



SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-91145; File No. SR-EMERALD-2021-05]

Self-Regulatory Organizations; MIAX Emerald, LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend Its Fee Schedule to Establish Market Data Fees

February 17, 2021.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),¹ and Rule 19b-4 thereunder,² notice is hereby given that on February 4, 2021, MIAX Emerald, LLC (“MIAX Emerald” or “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The 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 market data fees.

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 the proposed rule change. The text of these statements may be examined at the places specified in

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

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

1. Purpose

The Exchange proposes to amend the Fee Schedule to establish market data fees. MIAX Emerald commenced operations as a national securities exchange registered under Section 6 of the Act³ on March 1, 2019.⁴ The Exchange adopted its transaction fees and certain of its non-transaction fees in its filing SR-EMERALD-2019-15.⁵ In that filing, the Exchange expressly waived, among others, market data fees to provide an incentive to prospective market participants to become Members⁶ of the Exchange. At that time, the Exchange waived market data fees for the Waiver Period⁷ and stated that it would provide notice to market participants when the Exchange intended to terminate the Waiver Period.

³ 15 U.S.C. 78f.

⁴ See Securities Exchange Act Release No. 84891 (December 20, 2018), 83 FR 67421 (December 28, 2018) (File No. 10-233) (order approving application of MIAX Emerald, LLC for registration as a national securities exchange).

⁵ See Securities Exchange Act Release No. 85393 (March 21, 2019), 84 FR 11599 (March 27, 2019) (SR-EMERALD-2019-15) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Establish the MIAX Emerald Fee Schedule).

⁶ “Member” means an individual or organization approved to exercise the trading rights associated with a Trading Permit. Members are deemed “members” under the Exchange Act. See Exchange Rule 100 and the Definitions Section of the Fee Schedule.

⁷ “Waiver Period” means, for each applicable fee, the period of time from the initial effective date of the MIAX Emerald Fee Schedule until such time that the Exchange has an effective fee filing establishing the applicable fee. The Exchange will issue a Regulatory Circular announcing the establishment of an applicable fee that was subject to a Waiver Period at least fifteen (15) days prior to the termination of the Waiver Period and effective date of any such applicable fee. See the Definitions Section of the Fee Schedule.

On September 15, 2020, the Exchange issued a Regulatory Circular which announced, among other things, that the Exchange would be ending the Waiver Period for market data fees, beginning October 1, 2020.⁸

On October 1, 2020, the Exchange filed its proposal to assess fees for its market data products, MIAX Emerald Top of Market (“ToM”), Administrative Information Subscriber (“AIS”) feed, and MIAX Order Feed (“MOR”).⁹ On October 14, 2020, the Exchange withdrew the First Proposed Rule Change and refiled its proposal in order to provide more description regarding the difference in pricing for internal distributors and external distributors.¹⁰

On November 25, 2020, the Exchange withdrew the Second Proposed Rule Change¹¹ and refiled its proposal to assess fees for its ToM, AIS and MOR products in order to provide additional information.¹² On January 22, 2021, the Exchange withdrew the Third Proposed Rule Change¹³ and refiled its proposal in order to provide a cost-based justification for its market data fees.¹⁴ On February 4, 2021, the Exchange withdrew the Fourth Proposed Rule Change and refiled this proposal.

⁸ See MIAX Emerald Regulatory Circular 2020-41 available at https://www.miaxoptions.com/sites/default/files/circular-files/MIAX_Emerald_RC_2020_41.pdf.

⁹ See SR-EMERALD-2020-10 (the “First Proposed Rule Change”).

¹⁰ See Securities Exchange Act Release No. 90274 (October 27, 2020), 85 FR 69371 (November 2, 2020) (SR-EMERALD-2020-13) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fee Schedule To Establish Market Data Fees) (the “Second Proposed Rule Change”).

¹¹ See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated November 20, 2020, notifying the Commission that the Exchange will withdraw the Second Proposed Rule Change.

