, the Exchange will retain and attract smaller-scale Market Makers, which are an integral component of the option marketplace, but have been decreasing in number in recent years, due to industry consolidation and lower market maker profitability. Since these smaller-scale Market Makers utilize less Exchange capacity due to lower overall volume executed, the Exchange believes it is reasonable and equitable to offer such Market Makers a lower fixed cost. The Exchange notes that the Exchange’s affiliate, MIAX, provides a similar alternative lower Trading Permit fee for Market Makers who quote the entire MIAX market (or substantial amount of the MIAX market), as objectively measured by either number of classes assigned or

national ADV, but who do not otherwise execute a significant amount of volume on MIAx.<sup>21</sup> The Exchange also notes that other options exchanges assess certain of their membership fees at different rates, based upon a member's participation on that exchange,<sup>22</sup> and, as such, this concept is not new or novel. The proposed changes to the Trading Permit fees for Market Makers who fall within the 3<sup>rd</sup> and 4<sup>th</sup> levels of the fee table are based upon a business determination of current Market Maker assignments and trading volume.

MIAx Emerald 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 requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among members and markets. MIAx Emerald believes this high standard is especially important when an exchange imposes various access fees for market participants to access an exchange's marketplace. MIAx Emerald deems Trading Permit fees to be access fees. It records these fees as part of its "Access Fees" revenue in its financial statements. The Exchange believes that it is important to demonstrate that these fees are based on its costs and reasonable business needs. The Exchange believes the Proposed

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<sup>21</sup> See supra note 18.

<sup>22</sup> See e.g., NYSE Arca Options Fees and Charges, p.1 (assessing market makers \$6,000 for up to 175 option issues, an additional \$5,000 for up to 350 option issues, an additional \$4,000 for up to 1,000 option issues, an additional \$3,000 for all option issues on the exchange, and an additional \$1,000 for the fifth trading permit and for each trading permit thereafter); NYSE American Options Fee Schedule, p. 23 (assessing market makers \$8,000 for up to 60 plus the bottom 45% of option issues, an additional \$6,000 for up to 150 plus the bottom 45% of option issues, an additional \$5,000 for up to 500 plus the bottom 45% of option issues, and additional \$4,000 for up to 1,100 plus the bottom 45% of option issues, an additional \$3,000 for all issues traded on the exchange, and an additional \$2,000 for 6<sup>th</sup> to 9<sup>th</sup> ATPs; plus an addition fee for premium products). See also Cboe BZX Options Exchange ("BZX Options") assesses the Participant Fee, which is a membership fee, according to a member's ADV. See Cboe BZX Options Exchange Fee Schedule under "Membership Fees". The Participant Fee is \$500 if the member ADV is less than 5000 contracts and \$1,000 if the member ADV is equal to or greater than 5000 contracts. Id.

Access Fees will allow the Exchange to offset expense the Exchange has and will incur, and that the Exchange is providing sufficient transparency (as described below) into how the Exchange determined to charge such fees. Accordingly, the Exchange is providing an analysis of its revenues, costs, and profitability associated with the Proposed Access Fees. This analysis includes information regarding its methodology for determining the costs and revenues associated with the Proposed Access Fees.

In order to determine the Exchange's costs to provide the access services associated with the Proposed Access Fees, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the Proposed Access Fees, and, if such expense did so relate, what portion (or percentage) of such expense actually supports the access services. The sum of all such portions of expenses represents the total cost of the Exchange to provide the access services associated with the Proposed Access Fees. For the avoidance of doubt, no expense amount was allocated twice. The Exchange is also providing detailed information regarding the Exchange's cost allocation methodology – namely, information that explains the Exchange's rationale for determining that it was reasonable to allocate certain expenses described in this filing towards the cost to the Exchange to provide the access services associated with the Proposed Access Fees.

