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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-90981; File No. SR-PEARL-2021-01]

Self-Regulatory Organizations; MIAX PEARL, LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the MIAX PEARL Options Fee Schedule for Member and Non-Member Monthly Network Connectivity Fees

January 25, 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 January 13, 2021, MIAX PEARL, LLC ("MIAX PEARL" or "Exchange") filed with the Securities and Exchange Commission ("Commission") a proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

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

The Exchange is filing a proposal to amend the MIAX PEARL Fee Schedule (the "Fee Schedule") for the Exchange's options market.[3]

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

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

2 17 CFR 240.19b-4.

3 The Commission notes that the Exchange initially filed the proposed Fee Schedule amendment on December 31, 2020 (SR-PEARL-2020-39). On January 13, 2021, the Exchange withdrew that filing and submitted this filing.

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 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 increase the Exchange's network connectivity fees for its 10 gigabit ("Gb") ultra-low latency ("ULL") fiber connection for Members[4] and non-Members (the "Proposed Access Fees").

The Exchange currently offers various bandwidth alternatives for connectivity to the Exchange, to its primary and secondary facilities, consisting of a 1Gb fiber connection, a 10Gb fiber connection, and a 10Gb ULL fiber connection. The 10Gb ULL offering uses an ultra-low latency switch, which provides faster processing of messages sent to it in comparison to the switch used for the other types of connectivity. The Exchange currently assesses the following monthly network connectivity fees to both Members and non-Members for connectivity to the Exchange's primary/secondary facility: (a) $1,400 for the 1Gb connection; (b) $6,100 for the 10Gb connection; and (c) $9,300 for the 10Gb ULL connection.

The Exchange's MIAX Express Network Interconnect ("MENI") can be configured to provide Members and non-Members of the Exchange network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facilities of both the

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

Exchange and its affiliate, Miami International Securities Exchange, LLC ("MIAX"), via a single, shared connection. Members and non-Members utilizing the MENI to connect to the trading platforms, market data systems, test systems and disaster recovery facilities of the Exchange and MIAX via a single, shared connection are assessed only one monthly network connectivity fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection. The Exchange now proposes to increase the monthly network connectivity fees for its 10Gb ULL connections for both Members and non-Members from $9,300 to $10,000 per connection.

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The Exchange believes that exchanges, in setting fees of all types, should meet very high standards of transparency to demonstrate why each new fee or fee increase meets the 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. The Exchange believes this high standard is especially important when an exchange imposes various access fees for market participants to access an exchange's marketplace. The Exchange deems connectivity fees to be access fees. The Exchange believes that it is important to demonstrate that these fees are based on its costs and reasonable business needs. Accordingly, the Exchange believes the Proposed Access Fees will allow the Exchange to offset expense the Exchange has and will incur, and that the Exchange is providing sufficient transparency (as described below) into how the Exchange determined to charge such fees. Accordingly, the Exchange is providing an analysis of its revenues, costs, and profitability for the Proposed Access Fees. This analysis includes information regarding its methodology for determining the costs and revenues associated with the Proposed Access Fees.

In order to determine the Exchange's costs associated with providing the Proposed Access Fees, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger to determine whether each such

expense relates to the Proposed Access Fees, and, if such expense did so relate, what portion (or percentage) of such expense actually supports the services included in the Proposed Access Fees. The sum of all such portions of expenses represents the total cost of the Exchange to provide the Proposed Access Fees. For the avoidance of doubt, no expense amount was allocated twice. The Exchange is also providing detailed information regarding the Exchange's cost allocation methodology – namely, information that explains the Exchange's rationale for determining that it was reasonable to allocate certain expenses described in this filing towards the total cost to the Exchange to provide the Proposed Access Fees.

In order to determine the Exchange's projected revenues associated with providing the Proposed Access Fees, the Exchange analyzed the number of Members and non-Members currently utilizing the Exchange's services associated with the Proposed Access Fees during 2020, and, utilizing a recently completed monthly billing cycle, extrapolated annualized revenue on a going-forward basis. The Exchange is presenting its revenue and expense associated with the Proposed Access Fees in this filing in a manner that is consistent with how the Exchange presents its revenue and expense in its Audited Unconsolidated Financial Statements. The Exchange's most recent Audited Unconsolidated Financial Statement is for 2019. However, since the revenue and expense associated with the Proposed Access Fees were not in place in 2019 (or 2020), the Exchange believes its 2019 Audited Unconsolidated Financial Statement is not useful for analyzing the reasonableness of the total annual revenue and costs associated with the Proposed Access Fees. Accordingly, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 (actual for the first 11 months and projected for the final 1 month) revenue and costs, as described herein, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements. Based on this analysis, the Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit when comparing the Exchange's total annual expense associated with providing the services associated

with the Proposed Access Fees versus the total projected annual revenue the Exchange will collect for providing those services.