¹² See Securities Exchange Act Release No. 90612 (December 9, 2020), 85 FR 81242 (December 15, 2020) (SR-EMERALD-2020-16) (the “Third Proposed Rule Change”).

¹³ See Comment Letter from Joseph W. Ferraro III, SVP, Deputy General Counsel, the Exchange, dated January 19, 2021, notifying the Commission that the Exchange will withdraw the Third Proposed Rule Change.

¹⁴ See SR-EMERALD-2021-04 (the “Fourth Proposed Rule Change”).

A more detailed description of the ToM, AIS and MOR products can be found in the Exchange's previously filed Market Data Product filings.¹⁵ The Exchange notes that it will not be assessing fees for Complex Top of Market ("cToM")¹⁶ data at this time.

To summarize, ToM provides market participants with a direct data feed that includes the Exchange's best bid and offer, with aggregate size, and last sale information, based on displayable order and quoting interest on the Exchange. The ToM data feed includes data that is identical to the data sent to the processor for the Options Price Reporting Authority ("OPRA"). ToM also contains a feature that provides the number of Priority Customer¹⁷ contracts that are included in the size associated with the Exchange's best bid and offer.

AIS provides market participants with a direct data feed that allows subscribers to receive real-time updates of products traded on MIAX Emerald, trading status for MIAX Emerald and products traded on MIAX Emerald, and liquidity seeking event notifications. The AIS market data feed includes opening imbalance condition information, opening routing information, expanded quote range information, post-halt notifications, and liquidity refresh condition

¹⁵ See Securities Exchange Act Release No. 85207 (February 27, 2019), 84 FR 7963 (March 5, 2019) (SR-EMERALD-2019-09) (Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Establish MIAX Emerald Top of Market ("ToM") Data Feed, MIAX Emerald Complex Top of Market ("cToM") Data Feed, MIAX Emerald Administrative Information Subscriber ("AIS") Data Feed, and MIAX Emerald Order Feed ("MOR")).

¹⁶ cToM provides subscribers with the same information as the ToM market data product as it relates to the strategy book, 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. cToM also provides subscribers with the identification of the complex strategies currently trading on MIAX Emerald; complex strategy last sale information; and the status of securities underlying the complex strategy (e.g., halted, open, or resumed). cToM is distinct from ToM, and anyone wishing to receive cToM data must subscribe to cToM regardless of whether they are a current ToM subscriber. ToM subscribers are not required to subscribe to cToM, and cToM subscribers are not required to subscribe to ToM. See *id.*

¹⁷ The term "Priority Customer" means a person or entity that (i) is not a broker or dealer in securities, and (ii) does not place more than 390 orders in listed options per day on average during a calendar month for its own beneficial account(s). The number of orders shall be counted in accordance with Interpretation and Policy .01 to Exchange Rule 100. See Exchange Rule 100.

information. AIS real-time messages are disseminated over multicast to achieve a fair delivery mechanism. AIS notifications provide current electronic system status allowing subscribers to take necessary actions immediately.

MOR provides market participants with a direct data feed that allows subscribers to receive real-time updates of options orders, products traded on MIAX Emerald, MIAX Emerald Options System status, and MIAX Emerald Options Underlying trading status. Subscribers to the data feed will get a list of all options symbols and strategies that will be traded and sourced on that feed at the start of every session.

The Exchange proposes to charge monthly fees to Distributors (defined below) of the ToM, AIS, and MOR market data products. MIAX Emerald will assess market data fees applicable to the market data products on Internal and External Distributors in each month the Distributor is credentialed to use the applicable market data product 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, AIS, and MOR will be reduced for new Distributors for the first month during which they subscribe to the applicable market data product, 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 the applicable market data product 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 the applicable market data product in the production environment, divided by the total number of trading days in the affected calendar month.