In order to determine the Exchange's projected revenues associated with the Proposed Access Fees, the Exchange analyzed the number of Members currently utilizing the Trading Permits, and, utilizing a recent monthly billing cycle representative of 2020 monthly revenue, extrapolated annualized revenue on a going-forward basis. The Exchange does not believe it is appropriate to factor into its analysis future revenue growth or decline into its projections for purposes of these calculations, given the uncertainty of such projections due to the continually

changing access needs of market participants, discounts that can be achieved due to lower trading volume and vice versa, market participant consolidation, etc. Additionally, the Exchange similarly does not factor into its analysis future cost growth or decline. The Exchange is presenting its revenue and expense associated with the Proposed Access Fees in this filing in a manner that is consistent with how the Exchange presents its revenue and expense in its Audited Unconsolidated Financial Statements. The Exchange's most recent Audited Unconsolidated Financial Statement is for 2019. However, since the revenue and expense associated with the Proposed Access Fees were not in place in 2019 or for the first three quarters of 2020, the Exchange believes its 2019 Audited Unconsolidated Financial Statement is not useful for analyzing the reasonableness of the total annual revenue and costs associated with the Proposed Access Fees. Accordingly, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 revenue and costs, as described herein, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements. Based on this analysis, the Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit when comparing the Exchange's total annual expense associated with providing the services associated with the Proposed Access Fees versus the total projected annual revenue the Exchange will collect for providing those services.

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On March 29, 2019, the Commission issued its Order Disapproving Proposed Rule Changes to Amend the Fee Schedule on the BOX Market LLC Options Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX

Network (the “BOX Order”).<sup>23</sup> On May 21, 2019, the Commission issued the Staff Guidance on SRO Rule Filings Relating to Fees.<sup>24</sup> Accordingly, the Exchange believes that the Proposed Access Fees are consistent with the Act because they (i) are reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) are supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable because they not result in excessive pricing or supra-competitive profit; and (iv) utilize a cost-based justification framework that is substantially similar to a framework previously used by the Exchange to establish other non-transaction fees. Accordingly, the Exchange believes that the Commission should find that the Proposed Access Fees are consistent with the Act.

The proposed rule change is immediately effective upon filing with the Commission pursuant to Section 19(b)(3)(A) of the Act.

## 2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act<sup>25</sup> in general, and furthers the objectives of Section 6(b)(4) of the Act<sup>26</sup> in particular, in that it is an equitable allocation of reasonable dues, fees and other charges among its members and issuers and other persons using its facilities. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free

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<sup>23</sup> 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).

<sup>24</sup> See Staff Guidance on SRO Rule Filings Relating to Fees (May 21, 2019), at <https://www.sec.gov/tm/staff-guidance-sro-rule-filings-fees> (the “Guidance”).

<sup>25</sup> 15 U.S.C. 78f(b).

<sup>26</sup> 15 U.S.C. 78f(b)(4) and (5).

and open market and a national market system, and, in general to protect investors and the public interest and is not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange launched trading on March 1, 2019. For the month of December 2020, the Exchange had only a 3.58% market share of the U.S. options industry.<sup>27</sup> The Exchange is not aware of any evidence that a market share of approximately 3.6% provides the Exchange with anti-competitive pricing power. If the Exchange were to attempt to establish unreasonable pricing, then no market participant would join or connect, and existing market participants would disconnect.

Separately, the Exchange is not aware of any reason why market participants 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 participant, did not make business or economic sense for such market participant to access such exchange. No options market participant is required by rule, regulation, or competitive forces to be a Member of the Exchange. As evidence of the fact that market participants can and do drop their access to exchanges based on non-transaction fee pricing, R2G Services LLC (“R2G”) filed a comment letter after BOX’s proposed rule changes to increase its connectivity fees (SR-BOX-2018-24, SR-BOX-2018-37, and SR-BOX-2019-04). The R2G Letter stated, “[w]hen BOX instituted a \$10,000/month price increase for connectivity; we had no choice but to terminate connectivity into them as well as terminate our market data relationship. The cost benefit analysis just didn’t make any sense for us at those new levels.” Since the Exchange

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<sup>27</sup> See The Options Clearing Corporation (“OCC”) publishes options and futures volume in a variety of formats, including daily and monthly volume by exchange, available here: <https://www.theocc.com/market-data/volume/default.jsp>.

