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

File No. \* SR 2022 - \* 18

Amendment No. (req. for Amendments \*)

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"/>
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Pilot <input type="checkbox"/>	Extension of Time Period for Commission Action * <input type="checkbox"/>	Date Expires * <input type="text"/>	Rule <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)		
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Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010  
Section 806(e)(1) \*

Section 806(e)(2) \*

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

Exhibit 2 Sent As Paper Document

Exhibit 3 Sent As Paper Document

**Description**

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

Proposal to amend the Fee Schedule to establish fees for the cToM data feed.

**Contact Information**

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

First Name \* Michael Last Name \* Slade

Title \* AVP, Associate Counsel

E-mail \* mslade@miami-holdings.com

Telephone \* (609) 897-8499 Fax

**Signature**

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

Date 04/29/2022 (Title \*)

By Michael Slade AVP, Associate Counsel  
(Name \*)

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

*Michael Slade* Date: 2022.04.29  
14:45:04 -04'00'

Required fields are shown with yellow backgrounds and astericks.

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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

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

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SR-EMERALD-2022-18 - 19b4 (cToM

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

**Exhibit 1 - Notice of Proposed Rule Change \***

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SR-EMERALD-2022-18- Exhibit 1.doc

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

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

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

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

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

Exhibit Sent As Paper Document

**Exhibit 3 - Form, Report, or Questionnaire**

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

Exhibit Sent As Paper Document

**Exhibit 4 - Marked Copies**

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

**Exhibit 5 - Proposed Rule Text**

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SR-EMERALD-2022-18 - Exhibit 5.doc

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” or “Exchange Act”)<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> proposes to amend the MIAX Emerald Options Exchange Fee Schedule (the “Fee Schedule”) to establish fees for the market data product known as MIAX Emerald Complex Top of Market (“cToM”).

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

(b) Inapplicable.

(c) Inapplicable.

## 2. **Procedures of the Self-Regulatory Organization**

The proposed rule change was approved by the Chief Executive Officer of the Exchange or his designee pursuant to authority delegated by the Exchange Board of Directors on January 28, 2021. Exchange staff will advise the Board of Directors of any action taken pursuant to delegated authority. No other action by the Exchange is necessary for the filing of the proposed rule change.

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

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

a. Purpose

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

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

The Exchange previously adopted rules governing the trading of Complex Orders<sup>3</sup> on the MIAX Emerald System<sup>4</sup> in 2018,<sup>5</sup> ahead of the Exchange's planned launch, which took place on March 1, 2019. Shortly thereafter, the Exchange adopted the market data product, cToM, and provided cToM free of charge for over two years to incentivize market participants to subscribe and absorbed all costs associated with producing the cToM data product.<sup>6</sup> As discussed more fully below, the Exchange recently calculated its annual aggregate costs for providing cToM to subscribers to be \$236,284, or \$19,690 per month. Because the Exchange has offered cToM free of charge, the Exchange has borne 100% of the costs for the compilation and dissemination of cToM to subscribers. The Exchange now proposes to amend Section 6(a) of the Fee Schedule to establish fees for the cToM data product in order to recoup a portion, but not all, of these ongoing costs.

#### Background

In summary, cToM provides subscribers with the same information as the MIAX Emerald Top of Market ("ToM") data product as it relates to the Strategy Book,<sup>7</sup> *i.e.*, the

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<sup>3</sup> See Exchange Rule 518(a)(5) for the definition of Complex Orders.

<sup>4</sup> The term "System" means the automated trading system used by the Exchange for the trading of securities. See Exchange Rule 100.

<sup>5</sup> See Securities Exchange Act Release Nos. 84891 (December 20, 2018), 83 FR 67421 (December 28, 2018) (In the Matter of the Application of MIAX EMERALD, LLC for Registration as a National Securities Exchange; Findings, Opinion, and Order of the Commission); and 85345 (March 18, 2019), 84 FR 10848 (March 22, 2019) (SR-EMERALD-2019-13) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Exchange Rule 518, Complex Orders).

<sup>6</sup> See Securities Exchange Act Release No. 85207 (February 27, 2019), 84 FR 7963 (March 5, 2019) (SR-EMERALD-2019-09) (providing a complete description of the cToM data feed).

<sup>7</sup> The "Strategy Book" is the Exchange's electronic book of complex orders and complex quotes. See Exchange Rule 518(a)(17).

Exchange's best bid and offer for a complex strategy, with aggregate size, based on displayable order and quoting interest in the complex strategy on the Exchange. However, cToM provides subscribers with the following additional information that is not included in ToM: (i) the identification of the complex strategies currently trading on the Exchange; (ii) complex strategy last sale information; and (iii) the status of securities underlying the complex strategy (e.g., halted, open, or resumed). cToM is therefore a distinct market data product from ToM in that it includes additional information that is not available to subscribers that receive only the ToM data feed. ToM subscribers are not required to subscribe to cToM, and cToM subscribers are not required to subscribe to ToM.<sup>8</sup>

### Proposal

The Exchange now proposes to amend Section 6(a) of the Fee Schedule to charge monthly fees to Distributors<sup>9</sup> of cToM. Specifically, the Exchange proposes to assess Internal Distributors \$1,250 per month and External Distributors \$1,750 per month for the cToM data feed.<sup>10</sup> The proposed fees are identical to the fees that the Exchange, and its affiliate, Miami International Securities Exchange ("MIAX"), currently charge for their ToM data products, both of which were previously published by the Commission and remain in effect today.<sup>11</sup> The

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<sup>8</sup> See supra note 6.

<sup>9</sup> A "Distributor" of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. See Section 6(a) of the Fee Schedule.

<sup>10</sup> The Exchange also proposes to make a minor related change to remove "(as applicable)" from the explanatory paragraph in Section 6(a) as it will not change fees for both the ToM and cToM data feeds.

<sup>11</sup> See Securities Exchange Act Release Nos. 91145 (February 17, 2021), 86 FR 11033 (February 23, 2021) (SR-EMERALD-2021-05); 73942 (December 24, 2014), 80 FR 71 (January 2, 2015) (SR-MIAX-2014-66).

Exchange does not propose to adopt redistribution fees for the cToM data feed. However, the recipient of the cToM data feed would be required to become a data subscriber and would be subject to the applicable fees. The Exchange also does not propose to charge any additional fees based on a subscriber's use of the cToM data feed, e.g., displayed versus non-displayed use, and does not propose to impose any individual per user fees.

As it does today for ToM, the Exchange proposes to assess cToM fees on Internal and External Distributors in each month the Distributor is credentialed to use cToM in the production environment. Also, as the Exchange does today for ToM, market data fees for cToM will be reduced for new Distributors for the first month during which they subscribe to cToM, based on the number of trading days that have been held during the month prior to the date on which that subscriber has been credentialed to use cToM in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees listed in the table in Section 6)a) of the Fee Schedule, which is the percentage of the number of trading days remaining in the affected calendar month as of the date on which they have been credentialed to use cToM in the production environment, divided by the total number of trading days in the affected calendar month.

The Exchange believes that other exchanges' fees for complex market data are useful examples and provides the below table for comparison purposes only to show how the Exchange's proposed fees compare to fees currently charged by other options exchanges for similar complex market data. As shown by the below table, the Exchange's proposed fees for cToM are similar to or less than fees charged for similar data products provided by other options exchanges.

Exchange	Monthly Fee
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MIAX Emerald (as proposed)	\$1,250 – Internal Distributor \$1,750 – External Distributor
NYSE American, LLC (“Amex”) <sup>12</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
NYSE Arca, Inc. (“Arca”) <sup>13</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
NASDAQ PHLX LLC (“PHLX”) <sup>14</sup>	\$3,000 – Internal Distributor \$3,500 – External Distributor

The Exchange also proposes to amend the paragraph below the table of fees for ToM and cToM in Section 6)a) of the Fee Schedule to make a minor, non-substantive correction by deleting the phrase “(as applicable)” in the first sentence following the table of fees for ToM and cToM. The purpose of this proposed change is to remove unnecessary text from the Fee Schedule.

cToM Content is Available from Alternative Sources

cToM is also not the exclusive source for Complex Order information from the Exchange and market participants may choose to subscribe to the Exchange’s other data products to receive such information. It is a business decision of market participants whether to subscribe to the

<sup>12</sup> See NYSE American Options Proprietary Market Data Fees, American Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_American\\_Options\\_Market\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_American_Options_Market_Data_Fee_Schedule.pdf).

<sup>13</sup> See NYSE Arca Options Proprietary Market Data Fees, Arca Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_Arca\\_Options\\_Proprietary\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_Arca_Options_Proprietary_Data_Fee_Schedule.pdf).

<sup>14</sup> See PHLX Price List – U.S. Derivatives Data, PHLX Orders Fees, at <http://www.nasdaqtrader.com/Trader.aspx?id=DPPriceListOptions#PHLX>.

cToM data product or not. Market participants that choose not to subscribe to cToM can derive much, if not all, of the same information provided in the cToM feed from other Exchange sources, including, for example, the MIAX Emerald Order Feed (“MOR”).<sup>15</sup> The following cToM information is provided to subscribers of MOR: the Exchange’s best bid and offer for a complex strategy, with aggregate size, based on displayable order and quoting interest in the complex strategy on the Exchange; the identification of the complex strategies currently trading on the Exchange; and the status of securities underlying the complex strategy (e.g., halted, open, or resumed). In addition to the cToM information contained in MOR, complex strategy last sale information can be derived from the Exchange’s ToM data feed. Specifically, market participants may deduce that last sale information for multiple trades in related options series that are disseminated via the ToM data feed with the same timestamp are likely part of a Complex Order transaction and last sale.

### Implementation

The proposed rule change will be effective May 2, 2022. The Exchange initially filed this proposal on June 30, 2021 with the proposed fees effective beginning July 1, 2021.<sup>16</sup> Between August 2021 and February 2022, the Exchange withdrew and refiled the proposed rule change, each time to meaningfully attempt to provide additional justification for the proposed fee

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<sup>15</sup> See MIAX website, Market Data & Offerings, at <https://www.miaxoptions.com/market-data-offerings> (last visited April 1, 2022). In general, MOR provides real-time ultra-low latency updates on the following information: new Simple Orders added to the MIAX Emerald Order Book; updates to Simple Orders resting on the MIAX Emerald Order Book; new Complex Orders added to the Strategy Book (i.e., the book of Complex Orders); updates to Complex Orders resting on the Strategy Book; MIAX Emerald listed series updates; MIAX Emerald Complex Strategy definitions; the state of the MIAX Emerald System; and MIAX Emerald’s underlying trading state.

<sup>16</sup> See Securities Exchange Act Release No. 92358 (July 9, 2021), 86 FR 37361 (July 15, 2021) (SR-EMERALD-2021-21).

changes, provide enhanced details regarding the Exchange's cost methodology, and address questions contained in the Commission's suspension order.<sup>17</sup> No comment letters were submitted on any filings made to date regarding the proposed cToM fees. The Commission again suspended the proposed fees on February 15, 2022.<sup>18</sup> The Exchange then provided the cToM data feed free of charge for the month of March 2022 and absorbed all associated costs.

On March 30, 2022, the Exchange withdrew the proposed rule change that was previously suspended by the Commission on February 15, 2022. After providing the cToM data product free of charge for the month of March 2022, on April 1, 2022, the Exchange submitted a revised proposal for immediate effectiveness. This revised proposal provided additional details regarding the Exchange's cost methodology, revenue projections, and responded to various questions and requests for information contained in the Commission's suspension orders. The Exchange withdrew that revised proposal and submitted a further revised filing on April 29, 2022. The newest revised filing builds upon the additional details regarding the Exchange's cost methodology and revenue projections, as well as the Exchange's responses to various questions and requests for information contained in the Commission's suspension orders.

b. Statutory Basis

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<sup>17</sup> See Securities Exchange Act Release Nos. 92789 (August 27, 2021), 86 FR 49364 (September 2, 2021) (SR-MIAX-2021-28, SR-EMERALD-2021-21) ("Suspension Order 1"); 93471 (October 29, 2021), 86 FR 60947 (November 4, 2021) (SR-EMERALD-2021-32); 93427 (October 26, 2021), 86 FR 60310 (November 1, 2021) (SR-EMERALD-2021-34); and 93811 (December 17, 2021), 86 FR 73051 (December 23, 2021) (SR-EMERALD-2021-44).

<sup>18</sup> See Securities Exchange Act Release No. 94263 (February 15, 2022), 87 FR 9766 (February 22, 2022) (SR-EMERALD-2022-06) ("Suspension Order 2").

The Exchange believes that the proposed fees are consistent with Section 6(b) of the Act<sup>19</sup> in general, and furthers the objectives of Section 6(b)(4) of the Act<sup>20</sup> in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Members and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposed fees further the objectives of Section 6(b)(5) of the Act<sup>21</sup> in that they are designed to promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general protect investors and the public interest and are not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange believes that the information provided to justify the proposed fees meets or exceeds the amount of detail required in respect of proposed fee changes as set forth in recent Commission and Commission Staff guidance. On March 29, 2019, the Commission issued an Order disapproving a proposed fee change by the BOX Market LLC Options Facility to establish connectivity fees for its BOX Network (the “BOX Order”).<sup>22</sup> On May 21, 2019, the Commission Staff issued guidance “to assist the national securities exchanges and FINRA ... in preparing Fee Filings that meet their burden to demonstrate that proposed fees are consistent

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

<sup>20</sup> 15 U.S.C. 78f(b)(4).

<sup>21</sup> 15 U.S.C. 78f(b)(5).

<sup>22</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) (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).

with the requirements of the Securities Exchange Act.”<sup>23</sup> Based on both the BOX Order and the Guidance, the Exchange believes that the proposed fees are consistent with the Act because they are: (i) reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable and will not result in excessive pricing or supra-competitive profit; and (iv) identical to the prices the Exchange currently charges for its ToM data product and the prices the Exchange’s affiliate, MIAX, charges for its ToM product, both of which were previously published by the Commission and remain in effect today.<sup>24</sup>

In adopting Regulation NMS, the Commission granted self-regulatory organizations (“SROs”) and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. Particularly, cToM further broadens the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. The data product also promotes increased transparency through the dissemination of cToM. Particularly, cToM provides subscribers with the same information as ToM, but includes the following additional information: (i) the identification of the complex strategies currently trading on the Exchange; (ii) complex strategy last sale information; and (iii) the status of securities underlying the complex strategy (e.g., halted, open, or resumed). The Exchange believes cToM provides a valuable tool that subscribers can use to gain substantial insight into the trading activity in Complex Orders, but

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<sup>23</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>24</sup> See supra note 11.

also emphasizes such data is not necessary for trading. Moreover, other exchanges offer similar data products.<sup>25</sup>

**The Proposed Fees will not Result in a Supra-Competitive Profit**

The Exchange believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee amendment meets the requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among market participants.

In the Guidance, the Commission Staff states that, “[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces.”<sup>26</sup> The Guidance further states that, “... even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act.”<sup>27</sup> In the Guidance, the Commission Staff further states that, “[i]f an SRO seeks to support its claims that a proposed fee is fair and reasonable because it will permit recovery of the SRO’s costs, or will not result in excessive pricing or supra-competitive profit, specific information, including quantitative information, should be provided to support that argument.”<sup>28</sup> The Exchange does not assert that the proposed fees are constrained by competitive forces. Rather, the Exchange asserts that the proposed fees are reasonable because they will permit recovery of the Exchange’s costs in producing and disseminating cToM data and will not result in the Exchange generating a supra-competitive profit.