Specifically, the Exchange proposes to assess Internal Distributors \$1,250 per month and External Distributors \$1,750 per month for the ToM market data feed. The Exchange proposes

to assess Internal Distributors \$1,250 per month and External Distributors \$1,750 per month for the AIS market data feed. The Exchange proposes to assess Internal Distributors \$3,000 per month and External Distributors \$3,500 per month for the MOR market data feed. The Exchange notes that its data feed prices are generally lower than other options exchanges' data feed prices for their comparable data feed products.¹⁸

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MIAX Emerald believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee increase meets the requirements of the Act that fees be reasonable, equitably allocated, not unfairly discriminatory, and not create an undue burden on competition among members and markets. MIAX Emerald believes this high standard is especially important when an exchange sets certain non-transaction fees, including market data fees. The Exchange believes that it is important to demonstrate that these fees are based on its costs to provide these products and reasonable business needs. Accordingly, the Exchange believes the proposed fees will allow the Exchange to offset expense the Exchange has and will incur, and that the Exchange is providing sufficient transparency (as described below) into how the Exchange determined to charge such fees. Accordingly, the Exchange is providing an analysis of its revenues, costs, and profitability associated with the proposed fees. This analysis includes information regarding its methodology for determining the costs and revenues associated with the proposed fees.

In order to determine the Exchange's costs associated with providing the proposed fees, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such expense relates to the proposed fees, and, if such expense did so relate, what portion (or percentage) of such

¹⁸ See Nasdaq PHLX LLC Pricing Schedule, Options 7, Section 10, Proprietary Data Feed Fees; Cboe BZX Exchange, Inc. Fee Schedule, Market Data Fees; Cboe Data Services, LLC, Fee Schedule.

expense actually supports the services included in the proposed fees. The sum of all such portions of expenses represents the total cost of the Exchange to provide the proposed fees. For the avoidance of doubt, no expense amount was allocated twice. The Exchange is also providing detailed information regarding the Exchange's cost allocation methodology – namely, information that explains the Exchange's rationale for determining that it was reasonable to allocate certain expenses described in this filing towards the total cost to the Exchange to provide the proposed fees.

In order to determine the Exchange's projected revenues associated with providing the proposed fees, the Exchange analyzed the number of Members and non-Members currently utilizing the Exchange's services associated with the proposed fees, and, utilizing a recent monthly billing cycle representative of 2020 monthly revenue, extrapolated annualized revenue on a going-forward basis. The Exchange does not believe it is appropriate to factor into its analysis future revenue growth or decline into its projections for purposes of these calculations, given the uncertainty of such projections due to the continually changing market data needs of market participants, market participant consolidation, etc. Additionally, the Exchange similarly does not factor into its analysis future cost growth or decline.

The Exchange is presenting its revenue and expense associated with the proposed fees in this filing in a manner that is consistent with how the Exchange presents its revenue and expense in its Audited Unconsolidated Financial Statements. The Exchange's most recent Audited Unconsolidated Financial Statement is for 2019. However, since the revenue and expense associated with the proposed fees were not in place in 2019 or for the first three quarters of 2020, the Exchange believes its 2019 Audited Unconsolidated Financial Statement is not useful for analyzing the reasonableness of the total annual revenue and costs associated with the proposed fees. Accordingly, the Exchange believes it is more appropriate to analyze the proposed fees utilizing its 2020 revenue and costs, as described herein, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial

Statements. Based on this analysis, the Exchange believes that the proposed fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit when comparing the Exchange's total annual expense associated with providing the services associated with the proposed fees versus the total projected annual revenue the Exchange will collect for providing those services.

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On March 29, 2019, the Commission issued its Order Disapproving Proposed Rule Changes to Amend the Fee Schedule on the BOX Market LLC Options Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network (the "BOX Order").¹⁹ On May 21, 2019, the Commission issued the Staff Guidance on SRO Rule Filings Relating to Fees.²⁰ Accordingly, the Exchange believes that the proposed fees are consistent with the Act because they (i) are reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) are supported by evidence (including comprehensive revenue and cost data and analysis) that they are fair and reasonable because they do not result in excessive pricing or supra-competitive profit; and (iv) utilize a cost-based justification framework. Accordingly, the Exchange believes that the Commission should find that the proposed fees are consistent with the Act.