issued its notice instituting the Proposed Access Fees, one Member dropped its access to the Exchange as a result of the Proposed Access Fees. Accordingly, these examples show that if an exchange sets too high of a fee for connectivity and/or other non-transaction fees for its relevant marketplace, market participants can choose to drop their access to such exchange.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the Proposed Access Fees will not result in excessive or supra-competitive profit. The costs associated with providing access to Exchange Members and non-Members, as well as the general expansion of a state-of-the-art infrastructure, are extensive, have increased year-over-year, and are projected to increase year-over-year in the future. In particular, the Exchange has experienced a material increase in its costs in 2020, in connection with a project to make its network environment more transparent and deterministic, based on customer demand. This project will allow the Exchange to enhance its network architecture with the intent of ensuring a best-in-class, transparent and deterministic trading system while maintaining its industry leading latency and throughput capabilities. In order to provide this greater amount of transparency and higher determinism, MIAX Emerald has made significant capital expenditures (“CapEx”), incurred increased ongoing operational expenditures (“OpEx”), and undertaken additional engineering research and development (“R&D”) in the following areas: (i) implementing an improved network design to ensure the minimum latency between multicast market data signals disseminated by the Exchange across the extranet switches, improving the unicast jitter profile to reduce the occurrence of message sequence inversions from Members to the Exchange quoting gateway processors, and introducing a new optical fiber network infrastructure that ensures the optical fiber path for participants within extremely tight tolerances; (ii) introducing a re-architected and engineered participant quoting gateway that ensures the delivery of messages to the match engine with absolute determinism,

eliminating the message processing inversions that can occur with messages received nanoseconds apart; and (iii) designing an improved monitoring platform to better measure the performance of the network and systems at extremely tight tolerances and to provide Members with reporting on the performance of their systems. The CapEx associated with only phase 1 of this project in 2020 was approximately \$1.85 million. This expense does not include the significant increase in employee time and other resources necessary to maintain and service this network, which expense is captured in the operating expense discussed below. This project, which results in a material increase in expense of the Exchange, is, among other things, intended to enhance the overall trading experience at the Exchange, making it a venue that market participants want to access.

The Exchange believes the proposed Trading Permit fees are equitably allocated between EEMs and Market Makers, when these fees are viewed in the context of the overall trading volume on the Exchange, as Market Makers: (1) consume the most bandwidth and resources of the network; (2) transact the vast majority of the volume on the Exchange; and (3) require the high touch network support services provided by the Exchange and its staff, including more costly network monitoring, reporting and support services, resulting in a much higher cost to the Exchange. Further, the Exchange believes the Proposed Access Fees are equitably allocated because of customer demand for an even more transparent and deterministic network, as described above, which has resulted in higher CapEx, increasingly higher OpEx, and increased costs to engineering R&D. The Proposed Access Fees are equitably allocated in this regard because the majority of customer demand is coming from Market Makers, who transact the vast majority of volume on the Exchange. Accordingly, the Exchange believes it is reasonable, equitably allocated and not unfairly discriminatory to recoup the majority of its costs associated with providing Trading Permits from Market Makers quoting the most classes on the Exchange.



The Exchange believes that the proposed Trading Permit fees are equitably allocated between EEMs and Market Makers, as Market Makers consume the most bandwidth and resources of the network. Specifically, the Exchange notes that these users account for approximately greater than 99% of message traffic over the network, while EEMs account for approximately less than 1% of message traffic over the network. In the Exchange's experience, most EEMs do not have a business need for the high performance network solutions required by Market Makers. 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. On an average day, the Exchange handles over approximately 3 billion total messages. Of those, Market Makers generate approximately 3 billion messages, and EEMs generate 500,000 messages. However, in order 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 expense for storage and network transport capabilities. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that Market Makers pay for the vast majority of the access costs designed to be recovered via Trading Permit fees.

In order to provide more detail and to quantify the Exchange's costs associated with providing access to the Exchange in general, the Exchange notes that there are material costs associated with providing the infrastructure and headcount to fully-support access to the Exchange. The Exchange incurs technology expense related to establishing and maintaining Information Security services, enhanced network monitoring and customer reporting, as well as Regulation SCI mandated processes, associated with its network technology. While some of

the expense is fixed, much of the expense is not fixed, and thus increases as the services associated with the Proposed Access Fees increase. For example, new Market Makers to the Exchange may require the purchase of additional hardware to support those Members as well as enhanced monitoring and reporting of customer performance that MIAX Emerald and its affiliates provide. Further, as the total number Market Makers increase, MIAX Emerald and its affiliates may need to increase their data center footprint and consume more power, resulting in increased costs charged by their third-party data center provider. Accordingly, the cost to MIAX Emerald and its affiliates to provide access to its Members is not fixed. The Exchange believes the Proposed Access Fees are reasonable in order to offset a portion of the costs to the Exchange associated with providing access to its network infrastructure.

Market Makers account for the vast majority of network capacity utilization and volume executed on the Exchange, as discussed throughout. Accordingly, the Exchange believes that it is reasonable and appropriate to charge Market Makers more than EEMs for Trading Permits to access the Exchange.