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<sup>25</sup> See supra notes 12 through 14.

<sup>26</sup> See Guidance, supra note 23.

<sup>27</sup> Id.

<sup>28</sup> Id.

The Guidance defines “supra-competitive profit” as “profits that exceed the profits that can be obtained in a competitive market.”<sup>29</sup> The Commission Staff further states in the Guidance that “the SRO should provide an analysis of the SRO’s baseline revenues, costs, and profitability (before the proposed fee change) and the SRO’s expected revenues, costs, and profitability (following the proposed fee change) for the product or service in question.”<sup>30</sup> The Exchange provides this analysis below.

The proposed fees are based on a cost-plus model. The Exchange believes that it is important to demonstrate that the proposed fees are based on its costs and reasonable business needs and believes the proposed fees will allow the Exchange to begin to offset expenses. However, as discussed more fully below, such fees may also result in the Exchange recouping less than, or more than, all of its costs of providing the cToM data feed because of the uncertainty of forecasting subscriber decision making with respect to firms’ market data needs. The Exchange believes that the proposed fees will not result in excessive pricing or supra-competitive profit based on the total expenses the Exchange incurs versus the total revenue the Exchange projects to collect, and therefore meets the standards in the Act as interpreted by the Commission and the Commission Staff in the BOX Order and the Guidance.

The suspension orders sought additional information and comments on various aspects of the prior proposed fee changes. In many respects, the Commission’s questions about the prior proposed fee changes raise broader questions around the factors the Commission should consider and the type of data and analysis an exchange should provide in considering whether market data, port fees, or connectivity fees are fair and reasonable under a cost-based methodology. The

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<sup>29</sup> Id.

<sup>30</sup> Id.

suspension orders also sought more specific information regarding the allocation of third-party expenses, such as the overall estimated cost for each category of external expenses or at minimum the total applicable third-party expenses and percentage allocation or statements regarding the Exchange's overall estimated costs for the internal expense categories and general shared expenses figure. The Exchange added this additional information below.

In this filing, the Exchange offers a conceptual framework for further considering the Commission's questions that draws on the Exchange's own experience over several years of analyzing its own costs. The elements of that framework are as follows:

First, the Exchange created a flat, simple fee structure that imposes a single monthly fee for Internal Distributors and External Distributors, without added fees based on the way the data is used or individual per user fees. The Exchange believes this relatively simple, flat fee structure is transparent and easy for users to apply, and this difference also helps show that it meets the objectives of the Act.

The Exchange then conducted an extensive cost review in which the Exchange analyzed nearly every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the cToM data feed. That methodology does not allow for "double-counting" of the same costs for different classes of exchange products – for example transaction services, other market data products, physical connectivity, "logical" port connections or regulatory resources.

The Exchange then sought to narrowly allocate specific costs to the market data products to which the proposed fees would apply. In this filing, the Exchange provided more detail about how that allocation was determined and included information about tangential cost items that were not included. In determining what portion (or percentage) to allocate to producing and

disseminating the cToM data feed, each Exchange department head, in coordination with other Exchange personnel, determined the expenses that support producing and distributing the cToM data feed. This included numerous meetings between the Exchange's Chief Information Officer, Chief Financial Officer, Head of Strategic Planning and Operations, Chief Technology Officer, various members of the Legal Department, and other group leaders. The analysis also included each department head meeting with the divisions of teams within each department to determine the amount of time and resources allocated by employees within each division towards producing and distributing the cToM data feed. The Exchange reviewed each individual expense to determine if such expense was related to producing and disseminating the cToM data feed. Once the expenses were identified, the Exchange department heads, with the assistance of the Exchange's internal finance department, reviewed such expenses holistically on an Exchange-wide level to determine what portion of that expense supports producing and disseminating the cToM data feed. The sum of all such portions of expenses represents the total cost to the Exchange to produce and disseminate the cToM data feed. For the avoidance of doubt, no expense amount is allocated twice. Specifically, no expense amount is allocated to more than one expense category within this filing and no expense amount that is allocated as a cost to produce and disseminate the cToM data feed in this filing has been or will be allocated as a cost to provide any other exchange product or service in any other fee filing. In the suspension orders, the Commission questioned whether further explanation of the Exchange's cost analysis was necessary. The Exchange provides further details concerning its cost analysis in response to this question.

The Exchange believes exchanges, like all businesses, should be provided flexibility when developing and applying a methodology to allocate costs and resources they deem

necessary to operate their business, including providing market data and access services. The Exchange notes that costs and resource allocations may vary from business to business and, likewise, costs and resource allocations may differ from exchange to exchange when it comes to providing market data and access services. It is a business decision that must be evaluated by each exchange as to how to allocate internal resources and what costs to incur internally or via third parties that it may deem necessary to support its business and its provision of market data and access services to market participants.

Finally, the Exchange acknowledges that it is difficult to predict how much revenue the Exchange will receive from the proposed fees with precision. The analysis conducted by the Exchange is designed to make a fair and reasonable assessment of costs and resources allocated to support the production and dissemination of the cToM data feed associated with the proposed fees. The Exchange further acknowledges that this assessment can only capture a moment in time and that costs and resource allocations may change. That is why the Exchange historically, and on an ongoing basis, reviews its costs and resource allocations to ensure it appropriately allocates resources to properly provide services to the Exchange's constituents. As part of this proposed rule change, and as described further below, the Exchange is committing to conduct an annual cost review with respect to fees that are cost justified in this proposed rule change beginning one year from the date of this proposal, and annually thereafter. The Exchange expects that it may propose to adjust fees at that time, either to increase fees in the event that revenues fail to reasonably cover costs at the estimated margin set forth below, or to decrease fees in the event that revenue materially exceeds the Exchange's current projections. In the event that the Exchange determines to propose a fee change, updated cost estimates will be included in a rule filing proposing the fee change.

The Exchange believes applying this framework to the proposed fees shows that they are consistent with the requirements of the Act, leaving aside that the proposed fees are relatively similar to, or less than, fees charged by other exchanges for similar market data products.

*Exchange Costs and Cost Methodology*

The Exchange notes that there are material costs associated with providing the infrastructure and headcount to fully support the production and dissemination of the cToM data feed. As described below, 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.<sup>31</sup> The Exchange believes the proposed fees are a reasonable attempt to offset a portion of those costs associated with producing and disseminating the cToM data feed.

The Exchange estimated its total annual expense to provide the cToM data feed based on the following general expense categories: (1) external expenses, which include fees paid to third parties for certain products and services; (2) internal expenses relating to the internal costs to produce and disseminate the cToM data feed; and (3) general shared expenses.<sup>32</sup> The below table details each of these individual external and internal annual costs considered by the Exchange to be directly related to offering cToM to subscribers, and not any other product or

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<sup>31</sup> Both fixed and variable expenses have significant impact on the Exchange's overall costs to provide the cToM data feed. For example, to accommodate new Members, the Exchange may need to purchase additional hardware to support those Members and provide the cToM data feed. Further, as the total number of Members increases, the Exchange 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 the Exchange and its affiliates to provide access to its Members is not fixed.

<sup>32</sup> The percentage allocations used in this proposed rule change may differ from past filings from the Exchange or its affiliates due to adjustments to internal resource allocations and different system architecture of the Exchange as compared to its affiliates.

service offered by the Exchange. The below table also details the general shared expense allocated to this proposal. Each of these expenses are discussed in more detail further below.

For 2022, the total annual expense for producing and disseminating the cToM data feed is estimated to be \$236,284, or \$19,690 per month. The Exchange utilized its estimated 2022 revenue and costs, which utilize the same methodology set forth in the Exchange’s previously-issued Audited Unconsolidated Financial Statements.<sup>33</sup>

<b>External Expenses</b>	
<b>Category</b>	<b>Percentage of Total Expense Amount Allocated</b>
Data Center Provider	0.20%
Fiber Connectivity Provider	0.20%
Hardware and Software Providers	0.20%
Total of External Expenses	\$5,434 <sup>34</sup>
<b>Internal Expenses</b>	
<b>Category</b>	<b>Expense Amount Allocated</b>

<sup>33</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-party expense described in this filing is attributed to the same line item for the Exchange’s 2022 Form 1 Amendment, which will be filed in 2023. In its suspension orders, the Commission also asked should the Exchange use cost projections or actual costs estimated for 2021 in a filing made in 2022, or make cost projections for 2022. The Exchange utilized expenses from its most recent audited financial statement as those numbers are more reliable than more recent unaudited numbers, which may be subject to change.

<sup>34</sup> The Exchange does not believe it is appropriate to disclose the actual amount it pays to each individual third party provider as those fee arrangements are competitive or the Exchange is contractually prohibited from disclosing that amount.

Employee Compensation	\$209,610 (representing 2% of total \$9,900,032 expense)
Depreciation and Amortization	\$4,055 (representing 0.12% of total \$3,363,841 expense)
Occupancy	\$11,410 (representing 2% of total \$538,916 expense)
Total of Internal Expenses	\$225,075
Total Allocated Shared Expenses	\$5,775 (representing 0.2% of total \$2,872,232 expense)
<b>TOTAL EXTERNAL + INTERNAL + ALLOCATED SHARED EXPENSES</b>	<b>\$236,284</b>

In its suspension orders, the Commission solicited commenters' views on whether the Exchange has provided sufficient detail on the identity and nature of services provided by third parties. The Commission further solicited commenters' views on whether the Exchange has provided sufficient detail on the elements that go into producing and distributing the cToM data feed, including how shared costs are allocated and attributed to the cToM data feed, to permit an independent review and assessment of the reasonableness of purported cost-based fees and the corresponding profit margin thereon. In response, the Exchange provides additional detail regarding the identity and nature of services provided by third parties, the elements that go into producing and distributing the cToM data feed, and how expenses are allocated. The Exchange believes this additional detail is sufficient to support a finding that the proposed fees are consistent with the Exchange Act.

The Exchange notes that it only has a single source of revenue, distribution fees, to recover those costs associated with providing and disseminating the cToM data feed. For clarity, the Exchange took a conservative approach in determining the expense and the percentage of that expense to be allocated to providing the cToM data feed. The Exchange

describes below the analysis conducted for each expense and the resources or determinations that were considered when determining the amount necessary to allocate to each expense. The Exchange notes that, without the specific third party and internal expense items, the Exchange would not be able to provide and distribute cToM data feed. Each of these expense items, including physical hardware, software, employee compensation and benefits, occupancy costs, and the depreciation and amortization of equipment, were identified through a line-by-line cost analysis and determined to be integral to providing and distributing the cToM data feed for the reasons discussed below. Only a portion of all fees paid to such third parties are included in the third party expenses described herein, and, again, no expense amount is allocated twice. For example, the Exchange does not allocate its entire information technology and communication costs to providing and distributing the cToM data feed because it determined that a portion of those costs are attributable to other areas of the Exchange's operations, such as ports and transaction services, as well as other market data products provided by the Exchange. This may result in the Exchange under allocating an expense to provide the cToM data feed, and such expenses may actually be higher than what the Exchange allocated as part of this proposal.<sup>35</sup>

Further, as part of its ongoing assessment of costs and expenses, the Exchange recently conducted a periodic thorough review of its expenses and resource allocations, which resulted in revised percentage allocations in this filing as compared to prior versions of this proposed fee change that were previously withdrawn by the Exchange. The revised percentages are, among other things, the result of the shifting of internal resources in response to business

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<sup>35</sup> The Exchange notes that expenses associated with its affiliates, MIAX and MIAX Pearl (the options and equities markets), are accounted for separately and are not included within the scope of this filing.

objectives. Therefore, the percentage allocations used in this proposed rule change may differ from past filings from the Exchange or its affiliates due to, among other things, changes in expenses charged by third parties, adjustments to internal resource allocations, and different system architecture of the Exchange as compared to its affiliates.<sup>36</sup>

*External Expense Allocations*

For 2022, annual expenses relating to fees paid by the Exchange to third parties for products and services necessary to provide the cToM data feed are estimated to be \$5,434.<sup>37</sup> This includes a portion of the fees paid to: (1) a third party data center provider, including for the primary, secondary, and disaster recovery locations of the Exchange's trading system infrastructure; (2) a fiber connectivity provider for network services (fiber and bandwidth products and services) linking the Exchange's and its affiliates' office locations in Princeton, New Jersey and Miami, Florida, to all data center locations; and (3) hardware and software providers, which support the production environment in which Members and non-Members connect to the network to receive market data.<sup>38</sup>

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<sup>36</sup> The Exchange notes that the expense allocations differ from the Exchange's filing earlier in 2021, SR-EMERALD-2021-05, because that prior filing pertained to several different market data fees, which the Exchange had not been charging for since the Exchange launched operations in March 2019. See Securities Exchange Act Release No. 91145 (February 17, 2021), 86 FR 11033 (February 23, 2021) (SR-EMERALD-2021-05) (adopting fees for the ToM, Administrative Information Subscriber ('AIS'), and MOR data feeds, all of which had been free for market participants for over two years since inception).

<sup>37</sup> See supra note 34.

<sup>38</sup> Id. The Exchange did not allocate any expense associated with the proposed fees towards the Securities Financial Transaction Infrastructure ("SFTI") and various other service providers' because the Exchange's architecture takes advantage of an advance in design to eliminate the need for a market data distribution gateway layer. The computation and dissemination via an API is done solely within the match engine environment and is then delivered via the Member and non-Member connectivity infrastructure. This architecture delivers a market data system that is more efficient both in cost and performance.

Data Center Space and Operations Provider

The Exchange does not own the primary data center or the secondary data center, but instead leases space in data centers operated by third parties where the Exchange houses servers, switches and related equipment. Data center costs include an allocation of the costs the Exchange incurs to provide and distribute market data in the third party data centers where it maintains its equipment as well as related costs described below. The data center provider operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. Without the retention of a third party data center, the Exchange would not be able to operate its systems, provide a trading platform for market participants, and produce and distribute market data. The Exchange does not employ a separate fee to cover its data center expense and recoups that expense, in part, by charging for the cToM data feed.

The Exchange reviewed its data center footprint and space utilized, including its total rack space, cage usage, number of servers, switches, cabling within the data center, heating and cooling of physical space, storage space, and monitoring and divided its data center expenses among providing transaction services, market data, and connectivity based on space utilized by each area.<sup>39</sup> Based on this review, the Exchange determined that 0.20% of the total applicable data center provider expense is applicable to providing the cToM data feed. The Exchange reviewed space utilized to house rack space, cage usage, servers, switches, cabling, storage

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Accordingly, the Exchange determined not to allocate any expense associated with SFTI and various other service providers.

<sup>39</sup> The Investors Exchange, Inc. ("IEX") also allocated data center costs to produce market data based on space utilized. See Securities Exchange Act Release No. 94630 (April 7, 2022), 87 FR 21945, at page 21949 (April 13, 2022) (SR-IEX-2022-02) ("IEX Market Data Fee Proposal") (noting that "[d]ata Center costs consist of the fees charged by the third-party data centers used by IEX and represent less than 10% the Exchange's total data center costs *based on space utilized*" (*emphasis added*)).

space, heating and cooling of physical space, and monitoring, and identified that a small portion of that footprint is dedicated to equipment used to produce and distribute the cToM data feed.

The Exchange believes this allocation is reasonable because it represents the costs associated with housing the Exchange's equipment dedicated to processing and disseminating the cToM data feed. The Exchange excluded from this allocation a portion of the Exchange's data center expense that is due to space utilized to provide and maintain connectivity to the Exchange's System Networks, including providing cabling within the data center between market participants and the Exchange. The Exchange also did not allocate the remainder of the data center expense because it pertains to space utilized by other areas of the Exchange's operations, such as connectivity, ports and transaction services, as well as other market data products provided by the Exchange.