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

¹⁹ 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).

²⁰ 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_\(the "Guidance"\)](https://www.sec.gov/tm/staff-guidance-sro-rule-filings-fees_(the%20%22Guidance%22)).

2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act²¹ in general, and furthers the objectives of Section 6(b)(4) of the Act²² in particular, in that it is an equitable allocation of reasonable dues, fees and other charges among its members and issuers and other persons using its facilities. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest and is not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

Separately, the Exchange is not aware of any reason why market participants could not simply drop their market data subscriptions to an exchange (or not subscribe to market data feeds of an exchange) if an exchange were to establish prices for its market data fees that, in the determination of such market participant, did not make business or economic sense for such market participant. No options market participant is required by rule or regulation to subscribe to market data feeds of an options exchange. As evidence of the fact that market participants can and do unsubscribe from an exchange's market data feeds based on pricing, the Exchange notes that, since it issued its notice for the proposed fees, one Member terminated its market data feed subscriptions as a result of the proposed fees. Accordingly, this example shows that if an exchange sets too high of a fee for its market data products, market participants can choose to not purchase market data or simply unsubscribe from an exchange's market data feeds.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the proposed fees will not result in excessive or supra-competitive profit. The costs associated with providing market data to Exchange Members and non-Members, as well as the

²¹ 15 U.S.C. 78f(b).

²² 15 U.S.C. 78f(b)(4) and (5).

general expansion of a state-of-the-art infrastructure, are extensive, have increased year-over-year, and are projected to increase year-over-year in the future. In particular, the Exchange has experienced a material increase in its costs in 2020, in connection with a project to make its network environment more transparent and deterministic, based on customer demand. This project will allow the Exchange to enhance its network architecture with the intent of ensuring a best-in-class, transparent and deterministic trading system while maintaining its industry leading latency and throughput capabilities. In order to provide this greater amount of transparency and higher determinism, MIAX Emerald has made significant capital expenditures (“CapEx”), incurred increased ongoing operational expenditures (“OpEx”), and undertaken additional engineering research and development (“R&D”) in the following areas: (i) implementing an improved network design to ensure the minimum latency between multicast market data signals disseminated by the Exchange across the extranet switches, improving the unicast jitter profile to reduce the occurrence of message sequence inversions from Members to the Exchange quoting gateway processors, and introducing a new optical fiber network infrastructure that ensures the optical fiber path for participants within extremely tight tolerances; (ii) introducing a re-architected and engineered participant quoting gateway that ensures the delivery of messages to the match engine with absolute determinism, eliminating the message processing inversions that can occur with messages received nanoseconds apart; and (iii) designing an improved monitoring platform to better measure the performance of the network and systems at extremely tight tolerances and to provide Members with reporting on the performance of their systems. The CapEx associated with only phase 1 of this project in 2020 was approximately \$1.85 million. This expense does not include the significant increase in employee time and other resources necessary to maintain and service this network, which expense is captured in the operating expense discussed below. This project, which results in a material increase in expense of the Exchange, is, among other things, intended to enhance the overall trading experience at the

Exchange, making it a venue that market participants want to access, thereby creating greater value in the Exchange's market data products.

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 Exchange's ToM, AIS and MOR data feeds 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 and MIAX PEARL), must first execute, among other things, the MIAX Exchange Group Exchange Data Agreement (the "Exchange Data Agreement").²³ 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.²⁴ External Distributors may distribute the Exchange's market data to persons who are not officers, employees or affiliates of the external distributor,²⁵ and may charge their own fees for the distribution of such market data. Accordingly, the Exchange believes it is fair, reasonable and not unfairly discriminatory to assess External Distributors a higher fee for the Exchange's market data products as External Distributors have greater usage rights to commercialize such market data. It also costs the Exchange more 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. The Exchange believes the proposed fees are a reasonable allocation of its costs and expenses among its Members and other persons using its facilities since it is recovering the

²³ See Exchange Data Agreement, available at https://miaxweb2.pairsite.com/sites/default/files/page-files/MIAX_Exchange_Group_Data_Agreement_09032020.pdf.