The Exchange only has four primary sources of revenue: transaction fees, access fees (which includes the Proposed Access Fees), regulatory fees, and market data fees. Accordingly, the Exchange must cover all of its expenses from these four primary sources of revenue.

The Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit, when comparing the total annual expense that the Exchange projects to incur in connection with providing these access services versus the total annual revenue that the Exchange projects to collect in connection with

the associated Trading Permit fees. For 2020<sup>28</sup>, the total annual expense for providing the access services associated with the Proposed Access Fees for MIAX Emerald is projected to be approximately \$2.5 million. The \$2.5 million in projected total annual expense is comprised of the following, all of which are directly related to the access services associated with the Proposed Access Fees: (1) third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services; and (2) internal expense, relating to the internal costs of MIAX Emerald to provide the services associated with the Proposed Access Fees. As noted above, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 revenue and costs, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements.<sup>29</sup> The \$2.5 million in projected total annual expense is directly related to the access services associated with the Proposed Access Fees, and not any other product or service offered by the Exchange. It does not include general costs of operating matching systems and other trading technology, and no expense amount was allocated twice.

As discussed, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger (this includes over 150 separate and distinct expense items) to determine whether each such expense relates to the access services associated with the Proposed Access Fees, and, if such expense did so relate,

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<sup>28</sup> The Exchange has not yet finalized its 2020 year end results.

<sup>29</sup> For example, the Exchange previously noted that all third-party expense described in its prior fee filing was contained in the information technology and communication costs line item under the section titled "Operating Expenses Incurred Directly or Allocated From Parent," in the Exchange's 2019 Form 1 Amendment containing its financial statements for 2018. See Securities Exchange Act Release No. 87877 (December 31, 2019), 85 FR 738 (January 7, 2020) (SR-EMERALD-2019-39). Accordingly, the third-part expense described in this filing is attributed to the same line item for the Exchange's 2020 Form 1 Amendment, which will be filed in 2021.

what portion (or percentage) of such expense actually supports those services, and thus bears a relationship that is, “in nature and closeness,” directly related to those services. The sum of all such portions of expenses represents the total cost of the Exchange to provide access services associated with the Proposed Access Fees.

For 2020, total third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services for the Exchange to be able to provide the access services associated with the Proposed Access Fees, is projected to be \$190,621. This includes, but is not limited to, a portion of the fees paid to: (1) Equinix, for data center services, for the primary, secondary, and disaster recovery locations of the MIAX Emerald trading system infrastructure; (2) Zayo Group Holdings, Inc. (“Zayo”) for network services (fiber and bandwidth products and services) linking MIAX Emerald’s office locations in Princeton, NJ and Miami, FL to all data center locations; (3) Secure Financial Transaction Infrastructure (“SFTI”)<sup>30</sup>, which supports connectivity and feeds for the entire U.S. options industry; (4) various other services providers (including Thompson Reuters, NYSE, Nasdaq, and Internap), which provide content, connectivity services, and infrastructure services for critical components of options connectivity and network services; and (5) various other hardware and software providers (including Dell and Cisco, which support the production environment in which Members connect to the network to trade, receive market data, etc.).

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<sup>30</sup> In fact, on October 22, 2019, the Exchange was notified by SFTI that it is again raising its fees charged to the Exchange by approximately 11%, without having to show that such fee change complies with the Act by being reasonable, equitably allocated, and not unfairly discriminatory. It is unfathomable to the Exchange that, given the critical nature of the infrastructure services provided by SFTI, that its fees are not required to be rule-filed with the Commission pursuant to Section 19(b)(1) of the Act and Rule 19b-4 thereunder. See 15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively.

For clarity, only a portion of all fees paid to such third-parties is included in the third-party expense herein, and no expense amount is allocated twice. Accordingly, MIAX Emerald does not allocate its entire information technology and communication costs to the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate such third-party expense described above towards the total cost to the Exchange to provide the access services associated with the Proposed Access Fees. In particular, the Exchange believes it is reasonable to allocate the identified portion of the Equinix expense because Equinix operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. This includes, among other things, the necessary storage space, which continues to expand and increase in cost, power to operate the network infrastructure, and cooling apparatuses to ensure the Exchange's network infrastructure maintains stability. Without these services from Equinix, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the Equinix expense toward the cost of providing the access services associated with the Proposed Access Fees, only that portion which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 10% of the total Equinix expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portion of the Zayo expense because Zayo provides the internet, fiber and bandwidth connections with respect to the network, linking MIAX Emerald with its affiliates, MIAX and MIAX PEARL, LLC