#### *Fiber Connectivity Provider*

The Exchange engages a third party service provider that provides the internet, fiber and bandwidth connections between the Exchange's networks, primary and secondary data center, and office locations in Princeton and Miami. Fiber connectivity is necessary for the Exchange to switch to its secondary data center in the case of an outage in its primary data center. Fiber connectivity also allows the Exchange's National Operations & Control Center ("NOCC") and Security Operations Center ("SOC") in Princeton to communicate with the Exchange's primary and secondary data centers. As such, all trade data, including the billions of messages each day, flow through this third party provider's infrastructure over the Exchange's network. Fiber connectivity is also necessary for personnel responsible for overseeing and providing customer service related to producing and distributing the cToM data feed, receiving relevant data and

being able to communicate between the Exchange's various locations and data centers.

Without the retention of a third party fiber connectivity provider, the Exchange would not be able to communicate between its data centers and office locations in a manner necessary to maintain and support the cToM data feed. Fiber connectivity is a necessary integral means to disseminate information, including data related to producing and distributing the cToM data feed, from the Exchange's primary data center to other Exchange locations. It is necessary for Exchange employees located in various locations to be able to communicate and receive the necessary data to maintain and provide customer support related to the cToM data feed. The Exchange would not be able to operate and support the network and produce and distribute the cToM data feed without third party fiber connectivity. The Exchange does not employ a separate fee to cover its fiber connectivity expense and recoups that expense, in part, by charging for cToM data feed.

The Exchange reviewed its costs to retain fiber connectivity from a third party, including the ongoing costs to support fiber connectivity, ensuring adequate bandwidth and infrastructure maintenance to support exchange operations, and ongoing network monitoring and maintenance and determined that 0.20% of the total fiber connectivity expense was applicable to producing and distributing the cToM data feed. The Exchange reviewed its total fiber connectivity expense and allocated it among transaction services, connectivity, ports, other market data products, and administrative operations based on usage. The Exchange then further divided up its fiber connectivity costs related to market data and identified the portion that is attributable to producing and maintaining the cToM data feed, also based on usage. This allocation is, therefore, based on the amount of bandwidth and fiber connectivity the Exchange calculated is utilized to support exchange operations, and ongoing network monitoring and

maintenance that are necessary to produce and maintain the cToM data feed. The Exchange believes this allocation is reasonable because it reflects the portion of the fiber connectivity expense that relates to producing and distributing the cToM data feed. The Exchange excluded a large portion of the Exchange's fiber connectivity expense that is due to providing and maintaining connectivity between the Exchange's System Networks, data centers, and office locations and is core to the daily operation of the Exchange. The Exchange also excluded from this allocation fiber connectivity usage related to system connectivity or other business lines, such as transaction services and other market data products offered by the Exchange, or unrelated administrative services. The Exchange also did not allocate the remainder of this expense because it pertains to other areas of the Exchange's operations and does not directly relate to providing the cToM data feed. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to produce and distribute the cToM data feed.

#### Hardware and Software Providers

The Exchange relies on dozens of third party hardware and software providers for equipment necessary to produce and disseminate the cToM data feed. This includes either the purchase or licensing of physical equipment, such as servers, switches, cabling, and devices needed by Exchange personnel to monitor servers and the health of market data products, including the cToM data feed. This consists of real-time monitoring of system performance, integrity, and latency of market data products. It also includes the Exchange purchasing or licensing software necessary for security monitoring, data analysis and Exchange operations. Hardware and software providers are necessary to produce and distribute the cToM data feed. Hardware and software equipment and licenses for that equipment are also necessary to operate and monitor physical assets necessary to produce and distribute the cToM data feed. Hardware

and software equipment and licenses are key to the operation of the Exchange and without them the Exchange would not be able to produce and distribute the cToM data feed. The Exchange does not employ a separate fee to cover its hardware and software expense and recoups that expense, in part, by charging for cToM data feed dissemination.

The Exchange reviewed its hardware and software related costs, including software patch management, vulnerability management, administrative activities related to equipment and software management, professional services for selection, installation and configuration of equipment and software supporting exchange operations. The Exchange then divided those costs among transaction services, ports, connectivity, other market data products, and other Exchange operations based on whether all of that hardware or software is based on usage. The Exchange then reviewed the amount allocated to producing and distributing market data generally and what portion of that hardware and software equipment or license is used to support the cToM data feed specifically. Based on this review, the Exchange determined that 0.20% of the total applicable hardware and software expense is allocated to producing and distributing the cToM data feed. This percentage reflects the amount of hardware and software equipment and licenses dedicated to produce and maintain the cToM data feed.<sup>40</sup> Hardware and software equipment and licenses are key to the operation of the Exchange and production and distribution of market data. Without them, the Exchange would not be able to develop, and market participants would not be able to purchase, the cToM data feed. The Exchange only allocated the portion of this expense to the hardware and software that is related to the cToM

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<sup>40</sup> The Exchange notes that IEX used a similar methodology to allocate hardware costs to market data. See IEX Market Data Fee Proposal, *id.* at page 21950 (noting that “IEX only included hardware specifically dedicated to the market data feeds in calculating the costs of providing market data”).

data feed, such as operating servers and equipment necessary to produce and distribute the cToM data feed. The Exchange, therefore, did not allocate portions of its hardware and software expense that related to other areas of the Exchange's business, such as hardware and software used for connectivity or unrelated administrative services. The Exchange also did not allocate the remainder of this expense because it pertains to other areas of the Exchange's operations, such as ports or transaction services, as well as other market data products provided by the Exchange, and is not directly related to producing and disseminating the cToM data feed. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to produce and disseminate the cToM data feed, and not any other service, as supported by its cost review.

#### Internal Expense Allocations

For 2022, total internal annual expense relating to the Exchange producing and distributing the cToM data feed is estimated to be \$225,075. This includes costs associated with: (1) employee compensation and benefits for full-time employees that support market data, 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 as well as important system upgrades; (2) depreciation and amortization of hardware and software used to produce and distribute the cToM data feed, 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 support the cToM data feed.

#### Employee Compensation and Benefits

Human personnel are key to exchange operations and supporting the Exchange's ongoing provision of the cToM data feed. The Exchange reviewed its employee compensation and benefits expense and the portion of that expense allocated to providing the cToM data feed. As part of this review, the Exchange considered employees whose functions include providing and maintaining the cToM data feed and used a blended rate of compensation reflecting salary, stock and bonus compensation, bonuses, benefits, payroll taxes, and 401K matching contributions.<sup>41</sup>

In its suspension orders, the Commission asked the Exchange provide more detail about the methodology the Exchange used to determine how much of an employee's time is devoted to market data related activities. In considering the cost of personnel, the Exchange generally considered the time spent on various market data projects and initiatives through project management tracking tools and analysis of employee resource allocations, among its Technology Team in the following areas: Technical Operations, Software Engineering, Quality Assurance, and Infrastructure. The Exchange did not consider non-Technology Teams such as Market Operations, Project Management, Regulatory, Legal, and Accounting/Finance.<sup>42</sup>

Based on this review, the Exchange determined to allocate \$209,610 in employee compensation and benefits expense to producing and distributing the cToM data feed. This represents approximately 2.0% of the \$9,900,032 total projected expense for employee compensation and benefits. The Exchange determined the cost allocation for employees who

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<sup>41</sup> For purposes of this allocation, the Exchange did not consider expenses related to office space, supplies, or equipment use by employees who support cToM data feed.

<sup>42</sup> The Exchange notes that IEX used a similar methodology to allocate employee compensation related costs to market data. See IEX Market Data Fee Proposal, supra note 39 at page 29150 (noting that “[f]or personnel costs, IEX calculated an allocation of employee time for employees whose functions include providing and maintaining IEX Data and/or the proprietary market data feeds used to transmit IEX Data, and used a blended rate of compensation reflecting salary, stock and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions”).

perform work in support of producing and distributing the cToM data feed to arrive at a full time equivalent (“FTE”) of 0.6 FTEs across all the identified personnel. The Exchange then multiplied the FTE times a blended compensation rate for all relevant Exchange personnel to determine the personnel costs associated with producing and distributing the cToM data feed. Senior staff also reviewed these time allocations with department heads and team leaders to determine whether those allocations were appropriate. These employees are critical to the Exchange to producing and distributing the cToM data feed. The Exchange determined the above allocation based on the personnel whose work focused on functions necessary to producing and distributing the cToM data feed. The Exchange does not charge a separate fee for employees who support the cToM data feed and the Exchange seeks to recoup that expense, in part, by charging for the cToM data feed.

The Exchange believes it is appropriate to include incentive compensation in the blended personnel compensation rate on the same basis as other personnel costs for in-scope employees because incentive compensation is a part of the total personnel costs associated with the Exchange’s costs to provide the cToM data feed. Moreover, the Exchange notes that it has taken a conservative approach in determining which employees to include in its cost analysis, in terms of function and percent allocation, so that the included personnel costs are directly and closely tied to the costs of providing the cToM data feed. The FTE allocation represents just 2.0% of the Exchange’s overall personnel costs. Consistent with the Exchange’s conservative methodology to limit costs allocated to producing and disseminating the cToM data feed, this approach includes only a de minimis personnel cost allocation for senior level executives and no allocation for members of the Exchange’s board of directors. Accordingly, the Exchange believes that the

allocated personnel expenses included are appropriately attributable to producing and disseminating the cToM data feed.

*Depreciation and Amortization*

A key expense incurred by the Exchange relates to the depreciation and amortization of equipment that the Exchange procured to produce and distribute the cToM data feed. The Exchange reviewed all of its physical assets and software, owned and leased, and determined whether each asset is related to providing and maintaining the cToM data feeds, and added up the depreciation of those assets. All physical assets and software, which includes assets used for testing and monitoring of Exchange infrastructure, were valued at cost and depreciated or leased over periods ranging from three to five years. Based on the Exchange's experience, this depreciation period equals the typical life expectancy of those assets. In determining the amount of depreciation and amortization to apply to providing the cToM data feeds, the Exchange considered the depreciation of hardware and software that are key to its provision of the cToM data feeds. This includes servers, computers, laptops, monitors, information security appliances and storage, and network switching infrastructure equipment, including switches and taps that were previously purchased to produce and distribute the cToM data feed. Without them, market participants would not be able to receive the cToM data feed. The Exchange seeks to recoup a portion of its depreciation expense by charging for the cToM data feed.

Based on this review, the Exchange determined to allocate \$4,055 in depreciation and amortization expense to producing and distributing the cToM data feed. This is only 0.12% of the \$3,363,841 total projected expense for depreciation and amortization. For purposes of the allocation of these costs to the cToM data feed, the Exchange allocates the annual depreciation (i.e., one-third or one-fifth of the initial asset value based on the typical life expectancy of those

assets). One-third or one-fifth of the cost of each asset is included in the annual costs allocated to the cToM data feed. The Exchange only included assets specifically dedicated to the cToM data feed in calculating the costs of providing the cToM data feed. This means that physical assets used for transaction services, other market data products, or other Exchange operations were excluded from the calculation.<sup>43</sup> The Exchange, therefore, did not allocate portions of depreciation expense that relates to other areas of the Exchange's business, such as the depreciation of hardware and software used for connectivity, unrelated administrative services, or other market data products provided by the Exchange. All of the expenses outlined in this proposed fee change refer to the operating expenses of the Exchange. In the suspension orders, the Commission asked for additional detail or explanation to ensure that no expense amount is allocated twice. The Exchange did not include any future capital expenditures within these costs ensuring that no cost is counted twice. Depreciation and amortization represent the expense of previously purchased hardware and internally developed software spread over the useful life of the assets. Due to the fact that the Exchange has only included operating expense and historical purchases, there is no double counting of expenses in the Exchange's cost estimates.

### Occupancy

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<sup>43</sup> The Exchange notes that IEX used a similar methodology to allocate hardware costs to market data. See IEX Market Data Fee Proposal at note 54, supra note 39 at page 21950 (noting that “[h]ardware is depreciated on a straight-line three-year period, which in IEX’s experience, is equal to the typical life expectancy of those assets. As noted above, one-third of the cost of each hardware asset is included in the annual costs allocated to market data. IEX only included hardware specifically dedicated to the market data feeds in calculating the costs of providing market data. This means that physical assets used for both order entry and market data were excluded from the calculation”).

The Exchange rents and maintains multiple physical locations to house staff and equipment necessary to support the production and dissemination of the cToM data feed. The Exchange's occupancy expense is not limited to the housing of personnel and includes locations used to store equipment necessary for Exchange operations. In determining the amount of its occupancy related expense, the Exchange considered actual physical space used to house employees whose functions include producing and distributing the cToM data feed. Similarly, the Exchange also considered the actual physical space used to house hardware and other equipment necessary to provide and maintain the cToM data feed. The Exchange maintains staff that support producing and distributing the cToM data feed in various locations and needs to provide workplaces for that staff as well as space to house hardware and equipment necessary for those employees to perform those functions.<sup>44</sup> This equipment includes computers, servers, and accessories necessary to support producing and distributing cToM data feed. Based on this review, the Exchange determined to allocate \$11,410 of its occupancy expense to producing and distributing the cToM data feed. According to the Exchange's calculations, it allocated approximately 2.0% of the total applicable occupancy expense to producing and distributing the cToM data feeds. This is only a portion of the \$538,916 total projected expense for occupancy. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the cToM data feed. The Exchange considered the rent paid for the Exchange's Princeton and Miami offices, as well as various related costs, such as physical security, property management fees, property taxes, and utilities

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<sup>44</sup> For the avoidance of doubt, the Exchange did not include within this cost any portion of its costs related to third party fiber connectivity used by Exchange staff in different office locations to communicate as part of their role in supporting the cToM data feed.

at each of those locations. The Exchange did not include occupancy expenses related to housing employees and equipment related to other Exchange operations, such as transaction and administrative services.

#### Allocated Shared Expense

Finally, a limited portion of general shared expenses was allocated to the cToM data feed costs, as without these general shared costs, the Exchange would not be able to operate in the manner that it does and produce and distribute the cToM data feed. The costs included in general shared expenses include recruiting and training, marketing and advertising costs, professional fees for legal, tax and accounting services, and telecommunications costs. For 2022, the Exchange's general shared expense allocated to the cToM data feed is estimated to be \$5,755. This represents approximately 0.2% of the \$2,872,232 total projected general shared combined expense. The Exchange used the weighted average of the above allocations to determine the amount of general shared expenses to allocate to the Exchange. Next, based on additional management and expense analysis, these fees are allocated to the proposal.

#### Revenue and Estimated Profit Margin

The Exchange only has four primary sources of revenue and cost recovery mechanisms to fund all of its operations: transaction fees, access fees, regulatory fees, and market data fees. Accordingly, the Exchange must cover all of its expenses from these four primary sources of revenue and cost recovery mechanisms.

To determine the Exchange's estimated revenue associated with the cToM data feed, the Exchange analyzed the number of Members and non-Members currently receiving the cToM data feed and used a recent monthly billing cycle representative of current monthly revenue. The Exchange also provided its baseline by analyzing March 2022, the monthly billing cycle prior to

the proposed cToM data fee, and compared this to its expenses for that month. As discussed below, the Exchange does not believe it is appropriate to factor into its analysis future revenue growth or decline into its estimates for purposes of these calculations, given the uncertainty of such estimates due to the continually changing access needs of market participants and potential changes in internal and third party expenses.