²⁴ See *id.*

²⁵ See *id.*

costs associated with distributing such data. Access to the Exchange is provided on fair and non-discriminatory terms. The Exchange believes the proposed fees are equitable and not unfairly discriminatory because the fee level results in a reasonable and equitable allocation of fees amongst users for similar services. Moreover, the decision as to whether or not to purchase market data is entirely optional to all users. 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 the market deems the proposed fees to be unfair or inequitable, firms can diminish or discontinue their use of this data.

The Exchange only has four primary sources of revenue: 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.

The Exchange believes that the proposed fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit, when comparing the total annual expense that the Exchange projects to incur in connection with providing these products versus the total annual revenue that the Exchange projects to collect in connection with the proposed market data fees. For 2020²⁶, the total annual expense for providing the market data products associated with the proposed fees for MIAX Emerald is projected to be approximately \$1,040,064. The \$1,040,064 in projected total annual expense is comprised of the following, all of which are directly related to providing the market data products associated with the proposed fees: (1) third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services; and (2) internal expense, relating to the internal costs of MIAX Emerald to provide the market data products associated with the proposed fees.

²⁶ The Exchange has not yet finalized its 2020 year end results.

The Exchange notes that the MIAX Emerald 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 application program interface (“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 distribution system that is more efficient both in cost and performance. Earlier implementations like those implemented for the Exchange’s affiliates, Miami International Securities Exchange, LLC (“MIAX”) and MIAX PEARL, LLC (“MIAX PEARL”), require an additional server hardware level and network infrastructure making them more expensive to deploy, operate and maintain. All capital and operational expenses to support market data generation are a percentage of the total cost to support the MIAX Emerald match engines (both in capital and operational expense). The Exchange believes that 10% of the functionality and support infrastructure is required to support the computation and dissemination of market data at the match engine layer, which serves as the basis for its cost allocation for market data products. Approximately 10% of the Exchange staff are required to support market data and fall under two categories: 1) the technical development, maintenance, operation and administration of market data computation and delivery; and 2) non-technical administration including managing market data agreements and the auditing and tracking of member and non-member market data usage.

As noted above, the Exchange believes it is more appropriate to analyze the proposed fees utilizing its 2020 revenue and costs, which utilize the same presentation methodology as set forth in the Exchange’s previously-issued Audited Unconsolidated Financial Statements.²⁷

²⁷ For example, the Exchange previously noted that all third-party expense described in its prior fee filing was contained in the information technology and communication costs line item under the section titled “Operating Expenses Incurred Directly or Allocated From Parent,” in the Exchange’s 2019 Form 1 Amendment containing its financial statements for 2018. See Securities Exchange Act Release No. 87877 (December 31, 2019), 85 FR 738 (January 7, 2020) (SR-EMERALD-2019-39). Accordingly, the third-part expense described in this filing is attributed to the same line item for the Exchange’s 2020 Form 1 Amendment, which will be filed in 2021.

The \$1,040,064 in projected total annual expense is directly related to providing the market data products associated with the proposed fees, and not any other product or service offered by the Exchange. No expense amount was allocated twice.