(“MIAX PEARL”), as well as the data center and disaster recovery locations. As such, all of the trade data, including the billions of messages each day per exchange, flow through Zayo’s infrastructure over the Exchange’s network. Without these services from Zayo, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees. The Exchange did not allocate all of the Zayo expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to providing the Proposed Access Fees, approximately 1% of the total Zayo expense. The Exchange believes this allocation is reasonable because it represents the Exchange’s actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portions of the SFTI expense and various other service providers’ (including Thompson Reuters, NYSE, Nasdaq, and Internap) expense because those entities provide connectivity and feeds for the entire U.S. options industry, as well as the content, connectivity services, and infrastructure services for critical components of the network. Without these services from SFTI and various other service providers, the Exchange would not be able to operate and support the network and provide access to its Members and their customers. The Exchange did not allocate all of the SFTI and other service providers’ expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 1% of the total SFTI and other service providers’ expense. The Exchange believes this allocation is reasonable because it represents the Exchange’s actual cost to provide the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate the identified portion of the other hardware and software provider expense because this includes costs for dedicated hardware licenses for switches and servers, as well as dedicated software licenses for security monitoring and reporting across the network. Without this hardware and software, the Exchange would not be able to operate and support the network and provide access to its Members and their customers. The Exchange did not allocate all of the hardware and software provider expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 10% of the total hardware and software provider expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees.

For 2020, total projected internal expense, relating to the internal costs of MIAX Emerald to provide the access services associated with the Proposed Access Fees, is projected to be \$2,046,137. This includes, but is not limited to, costs associated with: (1) employee compensation and benefits for full-time employees that support the access services associated with the Proposed Access Fees, including staff in network operations, trading operations, development, system operations, business, as well as staff in general corporate departments (such as legal, regulatory, and finance) that support those employees and functions (including an increase as a result of the higher determinism project); (2) depreciation and amortization of hardware and software used to provide the access services associated with the Proposed Access Fees, including equipment, servers, cabling, purchased software and internally developed software used in the production environment to support the network for trading; and (3) occupancy costs for leased office space for staff that provide the access services associated with

the Proposed Access Fees. The breakdown of these costs is more fully-described below. For clarity, only a portion of all such internal expenses are included in the internal expense herein, and no expense amount is allocated twice. Accordingly, MIAX Emerald does not allocate its entire costs contained in those items to the access services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate such internal expense described above towards the total cost to the Exchange to provide the access services associated with the Proposed Access Fees. In particular, MIAX Emerald's employee compensation and benefits expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$1,403,101, which is only a portion of the \$9,354,009 total projected expense for employee compensation and benefits. The Exchange believes it is reasonable to allocate the identified portion of such expense because this includes the time spent by employees of several departments, including Technology, Back Office, Systems Operations, Networking, Business Strategy Development (who create the business requirement documents that the Technology staff use to develop network features and enhancements), Trade Operations, Finance (who provide billing and accounting services relating to the network), and Legal (who provide legal services relating to the network, such as rule filings and various license agreements and other contracts). As part of the extensive cost review conducted by the Exchange, the Exchange reviewed the amount of time spent by each employee on matters relating to the provision of access services associated with the Proposed Access Fees. Without these employees, the Exchange would not be able to provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the employee compensation and benefits expense toward the cost of the access services associated with the Proposed Access Fees, only the portions which the Exchange identified as being specifically



mapped to providing the access services associated with the Proposed Access Fees, approximately 15% of the total employee compensation and benefits expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX Emerald's depreciation and amortization expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$571,888, which is only a portion of the \$3,812,590 total projected expense for depreciation and amortization. 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 and provide the access services associated with the Proposed Access Fees. Without this equipment, the Exchange would not be able to operate the network and provide the access services associated with the Proposed Access Fees to its Members and their customers. The Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to providing the access services associated with the Proposed Access Fees, approximately 15% of the total depreciation and amortization expense, as these access services would not be possible without relying on such. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX Emerald's occupancy expense relating to providing the access services associated with the Proposed Access Fees is projected to be \$71,148, which is only a portion of the \$474,323 total projected expense for occupancy. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense represents the portion of the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the network, including providing the access services associated with the Proposed Access Fees. This amount consists primarily of rent for the Exchange's Princeton, NJ office, as well as various related costs, such as physical security, property management fees, property taxes, and utilities. The Exchange operates its Network Operations Center ("NOC") and Security Operations Center ("SOC") from its Princeton, New Jersey office location. A centralized office space is required to house the staff that operates and supports the network. The Exchange currently has approximately 150 employees. Approximately two-thirds of the Exchange's staff are in the Technology department, and the majority of those staff have some role in the operation and performance of the access services associated with the proposed Trading Permit fees. Without this office space, the Exchange would not be able to operate and support the network and provide the access services associated with the Proposed Access Fees to its Members and their customers. Accordingly, the Exchange believes it is reasonable to allocate the identified portion of its occupancy expense because such amount represents the Exchange's actual cost to house the equipment and personnel who operate and support the Exchange's network infrastructure and the access services associated with the Proposed Access Fees. The Exchange did not allocate all of the occupancy expense toward the cost of providing the access services associated with the Proposed Access Fees, only the portion which the Exchange identified as being specifically mapped to operating and supporting the network, approximately 15% of the total occupancy expense. The Exchange believes this allocation is