For the month of March 2022, prior to the effectiveness of the proposed cToM fees, the Exchange had 13 cToM data feed subscribers, for which the Exchange charged \$0. This resulted in a loss of \$19,690 for that month. For April 2022, the Exchange anticipates that it will have 13 cToM data feed subscribers.<sup>45</sup> Assuming the Exchange charges the proposed fees for Distributors, the Exchange would generate revenue of \$16,250 for April 2022. This would result in a loss of \$3,440 (\$16,250 minus \$19,690) for the month of April (a negative 21% margin from March 2022 to April 2022).

The Exchange believes that conducting the above analysis on a per month basis is reasonable as the revenue generated from the cToM data feed is generally remains static from month to month. The Exchange also conducted the above analysis on a per month basis to comply with the Commission Staff's Guidance, which requires a baseline analysis to assist in determining whether the proposal generates a supra-competitive profit. The Exchange cautions that this margin may also fluctuate from month to month based on the uncertainty of predicting how many subscribers may purchase cToM data feed subscriptions from month to month as

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<sup>45</sup> The Exchange notes that the number of cToM subscribers may change over time. Beginning with June 2021, the month prior to the original fee change to adopt cToM data fees, the Exchange had the following number of subscribers each month: June (13 subscribers); July (13 subscribers); August (12 subscribers); September (15 subscribers); October (12 subscribers); November (12 subscribers); December (12 subscribers); January (12 subscribers); February (12 subscribers); March (13 subscribers); and April (13 subscribers).

Members and non-Members are free to add and drop subscriptions at any time based on their own business decisions.

The Exchange believes the proposed margin is reasonable and will not result in a “supra-competitive” profit. The Guidance defines “supra-competitive profit” as “profits that exceed the profits that can be obtained in a competitive market.”<sup>46</sup> Until recently, the Exchange has operated at a cumulative net annual loss since it launched operations in 2019.<sup>47</sup> The Exchange has operated at a net loss due to a number of factors, one of which is choosing to forgo revenue by offering certain products, such as the cToM data feed, for free, as well as other products at lower rates, than other options exchanges to attract order flow and encourage market participants to experience the high determinism, low latency, and resiliency of the Exchange’s trading systems. The Exchange previously provided the cToM data feed free of charge and absorbed all costs associated with providing the cToM data feed to market participants. In this proposal, the Exchange would continue to offer the cToM data feed for a fee that still falls short of covering the Exchange’s expenses. The Exchange is not generating a profit, and therefore, cannot be deemed to be generating a “supra-competitive” profit by now charging for the cToM data feed. The Exchange should not now be penalized for seeking to adopt fees to at least cover a portion of its costs after offering the cToM data feed free of charge. Therefore, the Exchange believes the proposed fees are reasonable because they are based on both relative costs to the Exchange to generate and disseminate cToM, the extent to

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<sup>46</sup> See Guidance, supra note 23.

<sup>47</sup> The Exchange has incurred a cumulative loss of \$22 million since its inception in 2019 to 2020, the last year for which the Exchange’s Form 1 data is available. See Exchange’s Form 1/A, Application for Registration or Exemption from Registration as a National Securities Exchange, filed July 28, 2021, available at <https://sec.report/Document/9999999997-21-004557/>.

which the product drives the Exchange's overall costs and the relative value of the product, as well as the Exchange's objective to make cToM broadly available to market participants. The Exchange also believes the proposed fees are reasonable because they are designed to generate annual revenue to recoup some of the Exchange's annual costs of providing the cToM data feed.

The Exchange notes that its revenue estimate is based on projections and will only be realized to the extent such revenue actually produces the revenue estimated. As a generally new entrant to the hyper-competitive exchange environment, and an exchange focused on driving competition, the Exchange does not yet know whether such expectations will be realized. For instance, in order to generate the revenue expected from the cToM data feed, the Exchange will have to be successful in retaining existing clients that wish to receive the cToM data feed or obtaining new clients that will purchase such data. To the extent the Exchange is successful in encouraging new clients to receive the cToM data feed, the Exchange does not believe it should be penalized for such success. The Exchange, like other exchanges, is, after all, a for-profit business. While the Exchange believes in transparency around costs and potential margins, the Exchange does not believe that these estimates should form the sole basis of whether or not a proposed fee is reasonable or can be adopted. Instead, the Exchange believes that the information should be used solely to confirm that an Exchange is not earning supra-competitive profits, and the Exchange believes this proposal demonstrates this fact.

Finally, the Exchange believes that the proposed fees are reasonable because they will not impose onerous audit requirements on subscribers, because there will be no need to substantiate the number of users of cToM or the manner in which it is being used, but rather only whether it is being redistributed internally or to external third parties.

### Annual Review of Fees

In its suspension orders, the Commission asks whether exchanges should periodically reevaluate fees on an ongoing and periodic basis in order to assure that actual revenue aligns with a reasonable cost-plus model. As described above and as part of this proposed rule change, the Exchange is committing to conduct a one year review of the fees that are cost justified as part of this proposed rule change after the date of this proposal, and annually thereafter. The Exchange expects that it may propose to adjust fees at that time, either to increase fees in the event that revenues fail to reasonably cover costs at the estimated margin set forth above, or to decrease fees in the event that revenue materially exceeds the Exchange's current projections. In the event that the Exchange determines to propose a fee change, updated cost estimates will be included in a rule filing proposing the fee change. The Exchange believes this approach will further increase transparency around market data costs and help to ensure that Exchange fees continue to be reasonably related to costs.

### **The Proposed Fees are Reasonable when Compared to the Fees of other Options Exchanges with Similar Market Share**

The Exchange does not have visibility into other options exchanges' costs to provide market data or their fee markup over those costs, and therefore cannot use other exchange's market data fees as a benchmark to determine a reasonable markup over the costs of providing market data. Nevertheless, the Exchange believes the other exchanges' complex market data fees are useful examples of alternative approaches to providing and charging for complex market data notwithstanding that the competing exchanges may have different system architectures that may result in different cost structures for the provision of complex market data. To that end, the Exchange believes the proposed cToM data fees are reasonable because

the proposed fees are similar to, or less than fees charged for complex market data provided by other options exchanges with comparable market shares.

As described in the below table, the Exchange's proposed fees remain less than fees charged for similar market data products provided by other options exchanges with similar market share. Each of the market data rates in place at competing options exchanges were filed with the Commission for immediate effectiveness and remain in place today.

Exchange	Monthly Fee
MIAX Emerald (as proposed)	\$1,250 – Internal Distributor \$1,750 – External Distributor
Amex <sup>48</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
Arca <sup>49</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
PHLX <sup>50</sup>	\$3,000 – Internal Distributor \$3,500 – External Distributor

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

<sup>48</sup> See NYSE American Options Proprietary Market Data Fees, American Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_American\\_Options\\_Market\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_American_Options_Market_Data_Fee_Schedule.pdf).

<sup>49</sup> See NYSE Arca Options Proprietary Market Data Fees, Arca Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_Arca\\_Options\\_Proprietary\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_Arca_Options_Proprietary_Data_Fee_Schedule.pdf).

<sup>50</sup> See PHLX Price List – U.S. Derivatives Data, PHLX Orders Fees, at <http://www.nasdaqtrader.com/Trader.aspx?id=DPPriceListOptions#PHLX>.

The Exchange believes that the proposed fees are reasonable, fair, and equitable, and not unfairly discriminatory because they are designed to align fees with services provided and will apply equally to all subscribers. The Exchange believes that it is reasonable, equitable and not unfairly discriminatory to assess Internal Distributors fees that are less than the fees assessed for External Distributors for subscriptions to the cToM data feed because Internal Distributors have limited, restricted usage rights to the market data, as compared to External Distributors, which have more expansive usage rights. All Members and non-Members that determine to receive any market data feed of the Exchange (or its affiliates, MIAX Pearl and MIAX), must first execute, among other things, the MIAX Exchange Group Exchange Data Agreement (the “Exchange Data Agreement”).<sup>51</sup> Pursuant to the Exchange Data Agreement, Internal Distributors are restricted to the “internal use” of any market data they receive. This means that Internal Distributors may only distribute the Exchange’s market data to the recipient’s officers and employees and its affiliates.<sup>52</sup> External Distributors may distribute the Exchange’s market data to persons who are not officers, employees or affiliates of the External Distributor,<sup>53</sup> and may charge their own fees for the redistribution of such market data. External Distributors may monetize their receipt of the cToM data feed by charging their customers fees for receipt of the Exchange’s cToM data. Internal Distributors do not have the same ability to monetize the Exchange’s cToM data feed. Accordingly, the Exchange believes it is fair, reasonable and not unfairly discriminatory to assess External Distributors a higher fee for the Exchange’s cToM data feed as External

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<sup>51</sup> See Exchange Data Agreement, available at [https://miaxweb2.pairsite.com/sites/default/files/page-files/MIAX\\_Exchange\\_Group\\_Data\\_Agreement\\_09032020.pdf](https://miaxweb2.pairsite.com/sites/default/files/page-files/MIAX_Exchange_Group_Data_Agreement_09032020.pdf).

<sup>52</sup> See *id.*

<sup>53</sup> See *id.*

Distributors have greater usage rights to commercialize such market data and can adjust their own fee structures if necessary.

The Exchange also utilizes more resources to support External Distributors versus Internal Distributors, as External Distributors have reporting and monitoring obligations that Internal Distributors do not have, thus requiring additional time and effort of Exchange staff. For example, External Distributors have monthly reporting requirements under the Exchange's Market Data Policies.<sup>54</sup> Exchange staff must then, in turn, process and review information reported by External Distributors to ensure the External Distributors are redistributing cToM data in compliance with the Exchange's Market Data Agreement and Policies.

The Exchange believes the proposed cToM fees are equitable and not unfairly discriminatory because the fee level results in a reasonable and equitable allocation of fees amongst subscribers for similar services, depending on whether the subscriber is an Internal or External Distributor. Moreover, the decision as to whether or not to purchase market data is entirely optional to all market participants. Potential purchasers are not required to purchase the market data, and the Exchange is not required to make the market data available. Purchasers may request the data at any time or may decline to purchase such data. The allocation of fees among users is fair and reasonable because, if market participants determine not to subscribe to the data feed, firms can discontinue their use of the cToM data.

The Exchange further believes that the proposed fees are reasonable, fair, and equitable, and non-discriminatory because they will apply to all subscribers in the same manner based on whether the data is used for internal purposes or distributed to third parties. All similarly

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<sup>54</sup> Section 6 of the Exchange's Market Data Policies, [available at https://www.miaxoptions.com/sites/default/files/page-files/MIAX\\_Exchange\\_Group\\_Market\\_Data\\_Policies\\_07202021.pdf](https://www.miaxoptions.com/sites/default/files/page-files/MIAX_Exchange_Group_Market_Data_Policies_07202021.pdf).

situated market participants are subject to the same fees. The fees also do not depend on any distinctions between or among Members, customers, broker-dealers, or any other entity, because they are solely determined by the individual market participant based on its business needs. The Exchange also notes that the proposed monthly cToM fees for Internal and External Distributors are the same prices that the Exchange charges for its ToM data product.

Finally, the Exchange believes that the proposed fees are consistent with Section 11A of the Exchange Act in that it is designed to facilitate the economically efficient execution of securities transactions, fair competition among brokers and dealers, exchange markets and markets other than exchange markets, and the practicability of brokers executing investors' orders in the best market. Specifically, the proposed low cost-based fee will enable a broad range of market participants to receive the cToM data feed, thereby facilitating the economically efficient execution of securities transactions on the Exchange, fair competition between and among such Members, and the practicability of Members that are brokers executing investors' orders on the Exchange when it is the best market.

For the foregoing reasons, the Exchange believes that the proposed fee is reasonable, equitably allocated, and not unfairly discriminatory.

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The Exchange believes the proposed change to delete certain text from Section 6)a) of the Fee Schedule promotes just and equitable principles of trade and removes impediments to and perfects the mechanism of a free and open market and a national market system because the proposed change is a non-substantive edit to the Fee Schedule to remove unnecessary text. The Exchange believes that this proposed change will provide greater clarity to Members and the

public regarding the Exchange's Fee Schedule and that it is in the public interest for the Fee Schedule to be accurate and concise so as to eliminate the potential for confusion.

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

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

Intra-Market Competition

The Exchange believes the proposed fees will not result in any burden on intra-market competition that is not necessary or appropriate in furtherance of the purposes of the Act because the proposed fees will allow the Exchange to recoup some of its costs in providing cToM to market participants. As described above, the Exchange has operated at a cumulative net annual loss since it launched operations in 2019<sup>55</sup> due to providing a low cost alternative to attract order flow and encourage market participants to experience the high determinism and resiliency of the Exchange's trading Systems. To do so, the Exchange chose to waive the fees for some non-transaction related services and Exchange products or provide them at a very marginal cost, which was not profitable to the Exchange. This resulted in the Exchange forgoing revenue it could have generated from assessing any fees or higher fees. The Exchange could have sought to charge higher fees at the outset, but that could have served to discourage participation on the Exchange. Instead, the Exchange chose to provide a low cost exchange alternative to the options industry which resulted in lower initial revenues. An example of this is cToM, for which the Exchange only now seeks to adopt fees at a level similar to or lower than those of other options exchanges.

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<sup>55</sup> See supra note 47.

Since the Exchange initially launched operations with the cToM data product in 2019, all Exchange Members and non-Members have had the ability to receive the Exchange's cToM data free of charge for the past three years. Since 2019, when the Exchange adopted Complex Order functionality, the Exchange has spent time and resources building out additional features for Complex Order functionality in its System to provide better trading strategies and risk protections for market participants in order to better compete with other exchanges' complex functionality and similar data products focused on complex orders.<sup>56</sup> The Exchange now seeks to recoup its costs for providing cToM to market participants and believes the proposed fees will not result in excessive pricing or supra-competitive profit.

#### Inter-Market Competition

The Exchange also does not believe the proposed fees would cause any unnecessary or inappropriate burden on intermarket competition as other exchanges are free to introduce their own comparable data product and lower their prices to better compete with the Exchange's offering. There is no reason to believe that the newly proposed fees to receive the cToM data feed would impair other exchange's ability to compete or cause any unnecessary or inappropriate burden on inter-market competition. Particularly, the proposed product and fees apply uniformly to any purchaser, in that it does not differentiate between subscribers that purchase cToM. The proposed fees are set at a modest level that would allow any interested Member or non-Member to purchase such data based on their business needs.

The Exchange does not believe that the proposed rule change to make a minor, non-substantive edit to Section 6(a) of the Fee Schedule by deleting unnecessary text will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of

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<sup>56</sup> See supra notes 12 through 14.

the Act. This proposed rule change is not being made for competitive reasons, but rather is designed to remedy a minor non-substantive issue and will provide added clarity to the Fee Schedule. The Exchange believes that it is in the public interest for the Fee Schedule to be accurate and concise so as to eliminate the potential for confusion on the part of market participants. In addition, the Exchange does not believe the proposal will impose any burden on inter-market competition as the proposal does not address any competitive issues and is intended to protect investors by providing further transparency regarding the Exchange's Fee Schedule.

**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**

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

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

Pursuant to Section 19(b)(3)(A)(ii) of the Act,<sup>57</sup> and Rule 19b-4(f)(2) thereunder<sup>58</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 self-regulatory organization or of the Commission.

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<sup>57</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>58</sup> 17 CFR 240.19b-4.

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

Not applicable.