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

For 2020, total third-party expense, relating to fees paid by MIAX Emerald to third-parties for certain products and services for the Exchange to be able to provide the market data products associated with the proposed fees, is projected to be \$19,105. This includes, but is not limited to, a portion of the fees paid to: (1) Equinix, for data center services, for the primary, secondary, and disaster recovery locations of the MIAX Emerald trading system infrastructure; (2) Zayo Group Holdings, Inc. ("Zayo") for network services (fiber and bandwidth products and services) linking MIAX Emerald's office locations in Princeton, NJ and Miami, FL to all data center locations; (3) Secure Financial Transaction Infrastructure ("SFTI")²⁸, which supports connectivity and feeds for the entire U.S. options industry; (4) various other services providers (including Thompson Reuters, NYSE, Nasdaq, and Internap), which provide content,

²⁸ In fact, on October 22, 2019, the Exchange was notified by SFTI that it is again raising its fees charged to the Exchange by approximately 11%, without having to show that such fee change complies with the Act by being reasonable, equitably allocated, and not unfairly discriminatory. It is unfathomable to the Exchange that, given the critical nature of the infrastructure services provided by SFTI, that its fees are not required to be rule-filed with the Commission pursuant to Section 19(b)(1) of the Act and Rule 19b-4 thereunder. See 15 U.S.C. 78s(b)(1) and 17 CFR 240.19b-4, respectively.

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

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

The Exchange believes it is reasonable to allocate such third-party expense described above towards the total cost to the Exchange to provide the market data products associated with the proposed fees. In particular, the Exchange believes it is reasonable to allocate the identified portion of the Equinix expense because Equinix operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. This includes, among other things, the necessary storage space, which continues to expand and increase in cost, power to operate the network infrastructure, and cooling apparatuses to ensure the Exchange's network infrastructure maintains stability. Without these services from Equinix, the Exchange would not be able to operate and support the network and provide the market data products associated with the proposed fees to its Members and their customers. The Exchange did not allocate all of the Equinix expense toward the cost of providing the market data products associated with the proposed fees, only that portion which the Exchange identified as being specifically mapped to providing the market data products associated with the proposed fees, approximately 1% of the total Equinix expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the market data products associated with the proposed fees, and not any other product or service, as supported by its cost review.

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

The Exchange did not allocate any expense associated with the proposed fees towards SFTI and various other service providers' (including Thompson Reuters, NYSE, Nasdaq, and Internap) because, as described above, the MIAX Emerald 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. Accordingly, the Exchange determined not to allocate any expense associated with SFTI and various other service providers.

The Exchange believes it is reasonable to allocate the identified portion of the other hardware and software provider expense because this includes costs for dedicated hardware licenses for switches and servers, as well as dedicated software licenses for security monitoring

and reporting across the network. Without this hardware and software, the Exchange would not be able to operate and support the network and provide the market data products. The Exchange did not allocate all of the hardware and software provider expense toward the cost of providing the market data products associated with the proposed fees, only the portions which the Exchange identified as being specifically mapped to providing the market data products associated with the proposed fees, approximately 1% of the total hardware and software provider expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the market data products associated with the proposed fees.

For 2020, total projected internal expense, relating to the internal costs of MIA X Emerald to provide the market data products associated with the proposed fees, is projected to be \$1,020,959. This includes, but is not limited to, costs associated with: (1) employee compensation and benefits for full-time employees that support the market data products associated with the proposed fees, including staff in network operations, trading operations, development, system operations, business, as well as staff in general corporate departments (such as legal, regulatory, and finance) that support those employees and functions (including an increase as a result of the higher determinism project); (2) depreciation and amortization of hardware and software used to provide the market data products associated with the proposed fees, including equipment, servers, cabling, purchased software and internally developed software used in the production environment to support the network for trading; and (3) occupancy costs for leased office space for staff that provide the market data products associated with the proposed fees. The breakdown of these costs is more fully-described below. For clarity, only a portion of all such internal expenses are included in the internal expense herein, and no expense amount is allocated twice. Accordingly, MIA X Emerald does not allocate its entire costs contained in those items to the market data products associated with the proposed fees.