reasonable because it represents the Exchange's cost to provide the access services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange notes that a material portion of its total overall expense is allocated to the provision of access services (including connectivity, ports, and trading permits). The Exchange believes this is reasonable and in line, as the Exchange operates a technology-based business that differentiates itself from its competitors based on its trading systems that rely on access to a high performance network, resulting in significant technology expense. Over two-thirds of Exchange staff are technology-related employees. The majority of the Exchange's expense is technology-based. As described above, the Exchange has only four primary sources of fees in to recover its costs, thus the Exchange believes it is reasonable to allocate a material portion of its total overall expense towards access fees.

Accordingly, based on the facts and circumstances presented, the Exchange believes that its provision of the access services associated with the Proposed Access Fees will not result in excessive pricing or supra-competitive profit. To illustrate, on a going-forward, fully-annualized basis, the Exchange projects that its annualized revenue for providing the access services associated with the Proposed Access Fees would be approximately \$2.5 million per annum, based on a recent billing cycle. The Exchange projects that its annualized expense for providing the access services associated with the Proposed Access Fees would be approximately \$2,236,758 per annum. Accordingly, on a fully-annualized basis, the Exchange believes its total projected revenue for the providing the access services associated with the Proposed Access Fees will not result in excessive pricing or supra-competitive profit, as the Exchange will make only a 10% profit margin on the Proposed Access Fees (\$2.5 million – \$2,236,758 = \$263,242 per annum). The Exchange notes that the fee charged to each Market Maker for Trading Permits can vary from month to month depending on the number of classes

in which the Market Maker was assigned to quote on any given day within the calendar month, and upon certain class volume percentages. The Exchange also provides a further discount for a Market Maker's Trading Permit fees if the Market Maker's total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month. As such, the revenue projection is not a static number, with monthly Trading Permit fees likely to fluctuate month to month.

For the avoidance of doubt, none of the expenses included herein relating to the access services associated with the Proposed Access Fees relate to the provision of any other services offered by MIAX Emerald. Stated differently, no expense amount of the Exchange is allocated twice. The Exchange notes that, with respect to the MIAX Emerald expenses included herein, those expenses only cover the MIAX Emerald market; expenses associated with the Exchange's affiliate exchanges, MIAX and MIAX PEARL, are accounted for separately and are not included within the scope of this filing. Stated differently, no expense amount of the Exchange is also allocated to MIAX or MIAX PEARL.

The Exchange believes it is reasonable, equitable and not unfairly discriminatory to allocate the respective percentages of each expense category described above towards the total cost to the Exchange of operating and supporting the network, including providing the access services associated with the Proposed Access Fees because the Exchange performed a line-by-line item analysis of all the expenses of the Exchange, and has determined the expenses that directly relate to providing access to the Exchange. Further, the Exchange notes that, without the specific third-party and internal items listed above, the Exchange would not be able to provide the access services associated with the Proposed Access Fees to its Members and their customers. Each of these expense items, including physical hardware, software, employee

compensation and benefits, occupancy costs, and the depreciation and amortization of equipment, have been identified through a line-by-line item analysis to be integral to providing access services. The Proposed Access Fees are intended to recover the Exchange's costs of providing access to Exchange Systems. Accordingly, the Exchange believes that the Proposed Access Fees are fair and reasonable because they do not result in excessive pricing or supra-competitive profit, when comparing the actual costs to the Exchange versus the projected annual revenue from the Proposed Access Fees.