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

Not applicable.

**11. Exhibits**

1. Completed notice of proposed rule change for publication in the Federal Register.
5. Copy of the applicable section of the Fee Schedule.

**EXHIBIT 1**

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34- ; File No. SR-EMERALD-2022-18)

April\_, 2022

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 April 29 2022, 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 fees for the market data product known as MIAX Emerald Complex Top of Market (“cToM”).

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

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

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

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

the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

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

1. Purpose

The Exchange previously adopted rules governing the trading of Complex Orders<sup>3</sup> on the MIAX Emerald System<sup>4</sup> in 2018,<sup>5</sup> ahead of the Exchange's planned launch, which took place on March 1, 2019. Shortly thereafter, the Exchange adopted the market data product, cToM, and provided cToM free of charge for over two years to incentivize market participants to subscribe and absorbed all costs associated with producing the cToM data product.<sup>6</sup> As discussed more fully below, the Exchange recently calculated its annual aggregate costs for providing cToM to subscribers to be \$236,284, or \$19,690 per month. Because the Exchange has offered cToM free of charge, the Exchange has borne 100% of the costs for the compilation and dissemination of cToM to subscribers. The Exchange now proposes to amend Section 6(a) of the Fee Schedule to establish fees for the cToM data product in order to recoup a portion, but not all, of these ongoing costs.

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<sup>3</sup> See Exchange Rule 518(a)(5) for the definition of Complex Orders.

<sup>4</sup> The term "System" means the automated trading system used by the Exchange for the trading of securities. See Exchange Rule 100.

<sup>5</sup> See Securities Exchange Act Release Nos. 84891 (December 20, 2018), 83 FR 67421 (December 28, 2018) (In the Matter of the Application of MIAX EMERALD, LLC for Registration as a National Securities Exchange; Findings, Opinion, and Order of the Commission); and 85345 (March 18, 2019), 84 FR 10848 (March 22, 2019) (SR-EMERALD-2019-13) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Exchange Rule 518, Complex Orders).

<sup>6</sup> See Securities Exchange Act Release No. 85207 (February 27, 2019), 84 FR 7963 (March 5, 2019) (SR-EMERALD-2019-09) (providing a complete description of the cToM data feed).

### Background

In summary, cToM provides subscribers with the same information as the MIAX Emerald Top of Market (“ToM”) data product as it relates to the Strategy Book,<sup>7</sup> *i.e.*, the Exchange’s best bid and offer for a complex strategy, with aggregate size, based on displayable order and quoting interest in the complex strategy on the Exchange. However, cToM provides subscribers with the following additional information that is not included in ToM: (i) the identification of the complex strategies currently trading on the Exchange; (ii) complex strategy last sale information; and (iii) the status of securities underlying the complex strategy (e.g., halted, open, or resumed). cToM is therefore a distinct market data product from ToM in that it includes additional information that is not available to subscribers that receive only the ToM data feed. ToM subscribers are not required to subscribe to cToM, and cToM subscribers are not required to subscribe to ToM.<sup>8</sup>

### Proposal

The Exchange now proposes to amend Section 6(a) of the Fee Schedule to charge monthly fees to Distributors<sup>9</sup> of cToM. Specifically, the Exchange proposes to assess Internal Distributors \$1,250 per month and External Distributors \$1,750 per month for the cToM data feed.<sup>10</sup> The proposed fees are identical to the fees that the Exchange, and its affiliate, Miami

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<sup>7</sup> The “Strategy Book” is the Exchange’s electronic book of complex orders and complex quotes. See Exchange Rule 518(a)(17).

<sup>8</sup> See supra note 6.

<sup>9</sup> A “Distributor” of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. See Section 6(a) of the Fee Schedule.

<sup>10</sup> The Exchange also proposes to make a minor related change to remove “(as applicable)” from the explanatory paragraph in Section 6(a) as it will not change fees for both the ToM and cToM data feeds.

International Securities Exchange (“MIAX”), currently charge for their ToM data products, both of which were previously published by the Commission and remain in effect today.<sup>11</sup> The Exchange does not propose to adopt redistribution fees for the cToM data feed. However, the recipient of the cToM data feed would be required to become a data subscriber and would be subject to the applicable fees. The Exchange also does not propose to charge any additional fees based on a subscriber’s use of the cToM data feed, e.g., displayed versus non-displayed use, and does not propose to impose any individual per user fees.

As it does today for ToM, the Exchange proposes to assess cToM fees on Internal and External Distributors in each month the Distributor is credentialed to use cToM in the production environment. Also, as the Exchange does today for ToM, market data fees for cToM will be reduced for new Distributors for the first month during which they subscribe to cToM, based on the number of trading days that have been held during the month prior to the date on which that subscriber has been credentialed to use cToM in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees listed in the table in Section 6)a) of the Fee Schedule, which is the percentage of the number of trading days remaining in the affected calendar month as of the date on which they have been credentialed to use cToM in the production environment, divided by the total number of trading days in the affected calendar month.

The Exchange believes that other exchanges’ fees for complex market data are useful examples and provides the below table for comparison purposes only to show how the Exchange’s proposed fees compare to fees currently charged by other options exchanges for

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<sup>11</sup> See Securities Exchange Act Release Nos. 91145 (February 17, 2021), 86 FR 11033 (February 23, 2021) (SR-EMERALD-2021-05); 73942 (December 24, 2014), 80 FR 71 (January 2, 2015) (SR-MIAX-2014-66).

similar complex market data. As shown by the below table, the Exchange’s proposed fees for cToM are similar to or less than fees charged for similar data products provided by other options exchanges.

<b>Exchange</b>	<b>Monthly Fee</b>
MIAX Emerald (as proposed)	\$1,250 – Internal Distributor \$1,750 – External Distributor
NYSE American, LLC (“Amex”) <sup>12</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
NYSE Arca, Inc. (“Arca”) <sup>13</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
NASDAQ PHLX LLC (“PHLX”) <sup>14</sup>	\$3,000 – Internal Distributor \$3,500 – External Distributor

The Exchange also proposes to amend the paragraph below the table of fees for ToM and cToM in Section 6(a) of the Fee Schedule to make a minor, non-substantive correction by deleting the phrase “(as applicable)” in the first sentence following the table of fees for ToM and cToM. The purpose of this proposed change is to remove unnecessary text from the Fee Schedule.

<sup>12</sup> See NYSE American Options Proprietary Market Data Fees, American Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_American\\_Options\\_Market\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_American_Options_Market_Data_Fee_Schedule.pdf).

<sup>13</sup> See NYSE Arca Options Proprietary Market Data Fees, Arca Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_Arca\\_Options\\_Proprietary\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_Arca_Options_Proprietary_Data_Fee_Schedule.pdf).

<sup>14</sup> See PHLX Price List – U.S. Derivatives Data, PHLX Orders Fees, at <http://www.nasdaqtrader.com/Trader.aspx?id=DPPriceListOptions#PHLX>.

### cToM Content is Available from Alternative Sources

cToM is also not the exclusive source for Complex Order information from the Exchange and market participants may choose to subscribe to the Exchange's other data products to receive such information. It is a business decision of market participants whether to subscribe to the cToM data product or not. Market participants that choose not to subscribe to cToM can derive much, if not all, of the same information provided in the cToM feed from other Exchange sources, including, for example, the MIAX Emerald Order Feed ("MOR").<sup>15</sup> The following cToM information is provided to subscribers of MOR: the Exchange's best bid and offer for a complex strategy, with aggregate size, based on displayable order and quoting interest in the complex strategy on the Exchange; the identification of the complex strategies currently trading on the Exchange; and the status of securities underlying the complex strategy (e.g., halted, open, or resumed). In addition to the cToM information contained in MOR, complex strategy last sale information can be derived from the Exchange's ToM data feed. Specifically, market participants may deduce that last sale information for multiple trades in related options series that are disseminated via the ToM data feed with the same timestamp are likely part of a Complex Order transaction and last sale.

### Implementation

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<sup>15</sup> See MIAX website, Market Data & Offerings, at <https://www.miaxoptions.com/market-data-offerings> (last visited April 1, 2022). In general, MOR provides real-time ultra-low latency updates on the following information: new Simple Orders added to the MIAX Emerald Order Book; updates to Simple Orders resting on the MIAX Emerald Order Book; new Complex Orders added to the Strategy Book (i.e., the book of Complex Orders); updates to Complex Orders resting on the Strategy Book; MIAX Emerald listed series updates; MIAX Emerald Complex Strategy definitions; the state of the MIAX Emerald System; and MIAX Emerald's underlying trading state.

The proposed rule change will be effective May 2, 2022. The Exchange initially filed this proposal on June 30, 2021 with the proposed fees effective beginning July 1, 2021.<sup>16</sup> Between August 2021 and February 2022, the Exchange withdrew and refiled the proposed rule change, each time to meaningfully attempt to provide additional justification for the proposed fee changes, provide enhanced details regarding the Exchange's cost methodology, and address questions contained in the Commission's suspension order.<sup>17</sup> No comment letters were submitted on any filings made to date regarding the proposed cToM fees. The Commission again suspended the proposed fees on February 15, 2022.<sup>18</sup> The Exchange then provided the cToM data feed free of charge for the month of March 2022 and absorbed all associated costs.

On March 30, 2022, the Exchange withdrew the proposed rule change that was previously suspended by the Commission on February 15, 2022. After providing the cToM data product free of charge for the month of March 2022, on April 1, 2022, the Exchange submitted a revised proposal for immediate effectiveness. This revised proposal provided additional details regarding the Exchange's cost methodology, revenue projections, and responded to various questions and requests for information contained in the Commission's suspension orders. The Exchange withdrew that revised proposal and submitted a further revised filing on April 29, 2022. The newest revised filing builds upon the additional details regarding the Exchange's cost

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<sup>16</sup> See Securities Exchange Act Release No. 92358 (July 9, 2021), 86 FR 37361 (July 15, 2021) (SR-EMERALD-2021-21).

<sup>17</sup> See Securities Exchange Act Release Nos. 92789 (August 27, 2021), 86 FR 49364 (September 2, 2021) (SR-MIAX-2021-28, SR-EMERALD-2021-21) ("Suspension Order 1"); 93471 (October 29, 2021), 86 FR 60947 (November 4, 2021) (SR-EMERALD-2021-32); 93427 (October 26, 2021), 86 FR 60310 (November 1, 2021) (SR-EMERALD-2021-34); and 93811 (December 17, 2021), 86 FR 73051 (December 23, 2021) (SR-EMERALD-2021-44).

<sup>18</sup> See Securities Exchange Act Release No. 94263 (February 15, 2022), 87 FR 9766 (February 22, 2022) (SR-EMERALD-2022-06) ("Suspension Order 2").

methodology and revenue projections, as well as the Exchange's responses to various questions and requests for information contained in the Commission's suspension orders.

## 2. Statutory Basis

The Exchange believes that the proposed fees are consistent with Section 6(b) of the Act<sup>19</sup> in general, and furthers the objectives of Section 6(b)(4) of the Act<sup>20</sup> in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Members and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposed fees further the objectives of Section 6(b)(5) of the Act<sup>21</sup> in that they are designed to promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general protect investors and the public interest and are not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

The Exchange believes that the information provided to justify the proposed fees meets or exceeds the amount of detail required in respect of proposed fee changes as set forth in recent Commission and Commission Staff guidance. On March 29, 2019, the Commission issued an Order disapproving a proposed fee change by the BOX Market LLC Options Facility to establish connectivity fees for its BOX Network (the "BOX Order").<sup>22</sup> On May 21, 2019, the Commission Staff issued guidance "to assist the national securities exchanges and FINRA ... in

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

<sup>20</sup> 15 U.S.C. 78f(b)(4).

<sup>21</sup> 15 U.S.C. 78f(b)(5).

<sup>22</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) (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).

preparing Fee Filings that meet their burden to demonstrate that proposed fees are consistent with the requirements of the Securities Exchange Act.”<sup>23</sup> Based on both the BOX Order and the Guidance, the Exchange believes that the proposed fees are consistent with the Act because they are: (i) reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable and will not result in excessive pricing or supra-competitive profit; and (iv) identical to the prices the Exchange currently charges for its ToM data product and the prices the Exchange’s affiliate, MIAX, charges for its ToM product, both of which were previously published by the Commission and remain in effect today.<sup>24</sup>

In adopting Regulation NMS, the Commission granted self-regulatory organizations (“SROs”) and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. Particularly, cToM further broadens the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. The data product also promotes increased transparency through the dissemination of cToM. Particularly, cToM provides subscribers with the same information as ToM, but includes the following additional information: (i) the identification of the complex strategies currently trading on the Exchange; (ii) complex strategy last sale information; and (iii) the status of securities underlying the complex strategy (e.g., halted, open, or resumed). The Exchange believes cToM provides a valuable tool that

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<sup>23</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>24</sup> See supra note 11.

subscribers can use to gain substantial insight into the trading activity in Complex Orders, but also emphasizes such data is not necessary for trading. Moreover, other exchanges offer similar data products.<sup>25</sup>

**The Proposed Fees will not Result in a Supra-Competitive Profit**

The Exchange believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee amendment meets the requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among market participants.

In the Guidance, the Commission Staff states that, “[a]s an initial step in assessing the reasonableness of a fee, staff considers whether the fee is constrained by significant competitive forces.”<sup>26</sup> The Guidance further states that, “... even where an SRO cannot demonstrate, or does not assert, that significant competitive forces constrain the fee at issue, a cost-based discussion may be an alternative basis upon which to show consistency with the Exchange Act.”<sup>27</sup> In the Guidance, the Commission Staff further states that, “[i]f an SRO seeks to support its claims that a proposed fee is fair and reasonable because it will permit recovery of the SRO’s costs, or will not result in excessive pricing or supra-competitive profit, specific information, including quantitative information, should be provided to support that argument.”<sup>28</sup> The Exchange does not assert that the proposed fees are constrained by competitive forces. Rather, the Exchange asserts that the proposed fees are reasonable because they will permit recovery of the Exchange’s

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<sup>25</sup> See supra notes 12 through 14.

<sup>26</sup> See Guidance, supra note 23.

<sup>27</sup> Id.

<sup>28</sup> Id.

costs in producing and disseminating cToM data and will not result in the Exchange generating a supra-competitive profit.

The Guidance defines “supra-competitive profit” as “profits that exceed the profits that can be obtained in a competitive market.”<sup>29</sup> The Commission Staff further states in the Guidance that “the SRO should provide an analysis of the SRO’s baseline revenues, costs, and profitability (before the proposed fee change) and the SRO’s expected revenues, costs, and profitability (following the proposed fee change) for the product or service in question.”<sup>30</sup> The Exchange provides this analysis below.

The proposed fees are based on a cost-plus model. The Exchange believes that it is important to demonstrate that the proposed fees are based on its costs and reasonable business needs and believes the proposed fees will allow the Exchange to begin to offset expenses. However, as discussed more fully below, such fees may also result in the Exchange recouping less than, or more than, all of its costs of providing the cToM data feed because of the uncertainty of forecasting subscriber decision making with respect to firms’ market data needs. The Exchange believes that the proposed fees will not result in excessive pricing or supra-competitive profit based on the total expenses the Exchange incurs versus the total revenue the Exchange projects to collect, and therefore meets the standards in the Act as interpreted by the Commission and the Commission Staff in the BOX Order and the Guidance.

The suspension orders sought additional information and comments on various aspects of the prior proposed fee changes. In many respects, the Commission’s questions about the prior proposed fee changes raise broader questions around the factors the Commission should consider and the type of data and analysis an exchange should provide in considering whether market

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<sup>29</sup> Id.