The Exchange believes it is reasonable to allocate such internal expense described above towards the total cost to the Exchange to provide the market data products associated with the proposed fees. In particular, MIAX Emerald's employee compensation and benefits expense relating to providing the market data products associated with the proposed fees is projected to be \$935,400, which is only a portion of the \$9,354,009 total projected expense for employee compensation and benefits. The Exchange believes it is reasonable to allocate the identified portion of such expense because this includes the time spent by employees of several departments, including Technology, Back Office, Systems Operations, Networking, Business Strategy Development (who create the business requirement documents that the Technology staff use to develop market data products and enhancements), Trade Operations, Finance (who provide billing and accounting services relating to the market data products), and Legal (who provide legal services relating to the market data products, such as rule filings and various license agreements and other contracts). As part of the extensive cost review conducted by the Exchange, the Exchange reviewed the amount of time spent by each employee on matters relating to the provision of the market data products associated with the proposed fees. Without these employees, the Exchange would not be able to provide the market data products associated with the proposed fees to its Members and their customers. The Exchange did not allocate all of the employee compensation and benefits expense toward the cost of the market data products associated with the proposed fees, only the portions which the Exchange identified as being specifically mapped to providing the market data products associated with the proposed fees, approximately 10% of the total employee compensation and benefits expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the market data products associated with the proposed fees, and not any other service, as supported by its cost review.

MIAX Emerald's depreciation and amortization expense relating to providing the market data products associated with the proposed fees is projected to be \$38,125, which is

only a portion of the \$3,812,590 total projected expense for depreciation and amortization. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense includes the actual cost of the computer equipment, such as dedicated servers, computers, laptops, monitors, information security appliances and storage, and network switching infrastructure equipment, including switches and taps that were purchased to operate and support the network and provide the market data products associated with the proposed fees. Without this equipment, the Exchange would not be able to operate the network and provide the market data products associated with the proposed fees to its Members and their customers. The Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing the market data products associated with the proposed fees, only the portion which the Exchange identified as being specifically mapped to providing the market data products associated with the proposed fees, approximately 1% of the total depreciation and amortization expense, as these access services would not be possible without relying on such. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the market data products associated with the proposed fees, and not any other product or service, as supported by its cost review.

MIAX Emerald's occupancy expense relating to providing the market data products associated with the proposed fees is projected to be \$47,432, which is only a portion of the \$474,323 total projected expense for occupancy. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense represents the portion of the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the market data products, including providing the services associated with the proposed fees. This amount consists primarily of rent for the Exchange's Princeton, NJ office, as well as various related costs, such as physical security, property management fees, property taxes, and utilities. The Exchange operates its Network Operations Center ("NOC") and Security Operations Center ("SOC") from its Princeton, New Jersey office location. A

centralized office space is required to house the staff that operate and support the market data products. The Exchange currently has approximately 150 employees. Approximately two-thirds of the Exchange's staff are in the Technology department, and the majority of those staff have some role in the operation and performance of the network that supports the provision of the market data products associated with the proposed fees. Without this office space, the Exchange would not be able to operate and support the network and provide the market data products associated with the proposed fees to its Members and their customers. Accordingly, the Exchange believes it is reasonable to allocate the identified portion of its occupancy expense because such amount represents the Exchange's actual cost to house the equipment and personnel who operate and support the Exchange's network infrastructure and the market data products associated with the proposed fees. The Exchange did not allocate all of the occupancy expense toward the cost of providing the market data products associated with the proposed fees, only the portion which the Exchange identified as being specifically mapped to operating and supporting the market data products, approximately 10% of the total occupancy expense. The Exchange believes this allocation is reasonable because it represents the Exchange's cost to provide the services associated with the proposed fees, and not any other service, as supported by its cost review.

Accordingly, based on the facts and circumstances presented, the Exchange believes that its provision of the market data products associated with the proposed fees will not result in excessive pricing or supra-competitive profit. To illustrate, on a going-forward, fully-annualized basis, the Exchange projects that its annualized revenue for providing the market data products associated with the proposed fees would be approximately \$648,000 per annum, based on a recent billing cycle. The Exchange projects that its annualized expense for providing the market data products associated with the proposed fees would be approximately \$1,040,064 per annum. Accordingly, on a fully-annualized basis, the Exchange believes its total projected revenue for providing the market data products associated with the proposed

fees will not result in excessive pricing or supra-competitive profit; rather, it will result in a net loss to the Exchange of approximately (\$392,064) per year ($\$648,000 - \$1,040,064 = -\$392,064$).