Further, the Exchange no longer believes it is necessary to waive these fees to attract market participants to MIAX Emerald since this market is now established and MIAX Emerald no longer needs to rely on such waivers to attract market participants. The Exchange believes that the proposal is equitable and not unfairly discriminatory because the elimination of the fee waiver for the Proposed Access Fees will uniformly apply to all EEMs and Market Makers of the Exchange. The Exchange also notes that the Exchange's affiliate, MIAX, charges a similar, fixed trading permit fee to its EEMs, and a similar, varying trading permit fee to its Market Makers, based upon the number of assignments of option classes or the percentage of volume in option classes.<sup>31</sup>

The Exchange believes that the Proposed Access Fees are reasonable, equitable and not unfairly discriminatory because they are within the range of comparable fees at other competing options exchanges.<sup>32</sup> The Proposed Access Fees are fair and equitable and not unreasonably discriminatory because they apply equally to all Market Makers regardless of type and access to the Exchange is offered on terms that are not unfairly discriminatory. The Exchange designed the fee rates in order to provide objective criteria for Market Makers of different sizes and business

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<sup>31</sup> See supra note 18.

<sup>32</sup> See supra note 22.

models that best matches their quoting activity on the Exchange. The Exchange notes that trading volume and quoting activity in the options market tends to be concentrated in the top ranked options classes; with the vast majority of options classes being thinly quoted and traded. The Exchange believes that the proposed fee rates and criteria provide an objective and flexible framework that will encourage Market Makers to be assigned and quote in option classes with lower total national average daily volume while also equitably allocating the fees in a reasonable manner amongst Market Maker assignments to account for quoting and trading activity.

Finally, the Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive. In such an environment, the Exchange must continually adjust its fees for services and products, in addition to order flow, to remain competitive with other exchanges. The Exchange believes that the proposed changes reflect this competitive environment.

The Exchange also points out that it is not seeking to recoup any of its past costs associated with the provision of any Trading Permits during the Waiver Period. The Exchange currently has 35 Members,<sup>33</sup> all of whom did not pay Trading Permit fees during the Waiver Period from the time these firms all became Members of the Exchange. Further, the majority of firms that are Members of the Exchange's affiliate options exchanges, MIAX and MIAX PEARL, also became Members of those exchanges during similar Waiver Periods for the MIAX and MIAX PEARL Trading Permit fees. Accordingly, the Exchange (and MIAX and MIAX PEARL) have assumed approximately 100% of the costs associated with providing Trading Permits for the majority of Member firms of the Exchange, MIAX, and MIAX PEARL during their respective Waiver Periods. Accordingly, the Exchange believes that it is reasonable,

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<sup>33</sup> See <https://www.miaxoptions.com/exchange-members/emerald>.

equitable, and not unfairly discriminatory to now adopt Trading Permit fees that are reasonably related to (and designed to recover) the Exchange's cost associated with the provision of such Trading Permits.

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

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

Intra-Market Competition

The Exchange believes that the Proposed Access Fees do not place certain market participants at a relative disadvantage to other market participants because the Proposed Access Fees do not favor certain categories of market participants in a manner that would impose a burden on competition; rather, the fee rates are designed in order to provide objective criteria for Market Makers of different sizes and business models that best matches their quoting activity on the Exchange. The Exchange notes that trading volume and quoting activity in the options market tends to be concentrated in the top ranked options classes; with the vast majority of options classes being thinly quoted and traded. The Exchange believes that the proposed fee rates and criteria provide an objective and flexible framework that will encourage Market Makers to be assigned and quote in option classes with lower total national average daily volume while also equitably allocating the fees in a reasonable manner amongst Market Maker assignments to account for quoting and trading activity.

Inter-Market Competition

The Exchange believes the Proposed Access Fees do not place an undue burden on competition on other SROs that is not necessary or appropriate. In particular, options market participants are not forced to become members of all options exchanges. The Exchange notes that it has far less Members as compared to the much greater number of members at other

options exchanges. There are a number of large market makers and broker-dealers that are members of other options exchange but not Members of MIAX Emerald. The Exchange is also unaware of any assertion that its existing fee levels or the Proposed Access Fees would somehow unduly impair its competition with other options exchanges. To the contrary, if the fees charged are deemed too high by market participants, they can simply discontinue their membership with the Exchange.