<sup>30</sup> Id.

data, port fees, or connectivity fees are fair and reasonable under a cost-based methodology. The suspension orders also sought more specific information regarding the allocation of third-party expenses, such as the overall estimated cost for each category of external expenses or at minimum the total applicable third-party expenses and percentage allocation or statements regarding the Exchange's overall estimated costs for the internal expense categories and general shared expenses figure. The Exchange added this additional information below.

In this filing, the Exchange offers a conceptual framework for further considering the Commission's questions that draws on the Exchange's own experience over several years of analyzing its own costs. The elements of that framework are as follows:

First, the Exchange created a flat, simple fee structure that imposes a single monthly fee for Internal Distributors and External Distributors, without added fees based on the way the data is used or individual per user fees. The Exchange believes this relatively simple, flat fee structure is transparent and easy for users to apply, and this difference also helps show that it meets the objectives of the Act.

The Exchange then conducted an extensive cost review in which the Exchange analyzed nearly every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the cToM data feed. That methodology does not allow for "double-counting" of the same costs for different classes of exchange products – for example transaction services, other market data products, physical connectivity, "logical" port connections or regulatory resources.

The Exchange then sought to narrowly allocate specific costs to the market data products to which the proposed fees would apply. In this filing, the Exchange provided more detail about how that allocation was determined and included information about tangential cost items that were not included. In determining what portion (or percentage) to allocate to producing and

disseminating the cToM data feed, each Exchange department head, in coordination with other Exchange personnel, determined the expenses that support producing and distributing the cToM data feed. This included numerous meetings between the Exchange's Chief Information Officer, Chief Financial Officer, Head of Strategic Planning and Operations, Chief Technology Officer, various members of the Legal Department, and other group leaders. The analysis also included each department head meeting with the divisions of teams within each department to determine the amount of time and resources allocated by employees within each division towards producing and distributing the cToM data feed. The Exchange reviewed each individual expense to determine if such expense was related to producing and disseminating the cToM data feed. Once the expenses were identified, the Exchange department heads, with the assistance of the Exchange's internal finance department, reviewed such expenses holistically on an Exchange-wide level to determine what portion of that expense supports producing and disseminating the cToM data feed. The sum of all such portions of expenses represents the total cost to the Exchange to produce and disseminate the cToM data feed. For the avoidance of doubt, no expense amount is allocated twice. Specifically, no expense amount is allocated to more than one expense category within this filing and no expense amount that is allocated as a cost to produce and disseminate the cToM data feed in this filing has been or will be allocated as a cost to provide any other exchange product or service in any other fee filing. In the suspension orders, the Commission questioned whether further explanation of the Exchange's cost analysis was necessary. The Exchange provides further details concerning its cost analysis in response to this question.

The Exchange believes exchanges, like all businesses, should be provided flexibility when developing and applying a methodology to allocate costs and resources they deem necessary to operate their business, including providing market data and access services. The

Exchange notes that costs and resource allocations may vary from business to business and, likewise, costs and resource allocations may differ from exchange to exchange when it comes to providing market data and access services. It is a business decision that must be evaluated by each exchange as to how to allocate internal resources and what costs to incur internally or via third parties that it may deem necessary to support its business and its provision of market data and access services to market participants.

Finally, the Exchange acknowledges that it is difficult to predict how much revenue the Exchange will receive from the proposed fees with precision. The analysis conducted by the Exchange is designed to make a fair and reasonable assessment of costs and resources allocated to support the production and dissemination of the cToM data feed associated with the proposed fees. The Exchange further acknowledges that this assessment can only capture a moment in time and that costs and resource allocations may change. That is why the Exchange historically, and on an ongoing basis, reviews its costs and resource allocations to ensure it appropriately allocates resources to properly provide services to the Exchange's constituents. As part of this proposed rule change, and as described further below, the Exchange is committing to conduct an annual cost review with respect to fees that are cost justified in this proposed rule change beginning one year from the date of this proposal, and annually thereafter. The Exchange expects that it may propose to adjust fees at that time, either to increase fees in the event that revenues fail to reasonably cover costs at the estimated margin set forth below, or to decrease fees in the event that revenue materially exceeds the Exchange's current projections. In the event that the Exchange determines to propose a fee change, updated cost estimates will be included in a rule filing proposing the fee change.

The Exchange believes applying this framework to the proposed fees shows that they are consistent with the requirements of the Act, leaving aside that the proposed fees are relatively similar to, or less than, fees charged by other exchanges for similar market data products.

*Exchange Costs and Cost Methodology*

The Exchange notes that there are material costs associated with providing the infrastructure and headcount to fully support the production and dissemination of the cToM data feed. As described below, 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.<sup>31</sup> The Exchange believes the proposed fees are a reasonable attempt to offset a portion of those costs associated with producing and disseminating the cToM data feed.

The Exchange estimated its total annual expense to provide the cToM data feed based on the following general expense categories: (1) external expenses, which include fees paid to third parties for certain products and services; (2) internal expenses relating to the internal costs to produce and disseminate the cToM data feed; and (3) general shared expenses.<sup>32</sup> The below table details each of these individual external and internal annual costs considered by the Exchange to be directly related to offering cToM to subscribers, and not any other product or

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<sup>31</sup> Both fixed and variable expenses have significant impact on the Exchange's overall costs to provide the cToM data feed. For example, to accommodate new Members, the Exchange may need to purchase additional hardware to support those Members and provide the cToM data feed. Further, as the total number of Members increases, the Exchange 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 the Exchange and its affiliates to provide access to its Members is not fixed.

<sup>32</sup> The percentage allocations used in this proposed rule change may differ from past filings from the Exchange or its affiliates due to adjustments to internal resource allocations and different system architecture of the Exchange as compared to its affiliates.

service offered by the Exchange. The below table also details the general shared expense allocated to this proposal. Each of these expenses are discussed in more detail further below.

For 2022, the total annual expense for producing and disseminating the cToM data feed is estimated to be \$236,284, or \$19,690 per month. The Exchange utilized its estimated 2022 revenue and costs, which utilize the same methodology set forth in the Exchange’s previously-issued Audited Unconsolidated Financial Statements.<sup>33</sup>

<b>External Expenses</b>	
<b>Category</b>	<b>Percentage of Total Expense Amount Allocated</b>
Data Center Provider	0.20%
Fiber Connectivity Provider	0.20%
Hardware and Software Providers	0.20%
Total of External Expenses	\$5,434 <sup>34</sup>
<b>Internal Expenses</b>	
<b>Category</b>	<b>Expense Amount Allocated</b>

<sup>33</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-party expense described in this filing is attributed to the same line item for the Exchange’s 2022 Form 1 Amendment, which will be filed in 2023. In its suspension orders, the Commission also asked should the Exchange use cost projections or actual costs estimated for 2021 in a filing made in 2022, or make cost projections for 2022. The Exchange utilized expenses from its most recent audited financial statement as those numbers are more reliable than more recent unaudited numbers, which may be subject to change.

<sup>34</sup> The Exchange does not believe it is appropriate to disclose the actual amount it pays to each individual third party provider as those fee arrangements are competitive or the Exchange is contractually prohibited from disclosing that amount.

Employee Compensation	\$209,610 (representing 2% of total \$9,900,032 expense)
Depreciation and Amortization	\$4,055 (representing 0.12% of total \$3,363,841 expense)
Occupancy	\$11,410 (representing 2% of total \$538,916 expense)
Total of Internal Expenses	\$225,075
Total Allocated Shared Expenses	\$5,775 (representing 0.2% of total \$2,872,232 expense)
<b>TOTAL EXTERNAL + INTERNAL + ALLOCATED SHARED EXPENSES</b>	<b>\$236,284</b>

In its suspension orders, the Commission solicited commenters' views on whether the Exchange has provided sufficient detail on the identity and nature of services provided by third parties. The Commission further solicited commenters' views on whether the Exchange has provided sufficient detail on the elements that go into producing and distributing the cToM data feed, including how shared costs are allocated and attributed to the cToM data feed, to permit an independent review and assessment of the reasonableness of purported cost-based fees and the corresponding profit margin thereon. In response, the Exchange provides additional detail regarding the identity and nature of services provided by third parties, the elements that go into producing and distributing the cToM data feed, and how expenses are allocated. The Exchange believes this additional detail is sufficient to support a finding that the proposed fees are consistent with the Exchange Act.

The Exchange notes that it only has a single source of revenue, distribution fees, to recover those costs associated with providing and disseminating the cToM data feed. For clarity, the Exchange took a conservative approach in determining the expense and the percentage of that expense to be allocated to providing the cToM data feed. The Exchange

describes below the analysis conducted for each expense and the resources or determinations that were considered when determining the amount necessary to allocate to each expense. The Exchange notes that, without the specific third party and internal expense items, the Exchange would not be able to provide and distribute cToM data feed. Each of these expense items, including physical hardware, software, employee compensation and benefits, occupancy costs, and the depreciation and amortization of equipment, were identified through a line-by-line cost analysis and determined to be integral to providing and distributing the cToM data feed for the reasons discussed below. Only a portion of all fees paid to such third parties are included in the third party expenses described herein, and, again, no expense amount is allocated twice. For example, the Exchange does not allocate its entire information technology and communication costs to providing and distributing the cToM data feed because it determined that a portion of those costs are attributable to other areas of the Exchange's operations, such as ports and transaction services, as well as other market data products provided by the Exchange. This may result in the Exchange under allocating an expense to provide the cToM data feed, and such expenses may actually be higher than what the Exchange allocated as part of this proposal.<sup>35</sup>

Further, as part of its ongoing assessment of costs and expenses, the Exchange recently conducted a periodic thorough review of its expenses and resource allocations, which resulted in revised percentage allocations in this filing as compared to prior versions of this proposed fee change that were previously withdrawn by the Exchange. The revised percentages are, among other things, the result of the shifting of internal resources in response to business

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<sup>35</sup> The Exchange notes that expenses associated with its affiliates, MIAX and MIAX Pearl (the options and equities markets), are accounted for separately and are not included within the scope of this filing.

objectives. Therefore, the percentage allocations used in this proposed rule change may differ from past filings from the Exchange or its affiliates due to, among other things, changes in expenses charged by third parties, adjustments to internal resource allocations, and different system architecture of the Exchange as compared to its affiliates.<sup>36</sup>

*External Expense Allocations*

For 2022, annual expenses relating to fees paid by the Exchange to third parties for products and services necessary to provide the cToM data feed are estimated to be \$5,434.<sup>37</sup> This includes a portion of the fees paid to: (1) a third party data center provider, including for the primary, secondary, and disaster recovery locations of the Exchange's trading system infrastructure; (2) a fiber connectivity provider for network services (fiber and bandwidth products and services) linking the Exchange's and its affiliates' office locations in Princeton, New Jersey and Miami, Florida, to all data center locations; and (3) hardware and software providers, which support the production environment in which Members and non-Members connect to the network to receive market data.<sup>38</sup>

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<sup>36</sup> The Exchange notes that the expense allocations differ from the Exchange's filing earlier in 2021, SR-EMERALD-2021-05, because that prior filing pertained to several different market data fees, which the Exchange had not been charging for since the Exchange launched operations in March 2019. See Securities Exchange Act Release No. 91145 (February 17, 2021), 86 FR 11033 (February 23, 2021) (SR-EMERALD-2021-05) (adopting fees for the ToM, Administrative Information Subscriber ('AIS'), and MOR data feeds, all of which had been free for market participants for over two years since inception).

<sup>37</sup> See supra note 34.

<sup>38</sup> Id. The Exchange did not allocate any expense associated with the proposed fees towards the Securities Financial Transaction Infrastructure ("SFTI") and various other service providers' because the Exchange's architecture takes advantage of an advance in design to eliminate the need for a market data distribution gateway layer. The computation and dissemination via an API is done solely within the match engine environment and is then delivered via the Member and non-Member connectivity infrastructure. This architecture delivers a market data system that is more efficient both in cost and performance.

Data Center Space and Operations Provider

The Exchange does not own the primary data center or the secondary data center, but instead leases space in data centers operated by third parties where the Exchange houses servers, switches and related equipment. Data center costs include an allocation of the costs the Exchange incurs to provide and distribute market data in the third party data centers where it maintains its equipment as well as related costs described below. The data center provider operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. Without the retention of a third party data center, the Exchange would not be able to operate its systems, provide a trading platform for market participants, and produce and distribute market data. The Exchange does not employ a separate fee to cover its data center expense and recoups that expense, in part, by charging for the cToM data feed.

The Exchange reviewed its data center footprint and space utilized, including its total rack space, cage usage, number of servers, switches, cabling within the data center, heating and cooling of physical space, storage space, and monitoring and divided its data center expenses among providing transaction services, market data, and connectivity based on space utilized by each area.<sup>39</sup> Based on this review, the Exchange determined that 0.20% of the total applicable data center provider expense is applicable to providing the cToM data feed. The Exchange reviewed space utilized to house rack space, cage usage, servers, switches, cabling, storage space, heating and cooling of physical space, and monitoring, and identified that a small

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Accordingly, the Exchange determined not to allocate any expense associated with SFTI and various other service providers.

<sup>39</sup> The Investors Exchange, Inc. ("IEX") also allocated data center costs to produce market data based on space utilized. See Securities Exchange Act Release No. 94630 (April 7, 2022), 87 FR 21945, at page 21949 (April 13, 2022) (SR-IEX-2022-02) ("IEX Market Data Fee Proposal") (noting that "[d]ata Center costs consist of the fees charged by the third-party data centers used by IEX and represent less than 10% the Exchange's total data center costs *based on space utilized*" (*emphasis added*)).

portion of that footprint is dedicated to equipment used to produce and distribute the cToM data feed.

The Exchange believes this allocation is reasonable because it represents the costs associated with housing the Exchange's equipment dedicated to processing and disseminating the cToM data feed. The Exchange excluded from this allocation a portion of the Exchange's data center expense that is due to space utilized to provide and maintain connectivity to the Exchange's System Networks, including providing cabling within the data center between market participants and the Exchange. The Exchange also did not allocate the remainder of the data center expense because it pertains to space utilized by other areas of the Exchange's operations, such as connectivity, ports and transaction services, as well as other market data products provided by the Exchange.

*Fiber Connectivity Provider*

The Exchange engages a third party service provider that provides the internet, fiber and bandwidth connections between the Exchange's networks, primary and secondary data center, and office locations in Princeton and Miami. Fiber connectivity is necessary for the Exchange to switch to its secondary data center in the case of an outage in its primary data center. Fiber connectivity also allows the Exchange's National Operations & Control Center ("NOCC") and Security Operations Center ("SOC") in Princeton to communicate with the Exchange's primary and secondary data centers. As such, all trade data, including the billions of messages each day, flow through this third party provider's infrastructure over the Exchange's network. Fiber connectivity is also necessary for personnel responsible for overseeing and providing customer service related to producing and distributing the cToM data feed, receiving relevant data and being able to communicate between the Exchange's various locations and data centers.

Without the retention of a third party fiber connectivity provider, the Exchange would not be

able to communicate between its data centers and office locations in a manner necessary to maintain and support the cToM data feed. Fiber connectivity is a necessary integral means to disseminate information, including data related to producing and distributing the cToM data feed, from the Exchange's primary data center to other Exchange locations. It is necessary for Exchange employees located in various locations to be able to communicate and receive the necessary data to maintain and provide customer support related to the cToM data feed. The Exchange would not be able to operate and support the network and produce and distribute the cToM data feed without third party fiber connectivity. The Exchange does not employ a separate fee to cover its fiber connectivity expense and recoups that expense, in part, by charging for cToM data feed.