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

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

competitive profit, when comparing the actual costs to the Exchange versus the projected annual revenue from the proposed fees.

Further, the Exchange no longer believes it is necessary to waive these fees to attract market participants to MIAX Emerald since this market is now established and MIAX Emerald no longer needs to rely on such waivers to attract market participants. The Exchange believes that the proposal is equitable and not unfairly discriminatory because the elimination of the fee waiver for the proposed fees will uniformly apply to all market participants of the Exchange. The Exchange also notes that the Exchange's affiliate, MIAX, charges similar market data fees.²⁹

The Exchange also points out that it is not seeking to recoup any of its past costs associated with the provision of any market data fees during the Waiver Period. The Exchange currently has 13 subscriptions for its ToM data product; 11 subscriptions for its AIS data product; and 8 subscriptions for its MOR data product. All of these subscribers have not paid any market data fees during the Waiver Period. Further, the majority of firms that are subscribers of the Exchange's affiliate options exchanges, MIAX and MIAX PEARL, also received free market data during similar Waiver Periods for the MIAX and MIAX PEARL market data fees. Accordingly, the Exchange (and MIAX and MIAX PEARL) have assumed 100% of the costs associated with providing market data for the majority of subscribers of the Exchange, MIAX, and MIAX PEARL during their respective Waiver Periods. Accordingly, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory to now adopt market data fees that are reasonably related to (and designed to recover) the Exchange's cost associated with the provision of such market data.

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

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

²⁹ See MIAX Fee Schedule, Section 6)a)-c).

Intra-Market Competition

The Exchange believes that the proposed fees do not put any market participants at a relative disadvantage compared to other market participants. As noted above, the proposed fee schedule would apply to all subscribers of the ToM, AIS and MOR data feeds, and customers may choose whether to subscribe to any or all of the feeds. The Exchange also believes that the proposed fees neither favor nor penalize one or more categories of market participants in a manner that would impose an undue market on competition. Further, the Exchange's proposed market data fee levels, as described herein, are comparable to fee levels charged by other options exchanges for the same or similar services, including those fees assessed by the Exchange's affiliate, MIAA.³⁰

The Exchange believes that the proposed market data fees do not place certain market participants at a relative disadvantage to other market participants because the fees do not apply unequally to different size market participants, but instead would allow the Exchange charge for the time and resource necessary for providing market data to the market participants that request such data. Accordingly, the Exchange believes that the proposed market data fees do not favor certain categories of market participants in a manner that would impose a burden on competition.

Inter-Market Competition

The Exchange believes the proposed fees do not place an undue burden on competition on other SROs that is not necessary or appropriate. The Exchange notes that its data feed prices are generally lower than other options exchanges' data feed prices for their comparable data feed products.³¹ The Exchange notes that it has far less Members as compared to the much greater number of members at other options exchanges resulting in fewer market data subscribers. The Exchange is also unaware of any assertion that its proposed market data fees would somehow unduly impair its competition with other options exchanges. To the contrary, if the proposed

³⁰ See id.

³¹ See supra note 18.

market data fees are deemed too high by market participants, they can simply discontinue their market data subscriptions with the Exchange, as one such Member has already done (as described above).

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,³² and Rule 19b-4(f)(2)³³ thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

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

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-EMERALD-2021-05 on the subject line.

³² 15 U.S.C. 78s(b)(3)(A)(ii).

³³ 17 CFR 240.19b-4(f)(2).

Paper comments:

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

All submissions should refer to File Number SR-EMERALD-2021-05. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-EMERALD-2021-05, 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.³⁴

J. Matthew DeLesDernier,

Assistant Secretary.

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³⁴ 17 CFR 200.30-3(a)(12).