The Exchange operates in a highly competitive market in which market participants can readily favor one of the 15 competing options venues if they deem fee levels at a particular venue to be excessive. Based on publicly-available information, and excluding index-based options, no single exchange has more than 16% market share. Therefore, no exchange possesses significant pricing power in the execution of multiply-listed equity and ETF options order flow. For the month of December 2020, the Exchange had a market share of approximately 3.6% of executed multiply-listed equity options<sup>34</sup> and the Exchange believes that the ever-shifting market share among exchanges from month to month demonstrates that market participants can discontinue or reduce use of certain categories of products, or shift order flow, in response to fee changes. In such an environment, the Exchange must continually adjust its fees and fee waivers to remain competitive with other exchanges and to attract order flow to the Exchange.

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

Written comments were neither solicited nor received.

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<sup>34</sup> See supra note 27.



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

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,<sup>35</sup> and Rule 19b-4(f)(2)<sup>36</sup> 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](mailto:rule-comments@sec.gov). Please include File Number SR-EMERALD-2021-03 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-EMERALD-2021-03. 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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<sup>35</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>36</sup> 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-EMERALD-2021-03 and should be submitted on or before [insert date 21 days from publication in the Federal Register]. For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>37</sup>

Vanessa Countryman  
Secretary

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<sup>37</sup> 17 CFR 200.30-3(a)(12).

**Exhibit 5**

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

## MIAX Emerald Fee Schedule

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### 3) Membership Fees

#### a) No Change.

#### b) Monthly Trading Permit Fee

MIAX Emerald will issue Trading Permits to Members that confer the ability to transact on MIAX Emerald. (For a complete description of MIAX Emerald Trading Permits, see MIAX Emerald Rule 200.) Members receiving Trading Permits during a particular calendar month will be assessed Trading Permit Fees according to the schedules below.

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee
Electronic Exchange Member	[Fee waived for the Waiver Period] <u>\$1,500.00</u>

Monthly Trading Permit Fees will be assessed with respect to EEMs (other than Clearing Firms) in any month the EEM is certified in the membership system and the EEM is credentialed to use one or more FIX Ports in the production environment.

Monthly Trading Permit Fees will be assessed with respect to EEM Clearing Firms in any month the Clearing Firm is certified in the membership system to clear transactions on the Exchange.

Monthly Trading Permit Fees will be assessed with respect to Market Makers in any month the Market Maker is certified in the membership system, is credentialed to use one or more MEI Ports in the production environment and is assigned to quote in one or more classes.

Notwithstanding the foregoing, the calculation of the Trading Permit Fee for the first month in which the Trading Permit is issued will be pro-rated based on the number of trading days on which the Trading Permit was in effect divided by the total number of trading days in that month multiplied by the monthly rate.

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee	Market Maker Assignments (the lesser of the applicable measurements below)	
		Per Class	% of National Average Daily Volume
Market Maker (includes RMM, LMM, PLMM)	[Fee waived for the Waiver Period] <u>\$7,000.00</u>	Up to 10 Classes	Up to 20% of Classes by volume

[Fee waived for the Waiver Period] <u>\$12,000.00</u>	Up to 40 Classes	Up to 35% of Classes by volume
[Fee waived for the Waiver Period] <u>\$17,000.00</u> ■	Up to 100 Classes	Up to 50% of Classes by volume
[Fee waived for the Waiver Period] <u>\$22,000.00</u> ■	Over 100 Classes	Over 50% of Classes by volume up to all Classes listed on MIAX Emerald

- For these Monthly MIAX Emerald Trading Permit tier levels, if the Market Maker’s total monthly executed volume during the relevant month is less than 0.025% of the total monthly executed volume reported by OCC in the customer account type for MIAX Emerald-listed option classes for that month, then the fee will be \$15,500 instead of the fee otherwise applicable to such level.

For the calculation of the monthly Market Maker Trading Permit Fees, the number of classes is defined as the greatest number of classes the Market Maker was assigned to quote in on any given day within the calendar month and the class volume percentage is based on the total national average daily volume in classes listed on MIAX Emerald in the prior calendar quarter. Newly listed option classes are excluded from the calculation of the monthly Market Maker Trading Permit Fee until the calendar quarter following their listing, at which time the newly listed option classes will be included in both the per class count and the percentage of total national average daily volume. The Exchange will assess MIAX Emerald Market Makers the monthly Market Maker Trading Permit Fee based on the greatest number of classes listed on MIAX Emerald that the MIAX Emerald Market Maker was assigned to quote in on any given day within a calendar month and the applicable fee rate that is the lesser of either the per class basis or percentage of total national average daily volume measurement.

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