The Exchange reviewed its costs to retain fiber connectivity from a third party, including the ongoing costs to support fiber connectivity, ensuring adequate bandwidth and infrastructure maintenance to support exchange operations, and ongoing network monitoring and maintenance and determined that 0.20% of the total fiber connectivity expense was applicable to producing and distributing the cToM data feed. The Exchange reviewed its total fiber connectivity expense and allocated it among transaction services, connectivity, ports, other market data products, and administrative operations based on usage. The Exchange then further divided up its fiber connectivity costs related to market data and identified the portion that is attributable to producing and maintaining the cToM data feed, also based on usage. This allocation is, therefore, based on the amount of bandwidth and fiber connectivity the Exchange calculated is utilized to support exchange operations, and ongoing network monitoring and maintenance that are necessary to produce and maintain the cToM data feed. The Exchange believes this allocation is reasonable because it reflects the portion of the fiber connectivity expense that relates to producing and distributing the cToM data feed. The Exchange excluded

a large portion of the Exchange's fiber connectivity expense that is due to providing and maintaining connectivity between the Exchange's System Networks, data centers, and office locations and is core to the daily operation of the Exchange. The Exchange also excluded from this allocation fiber connectivity usage related to system connectivity or other business lines, such as transaction services and other market data products offered by the Exchange, or unrelated administrative services. The Exchange also did not allocate the remainder of this expense because it pertains to other areas of the Exchange's operations and does not directly relate to providing the cToM data feed. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to produce and distribute the cToM data feed.

#### *Hardware and Software Providers*

The Exchange relies on dozens of third party hardware and software providers for equipment necessary to produce and disseminate the cToM data feed. This includes either the purchase or licensing of physical equipment, such as servers, switches, cabling, and devices needed by Exchange personnel to monitor servers and the health of market data products, including the cToM data feed. This consists of real-time monitoring of system performance, integrity, and latency of market data products. It also includes the Exchange purchasing or licensing software necessary for security monitoring, data analysis and Exchange operations. Hardware and software providers are necessary to produce and distribute the cToM data feed. Hardware and software equipment and licenses for that equipment are also necessary to operate and monitor physical assets necessary to produce and distribute the cToM data feed. Hardware and software equipment and licenses are key to the operation of the Exchange and without them the Exchange would not be able to produce and distribute the cToM data feed. The Exchange does not employ a separate fee to cover its hardware and software expense and recoups that expense, in part, by charging for cToM data feed dissemination.

The Exchange reviewed its hardware and software related costs, including software patch management, vulnerability management, administrative activities related to equipment and software management, professional services for selection, installation and configuration of equipment and software supporting exchange operations. The Exchange then divided those costs among transaction services, ports, connectivity, other market data products, and other Exchange operations based on whether all of that hardware or software is based on usage. The Exchange then reviewed the amount allocated to producing and distributing market data generally and what portion of that hardware and software equipment or license is used to support the cToM data feed specifically. Based on this review, the Exchange determined that 0.20% of the total applicable hardware and software expense is allocated to producing and distributing the cToM data feed. This percentage reflects the amount of hardware and software equipment and licenses dedicated to produce and maintain the cToM data feed.<sup>40</sup> Hardware and software equipment and licenses are key to the operation of the Exchange and production and distribution of market data. Without them, the Exchange would not be able to develop, and market participants would not be able to purchase, the cToM data feed. The Exchange only allocated the portion of this expense to the hardware and software that is related to the cToM data feed, such as operating servers and equipment necessary to produce and distribute the cToM data feed. The Exchange, therefore, did not allocate portions of its hardware and software expense that related to other areas of the Exchange's business, such as hardware and software used for connectivity or unrelated administrative services. The Exchange also did not allocate the remainder of this expense because it pertains to other areas of the Exchange's

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<sup>40</sup> The Exchange notes that IEX used a similar methodology to allocate hardware costs to market data. See IEX Market Data Fee Proposal, *id.* at page 21950 (noting that "IEX only included hardware specifically dedicated to the market data feeds in calculating the costs of providing market data").

operations, such as ports or transaction services, as well as other market data products provided by the Exchange, and is not directly related to producing and disseminating the cToM data feed. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to produce and disseminate the cToM data feed, and not any other service, as supported by its cost review.

#### Internal Expense Allocations

For 2022, total internal annual expense relating to the Exchange producing and distributing the cToM data feed is estimated to be \$225,075. This includes costs associated with: (1) employee compensation and benefits for full-time employees that support market data, 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 as well as important system upgrades; (2) depreciation and amortization of hardware and software used to produce and distribute the cToM data feed, 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 support the cToM data feed.

#### Employee Compensation and Benefits

Human personnel are key to exchange operations and supporting the Exchange's ongoing provision of the cToM data feed. The Exchange reviewed its employee compensation and benefits expense and the portion of that expense allocated to providing the cToM data feed. As part of this review, the Exchange considered employees whose functions include providing and

maintaining the cToM data feed and used a blended rate of compensation reflecting salary, stock and bonus compensation, bonuses, benefits, payroll taxes, and 401K matching contributions.<sup>41</sup>

In its suspension orders, the Commission asked the Exchange provide more detail about the methodology the Exchange used to determine how much of an employee's time is devoted to market data related activities. In considering the cost of personnel, the Exchange generally considered the time spent on various market data projects and initiatives through project management tracking tools and analysis of employee resource allocations, among its Technology Team in the following areas: Technical Operations, Software Engineering, Quality Assurance, and Infrastructure. The Exchange did not consider non-Technology Teams such as Market Operations, Project Management, Regulatory, Legal, and Accounting/Finance.<sup>42</sup>

Based on this review, the Exchange determined to allocate \$209,610 in employee compensation and benefits expense to producing and distributing the cToM data feed. This represents approximately 2.0% of the \$9,900,032 total projected expense for employee compensation and benefits. The Exchange determined the cost allocation for employees who perform work in support of producing and distributing the cToM data feed to arrive at a full time equivalent ("FTE") of 0.6 FTEs across all the identified personnel. The Exchange then multiplied the FTE times a blended compensation rate for all relevant Exchange personnel to determine the personnel costs associated with producing and distributing the cToM data feed.

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<sup>41</sup> For purposes of this allocation, the Exchange did not consider expenses related to office space, supplies, or equipment use by employees who support cToM data feed.

<sup>42</sup> The Exchange notes that IEX used a similar methodology to allocate employee compensation related costs to market data. See IEX Market Data Fee Proposal, supra note 39 at page 29150 (noting that "[f]or personnel costs, IEX calculated an allocation of employee time for employees whose functions include providing and maintaining IEX Data and/or the proprietary market data feeds used to transmit IEX Data, and used a blended rate of compensation reflecting salary, stock and bonus compensation, benefits, payroll taxes, and 401(k) matching contributions").

Senior staff also reviewed these time allocations with department heads and team leaders to determine whether those allocations were appropriate. These employees are critical to the Exchange to producing and distributing the cToM data feed. The Exchange determined the above allocation based on the personnel whose work focused on functions necessary to producing and distributing the cToM data feed. The Exchange does not charge a separate fee for employees who support the cToM data feed and the Exchange seeks to recoup that expense, in part, by charging for the cToM data feed.

The Exchange believes it is appropriate to include incentive compensation in the blended personnel compensation rate on the same basis as other personnel costs for in-scope employees because incentive compensation is a part of the total personnel costs associated with the Exchange's costs to provide the cToM data feed. Moreover, the Exchange notes that it has taken a conservative approach in determining which employees to include in its cost analysis, in terms of function and percent allocation, so that the included personnel costs are directly and closely tied to the costs of providing the cToM data feed. The FTE allocation represents just 2.0% of the Exchange's overall personnel costs. Consistent with the Exchange's conservative methodology to limit costs allocated to producing and disseminating the cToM data feed, this approach includes only a de minimis personnel cost allocation for senior level executives and no allocation for members of the Exchange's board of directors. Accordingly, the Exchange believes that the allocated personnel expenses included are appropriately attributable to producing and disseminating the cToM data feed.

#### Depreciation and Amortization

A key expense incurred by the Exchange relates to the depreciation and amortization of equipment that the Exchange procured to produce and distribute the cToM data feed. The Exchange reviewed all of its physical assets and software, owned and leased, and determined

whether each asset is related to providing and maintaining the cToM data feeds, and added up the depreciation of those assets. All physical assets and software, which includes assets used for testing and monitoring of Exchange infrastructure, were valued at cost and depreciated or leased over periods ranging from three to five years. Based on the Exchange's experience, this depreciation period equals the typical life expectancy of those assets. In determining the amount of depreciation and amortization to apply to providing the cToM data feeds, the Exchange considered the depreciation of hardware and software that are key to its provision of the cToM data feeds. This includes servers, computers, laptops, monitors, information security appliances and storage, and network switching infrastructure equipment, including switches and taps that were previously purchased to produce and distribute the cToM data feed. Without them, market participants would not be able to receive the cToM data feed. The Exchange seeks to recoup a portion of its depreciation expense by charging for the cToM data feed.

Based on this review, the Exchange determined to allocate \$4,055 in depreciation and amortization expense to producing and distributing the cToM data feed. This is only 0.12% of the \$3,363,841 total projected expense for depreciation and amortization. For purposes of the allocation of these costs to the cToM data feed, the Exchange allocates the annual depreciation (i.e., one-third or one-fifth of the initial asset value based on the typical life expectancy of those assets). One-third or one-fifth of the cost of each asset is included in the annual costs allocated to the cToM data feed. The Exchange only included assets specifically dedicated to the cToM data feed in calculating the costs of providing the cToM data feed. This means that physical assets used for transaction services, other market data products, or other Exchange operations were excluded from the calculation.<sup>43</sup> The Exchange, therefore, did not allocate portions of

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<sup>43</sup> The Exchange notes that IEX used a similar methodology to allocate hardware costs to market data. See IEX Market Data Fee Proposal at note 54, *supra* note 39 at page 21950 (noting that “[h]ardware is depreciated on a straight-line three-year period, which in

depreciation expense that relates to other areas of the Exchange's business, such as the depreciation of hardware and software used for connectivity, unrelated administrative services, or other market data products provided by the Exchange. All of the expenses outlined in this proposed fee change refer to the operating expenses of the Exchange. In the suspension orders, the Commission asked for additional detail or explanation to ensure that no expense amount is allocated twice. The Exchange did not include any future capital expenditures within these costs ensuring that no cost is counted twice. Depreciation and amortization represent the expense of previously purchased hardware and internally developed software spread over the useful life of the assets. Due to the fact that the Exchange has only included operating expense and historical purchases, there is no double counting of expenses in the Exchange's cost estimates.

#### Occupancy

The Exchange rents and maintains multiple physical locations to house staff and equipment necessary to support the production and dissemination of the cToM data feed. The Exchange's occupancy expense is not limited to the housing of personnel and includes locations used to store equipment necessary for Exchange operations. In determining the amount of its occupancy related expense, the Exchange considered actual physical space used to house employees whose functions include producing and distributing the cToM data feed. Similarly, the Exchange also considered the actual physical space used to house hardware and other equipment necessary to provide and maintain the cToM data feed. The Exchange

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IEX's experience, is equal to the typical life expectancy of those assets. As noted above, one-third of the cost of each hardware asset is included in the annual costs allocated to market data. IEX only included hardware specifically dedicated to the market data feeds in calculating the costs of providing market data. This means that physical assets used for both order entry and market data were excluded from the calculation").

maintains staff that support producing and distributing the cToM data feed in various locations and needs to provide workplaces for that staff as well as space to house hardware and equipment necessary for those employees to perform those functions.<sup>44</sup> This equipment includes computers, servers, and accessories necessary to support producing and distributing cToM data feed. Based on this review, the Exchange determined to allocate \$11,410 of its occupancy expense to producing and distributing the cToM data feed. According to the Exchange's calculations, it allocated approximately 2.0% of the total applicable occupancy expense to producing and distributing the cToM data feeds. This is only a portion of the \$538,916 total projected expense for occupancy. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the cToM data feed. The Exchange considered the rent paid for the Exchange's Princeton and Miami offices, as well as various related costs, such as physical security, property management fees, property taxes, and utilities at each of those locations. The Exchange did not include occupancy expenses related to housing employees and equipment related to other Exchange operations, such as transaction and administrative services.

*Allocated Shared Expense*

Finally, a limited portion of general shared expenses was allocated to the cToM data feed costs, as without these general shared costs, the Exchange would not be able to operate in the manner that it does and produce and distribute the cToM data feed. The costs included in general shared expenses include recruiting and training, marketing and advertising costs,

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<sup>44</sup> For the avoidance of doubt, the Exchange did not include within this cost any portion of its costs related to third party fiber connectivity used by Exchange staff in different office locations to communicate as part of their role in supporting the cToM data feed.

professional fees for legal, tax and accounting services, and telecommunications costs. For 2022, the Exchange's general shared expense allocated to the cToM data feed is estimated to be \$5,755. This represents approximately 0.2% of the \$2,872,232 total projected general shared combined expense. The Exchange used the weighted average of the above allocations to determine the amount of general shared expenses to allocate to the Exchange. Next, based on additional management and expense analysis, these fees are allocated to the proposal.

#### Revenue and Estimated Profit Margin

The Exchange only has four primary sources of revenue and cost recovery mechanisms to fund all of its operations: transaction fees, access fees, regulatory fees, and market data fees. Accordingly, the Exchange must cover all of its expenses from these four primary sources of revenue and cost recovery mechanisms.

To determine the Exchange's estimated revenue associated with the cToM data feed, the Exchange analyzed the number of Members and non-Members currently receiving the cToM data feed and used a recent monthly billing cycle representative of current monthly revenue. The Exchange also provided its baseline by analyzing March 2022, the monthly billing cycle prior to the proposed cToM data fee, and compared this to its expenses for that month. As discussed below, the Exchange does not believe it is appropriate to factor into its analysis future revenue growth or decline into its estimates for purposes of these calculations, given the uncertainty of such estimates due to the continually changing access needs of market participants and potential changes in internal and third party expenses.

For the month of March 2022, prior to the effectiveness of the proposed cToM fees, the Exchange had 13 cToM data feed subscribers, for which the Exchange charged \$0. This resulted in a loss of \$19,690 for that month. For April 2022, the Exchange anticipates that it

will have 13 cToM data feed subscribers.<sup>45</sup> Assuming the Exchange charges the proposed fees for Distributors, the Exchange would generate revenue of \$16,250 for April 2022. This would result in a loss of \$3,440 (\$16,250 minus \$19,690) for the month of April (a negative 21% margin from March 2022 to April 2022).

The Exchange believes that conducting the above analysis on a per month basis is reasonable as the revenue generated from the cToM data feed is generally remains static from month to month. The Exchange also conducted the above analysis on a per month basis to comply with the Commission Staff's Guidance, which requires a baseline analysis to assist in determining whether the proposal generates a supra-competitive profit. The Exchange cautions that this margin may also fluctuate from month to month based on the uncertainty of predicting how many subscribers may purchase cToM data feed subscriptions from month to month as Members and non-Members are free to add and drop subscriptions at any time based on their own business decisions.

The Exchange believes the proposed margin is reasonable and will not result in a "supra-competitive" profit. The Guidance defines "supra-competitive profit" as "profits that exceed the profits that can be obtained in a competitive market."<sup>46</sup> Until recently, the Exchange has operated at a cumulative net annual loss since it launched operations in 2019.<sup>47</sup>

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<sup>45</sup> The Exchange notes that the number of cToM subscribers may change over time. Beginning with June 2021, the month prior to the original fee change to adopt cToM data fees, the Exchange had the following number of subscribers each month: June (13 subscribers); July (13 subscribers); August (12 subscribers); September (15 subscribers); October (12 subscribers); November (12 subscribers); December (12 subscribers); January (12 subscribers); February (12 subscribers); March (13 subscribers); and April (13 subscribers).

<sup>46</sup> See Guidance, *supra* note 23.

<sup>47</sup> The Exchange has incurred a cumulative loss of \$22 million since its inception in 2019 to 2020, the last year for which the Exchange's Form 1 data is available. See Exchange's Form 1/A, Application for Registration or Exemption from Registration as a National

The Exchange has operated at a net loss due to a number of factors, one of which is choosing to forgo revenue by offering certain products, such as the cToM data feed, for free, as well as other products at lower rates, than other options exchanges to attract order flow and encourage market participants to experience the high determinism, low latency, and resiliency of the Exchange's trading systems. The Exchange previously provided the cToM data feed free of charge and absorbed all costs associated with providing the cToM data feed to market participants. In this proposal, the Exchange would continue to offer the cToM data feed for a fee that still falls short of covering the Exchange's expenses. The Exchange is not generating a profit, and therefore, cannot be deemed to be generating a "supra-competitive" profit by now charging for the cToM data feed. The Exchange should not now be penalized for seeking to adopt fees to at least cover a portion of its costs after offering the cToM data feed free of charge. Therefore, the Exchange believes the proposed fees are reasonable because they are based on both relative costs to the Exchange to generate and disseminate cToM, the extent to which the product drives the Exchange's overall costs and the relative value of the product, as well as the Exchange's objective to make cToM broadly available to market participants. The Exchange also believes the proposed fees are reasonable because they are designed to generate annual revenue to recoup some of the Exchange's annual costs of providing the cToM data feed.

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

instance, in order to generate the revenue expected from the cToM data feed, the Exchange will have to be successful in retaining existing clients that wish to receive the cToM data feed or obtaining new clients that will purchase such data. To the extent the Exchange is successful in encouraging new clients to receive the cToM data feed, the Exchange does not believe it should be penalized for such success. The Exchange, like other exchanges, is, after all, a for-profit business. While the Exchange believes in transparency around costs and potential margins, the Exchange does not believe that these estimates should form the sole basis of whether or not a proposed fee is reasonable or can be adopted. Instead, the Exchange believes that the information should be used solely to confirm that an Exchange is not earning supra-competitive profits, and the Exchange believes this proposal demonstrates this fact.

Finally, the Exchange believes that the proposed fees are reasonable because they will not impose onerous audit requirements on subscribers, because there will be no need to substantiate the number of users of cToM or the manner in which it is being used, but rather only whether it is being redistributed internally or to external third parties.

#### *Annual Review of Fees*

In its suspension orders, the Commission asks whether exchanges should periodically reevaluate fees on an ongoing and periodic basis in order to assure that actual revenue aligns with a reasonable cost-plus model. As described above and as part of this proposed rule change, the Exchange is committing to conduct a one year review of the fees that are cost justified as part of this proposed rule change after the date of this proposal, and annually thereafter. The Exchange expects that it may propose to adjust fees at that time, either to increase fees in the event that revenues fail to reasonably cover costs at the estimated margin set forth above, or to decrease fees in the event that revenue materially exceeds the Exchange's current projections. In the event that the Exchange determines to propose a fee change, updated cost estimates will be

included in a rule filing proposing the fee change. The Exchange believes this approach will further increase transparency around market data costs and help to ensure that Exchange fees continue to be reasonably related to costs.

**The Proposed Fees are Reasonable when Compared to the Fees of other Options Exchanges with Similar Market Share**

The Exchange does not have visibility into other options exchanges' costs to provide market data or their fee markup over those costs, and therefore cannot use other exchange's market data fees as a benchmark to determine a reasonable markup over the costs of providing market data. Nevertheless, the Exchange believes the other exchanges' complex market data fees are useful examples of alternative approaches to providing and charging for complex market data notwithstanding that the competing exchanges may have different system architectures that may result in different cost structures for the provision of complex market data. To that end, the Exchange believes the proposed cToM data fees are reasonable because the proposed fees are similar to, or less than fees charged for complex market data provided by other options exchanges with comparable market shares.

As described in the below table, the Exchange's proposed fees remain less than fees charged for similar market data products provided by other options exchanges with similar market share. Each of the market data rates in place at competing options exchanges were filed with the Commission for immediate effectiveness and remain in place today.

<b>Exchange</b>	<b>Monthly Fee</b>
MIAX Emerald (as proposed)	\$1,250 – Internal Distributor \$1,750 – External Distributor
Amex <sup>48</sup>	\$1,500 – Access Fee

<sup>48</sup> See NYSE American Options Proprietary Market Data Fees, American Options Complex Fees, at

	\$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
Arca <sup>49</sup>	\$1,500 – Access Fee \$1,000 – Redistribution Fee (this fee is in addition to the Access Fee resulting in a \$2,500 monthly fee for external distribution)
PHLX <sup>50</sup>	\$3,000 – Internal Distributor \$3,500 – External Distributor

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

The Exchange believes that the proposed fees are reasonable, fair, and equitable, and not unfairly discriminatory because they are designed to align fees with services provided and will apply equally to all subscribers. The Exchange believes that it is reasonable, equitable and not unfairly discriminatory to assess Internal Distributors fees that are less than the fees assessed for External Distributors for subscriptions to the cToM data feed because Internal Distributors have limited, restricted usage rights to the market data, as compared to External Distributors, which have more expansive usage rights. All Members and non-Members that determine to receive any market data feed of the Exchange (or its affiliates, MIAX Pearl and MIAX), must first execute, among other things, the MIAX Exchange Group Exchange Data Agreement (the “Exchange Data

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[https://www.nyse.com/publicdocs/nyse/data/NYSE\\_American\\_Options\\_Market\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_American_Options_Market_Data_Fee_Schedule.pdf).

<sup>49</sup> See NYSE Arca Options Proprietary Market Data Fees, Arca Options Complex Fees, at [https://www.nyse.com/publicdocs/nyse/data/NYSE\\_Arca\\_Options\\_Proprietary\\_Data\\_Fee\\_Schedule.pdf](https://www.nyse.com/publicdocs/nyse/data/NYSE_Arca_Options_Proprietary_Data_Fee_Schedule.pdf).

<sup>50</sup> See PHLX Price List – U.S. Derivatives Data, PHLX Orders Fees, at <http://www.nasdaqtrader.com/Trader.aspx?id=DPPriceListOptions#PHLX>.

Agreement”).<sup>51</sup> Pursuant to the Exchange Data Agreement, Internal Distributors are restricted to the “internal use” of any market data they receive. This means that Internal Distributors may only distribute the Exchange’s market data to the recipient’s officers and employees and its affiliates.<sup>52</sup> External Distributors may distribute the Exchange’s market data to persons who are not officers, employees or affiliates of the External Distributor,<sup>53</sup> and may charge their own fees for the redistribution of such market data. External Distributors may monetize their receipt of the cToM data feed by charging their customers fees for receipt of the Exchange’s cToM data. Internal Distributors do not have the same ability to monetize the Exchange’s cToM data feed. Accordingly, the Exchange believes it is fair, reasonable and not unfairly discriminatory to assess External Distributors a higher fee for the Exchange’s cToM data feed as External Distributors have greater usage rights to commercialize such market data and can adjust their own fee structures if necessary.

The Exchange also utilizes more resources to support External Distributors versus Internal Distributors, as External Distributors have reporting and monitoring obligations that Internal Distributors do not have, thus requiring additional time and effort of Exchange staff. For example, External Distributors have monthly reporting requirements under the Exchange’s Market Data Policies.<sup>54</sup> Exchange staff must then, in turn, process and review information

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<sup>51</sup> See Exchange Data Agreement, available at [https://mixonweb2.pairsite.com/sites/default/files/page-files/MIAX\\_Exchange\\_Group\\_Data\\_Agreement\\_09032020.pdf](https://mixonweb2.pairsite.com/sites/default/files/page-files/MIAX_Exchange_Group_Data_Agreement_09032020.pdf).

<sup>52</sup> See *id.*

<sup>53</sup> See *id.*

<sup>54</sup> Section 6 of the Exchange’s Market Data Policies, available at [https://www.mioxoptions.com/sites/default/files/page-files/MIAX\\_Exchange\\_Group\\_Market\\_Data\\_Policies\\_07202021.pdf](https://www.mioxoptions.com/sites/default/files/page-files/MIAX_Exchange_Group_Market_Data_Policies_07202021.pdf).

reported by External Distributors to ensure the External Distributors are redistributing cToM data in compliance with the Exchange's Market Data Agreement and Policies.

The Exchange believes the proposed cToM fees are equitable and not unfairly discriminatory because the fee level results in a reasonable and equitable allocation of fees amongst subscribers for similar services, depending on whether the subscriber is an Internal or External Distributor. Moreover, the decision as to whether or not to purchase market data is entirely optional to all market participants. Potential purchasers are not required to purchase the market data, and the Exchange is not required to make the market data available. Purchasers may request the data at any time or may decline to purchase such data. The allocation of fees among users is fair and reasonable because, if market participants determine not to subscribe to the data feed, firms can discontinue their use of the cToM data.

The Exchange further believes that the proposed fees are reasonable, fair, and equitable, and non-discriminatory because they will apply to all subscribers in the same manner based on whether the data is used for internal purposes or distributed to third parties. All similarly situated market participants are subject to the same fees. The fees also do not depend on any distinctions between or among Members, customers, broker-dealers, or any other entity, because they are solely determined by the individual market participant based on its business needs. The Exchange also notes that the proposed monthly cToM fees for Internal and External Distributors are the same prices that the Exchange charges for its ToM data product.

Finally, the Exchange believes that the proposed fees are consistent with Section 11A of the Exchange Act in that it is designed to facilitate the economically efficient execution of securities transactions, fair competition among brokers and dealers, exchange markets and markets other than exchange markets, and the practicability of brokers executing investors' orders in the best market. Specifically, the proposed low cost-based fee will enable a broad range

of market participants to receive the cToM data feed, thereby facilitating the economically efficient execution of securities transactions on the Exchange, fair competition between and among such Members, and the practicability of Members that are brokers executing investors' orders on the Exchange when it is the best market.

For the foregoing reasons, the Exchange believes that the proposed fee is reasonable, equitably allocated, and not unfairly discriminatory.

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The Exchange believes the proposed change to delete certain text from Section 6)a) of the Fee Schedule promotes just and equitable principles of trade and removes impediments to and perfects the mechanism of a free and open market and a national market system because the proposed change is a non-substantive edit to the Fee Schedule to remove unnecessary text. The Exchange believes that this proposed change will provide greater clarity to Members and the public regarding the Exchange's Fee Schedule and that it is in the public interest for the Fee Schedule to be accurate and concise so as to eliminate the potential for confusion.

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

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

Intra-Market Competition

The Exchange believes the proposed fees will not result in any burden on intra-market competition that is not necessary or appropriate in furtherance of the purposes of the Act because the proposed fees will allow the Exchange to recoup some of its costs in providing cToM to market participants. As described above, the Exchange has operated at a cumulative net annual

loss since it launched operations in 2019<sup>55</sup> due to providing a low cost alternative to attract order flow and encourage market participants to experience the high determinism and resiliency of the Exchange's trading Systems. To do so, the Exchange chose to waive the fees for some non-transaction related services and Exchange products or provide them at a very marginal cost, which was not profitable to the Exchange. This resulted in the Exchange forgoing revenue it could have generated from assessing any fees or higher fees. The Exchange could have sought to charge higher fees at the outset, but that could have served to discourage participation on the Exchange. Instead, the Exchange chose to provide a low cost exchange alternative to the options industry which resulted in lower initial revenues. An example of this is cToM, for which the Exchange only now seeks to adopt fees at a level similar to or lower than those of other options exchanges.

Since the Exchange initially launched operations with the cToM data product in 2019, all Exchange Members and non-Members have had the ability to receive the Exchange's cToM data free of charge for the past three years. Since 2019, when the Exchange adopted Complex Order functionality, the Exchange has spent time and resources building out additional features for Complex Order functionality in its System to provide better trading strategies and risk protections for market participants in order to better compete with other exchanges' complex functionality and similar data products focused on complex orders.<sup>56</sup> The Exchange now seeks to recoup its costs for providing cToM to market participants and believes the proposed fees will not result in excessive pricing or supra-competitive profit.

#### Inter-Market Competition

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<sup>55</sup> See supra note 47.

<sup>56</sup> See supra notes 12 through 14.

The Exchange also does not believe the proposed fees would cause any unnecessary or inappropriate burden on intermarket competition as other exchanges are free to introduce their own comparable data product and lower their prices to better compete with the Exchange's offering. There is no reason to believe that the newly proposed fees to receive the cToM data feed would impair other exchange's ability to compete or cause any unnecessary or inappropriate burden on inter-market competition. Particularly, the proposed product and fees apply uniformly to any purchaser, in that it does not differentiate between subscribers that purchase cToM. The proposed fees are set at a modest level that would allow any interested Member or non-Member to purchase such data based on their business needs.

The Exchange does not believe that the proposed rule change to make a minor, non-substantive edit to Section 6(a) of the Fee Schedule by deleting unnecessary text will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. This proposed rule change is not being made for competitive reasons, but rather is designed to remedy a minor non-substantive issue and will provide added clarity to the Fee Schedule. The Exchange believes that it is in the public interest for the Fee Schedule to be accurate and concise so as to eliminate the potential for confusion on the part of market participants. In addition, the Exchange does not believe the proposal will impose any burden on inter-market competition as the proposal does not address any competitive issues and is intended to protect investors by providing further transparency regarding the Exchange's Fee Schedule.

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

Written comments were neither solicited nor received.

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

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,<sup>57</sup> and Rule 19b-4(f)(2)<sup>58</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-2022-18 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-2022-18. 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>57</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>58</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-2022-18 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>59</sup>

Vanessa Countryman  
Secretary

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<sup>59</sup> 17 CFR 200.30-3(a)(12).

**Exhibit 5**

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

### **MIAX Emerald Options Exchange Fee Schedule**

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#### **6) Market Data Fees**

##### **a) MIAX Emerald Top of Market (“ToM”) and Complex Top of Market (“cToM”)**

<b>Distributor Type</b>	<b>ToM Monthly Fee</b>	<b>cToM Monthly Fee</b>
Internal Distributor	\$1,250.00	[Fee waived for the Waiver Period] <u>\$1,250.00</u>
External Distributor	\$1,750.00	[Fee waived for the Waiver Period] <u>\$1,750.00</u>

MIAX Emerald will assess Market Data Fees[ (as applicable)] to ToM and cToM on Internal and External Distributors in each month the Distributor is credentialed to use ToM or cToM in the production environment. A Distributor of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. Market Data Fees for ToM and/or cToM, as applicable, will be reduced for new Distributors for the first month during which they subscribe to ToM and/or cToM, as applicable, based on the number of trading days that have been held during the month prior to the date on which they have been credentialed to use ToM and/or cToM, as applicable, in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees described above, which is the percentage of the number of trading days remaining in the affected calendar month as of the date on which they have been credentialed to use ToM and/or cToM in the production environment, divided by the total number of trading days in the affected calendar month.

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