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On March 29, 2019, the Commission issued its Order Disapproving Proposed Rule Changes to Amend the Fee Schedule on the BOX Market LLC Options Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network (the "BOX Order").[5] On May 21, 2019, the Commission issued the Staff Guidance on SRO Rule Filings Relating to Fees.[6]

The Exchange believes that the Proposed Access Fees are consistent with the Act because they (i) are reasonable, equitably allocated, not unfairly discriminatory, and not an undue burden on competition; (ii) comply with the BOX Order and the Guidance; (iii) are supported by evidence (including data and analysis), constrained by significant competitive forces; and (iv) are supported by specific information (including quantitative information), fair and reasonable because they will permit recovery of the Exchange's costs (less than all) and will not result in excessive pricing or supra-competitive profit. Accordingly, the Exchange believes that the Commission should find that the Proposed Access Fees are consistent with the Act.

2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act[7] in general, and furthers the objectives of Section 6(b)(4) of the Act[8] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among Exchange Members and issuers and other persons using any facility or system

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5 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).

6 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").

7 15 U.S.C. 78f(b).

8 15 U.S.C. 78f(b)(4).

which the Exchange operates or controls. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act[9] 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.

For November 2020, the Exchange had only a 3.39% market share of the U.S. options industry.[10] The Exchange is not aware of any evidence that a market share of approximately 3-4% provides the Exchange with anti-competitive pricing power. If the Exchange were to attempt to establish unreasonable pricing, then no market participant would join or connect, and existing market participants would disconnect.

Separately, the Exchange is not aware of any reason why market participants could not simply drop their connections and cease being Members of the Exchange if the Exchange were to establish unreasonable and uncompetitive price increases for its connectivity alternatives. Market participants choose to connect to a particular exchange and because it is a choice, the Exchange must set reasonable connectivity pricing, otherwise prospective members would not connect and existing members would disconnect or connect through a third-party reseller of connectivity. No options market participant is required by rule, regulation, or competitive forces to be a Member of the Exchange. As evidence of the fact that market participants can and do disconnect from exchanges based on connectivity pricing, R2G Services LLC ("R2G") filed a comment letter after BOX's proposed rule changes to increase its connectivity fees (SR-BOX-

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9 15 U.S.C. 78f(b)(5).

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

2018-24, SR-BOX-2018-37, and SR-BOX-2019-04).[11] The R2G Letter stated, "[w]hen BOX instituted a $10,000/month price increase for connectivity; we had no choice but to terminate connectivity into them as well as terminate our market data relationship. The cost benefit analysis just didn't make any sense for us at those new levels." Accordingly, this example shows that if an exchange sets too high of a fee for connectivity and/or market data services for its relevant marketplace, market participants can choose to disconnect from the exchange.

The Exchange believes that its proposal is consistent with Section 6(b)(4) of the Act because the Proposed Access Fees will not result in excessive or supra-competitive profit. The costs associated with providing access to Exchange Members and non-Members, as well as the general expansion of a state-of-the-art infrastructure, are extensive, have increased year-over-year, and are projected to increase year-over-year in the future.

The Exchange believes the proposed increase to the 10Gb ULL connection is an equitable allocation of reasonable fees because 10Gb ULL purchasers: (1) consume the most bandwidth and resources of the network; (2) transact the vast majority of the volume on the Exchange; and (3) require the high touch network support services provided by the Exchange and its staff, including more costly network monitoring, reporting and support services, resulting in a much higher cost to the Exchange.

The Exchange believes that the proposed increase to the 10Gb ULL fees are equitably allocated among users of the network connectivity alternatives, as the users of the 10Gb ULL connections consume the most bandwidth and resources of the network. Specifically, the Exchange notes that these users account for approximately greater than 99% of message traffic over the network, while the users of the 1Gb connections account for approximately less than 1% of message traffic over the network. In the Exchange's experience, users of the 1Gb connections do not have a business need for the high performance network solutions required by 10Gb ULL

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[11] See Letter from Stefano Durdic, R2G, to Vanessa Countryman, Acting Secretary, Commission, dated March 27, 2019 (the "R2G Letter").

users. The Exchange's high performance network solutions and supporting infrastructure (including employee support), provides unparalleled system throughput with the network ability to support access to several distinct options markets and the capacity to handle approximately 38 million quote messages per second. On an average day, the Exchange and MIAX handle over approximately 8,304,500,000 billion total messages. Of that total, users of the 10Gb ULL connections generate approximately 8.3 billion messages, and users of the 1Gb connections generate approximately 4.5 million messages. However, in order to achieve a consistent, premium network performance, the Exchange must build out and maintain a network that has the capacity to handle the message rate requirements of its most heavy network consumers. These billions of messages per day consume the Exchange's resources and significantly contribute to the overall network connectivity expense for storage and network transport capabilities. Given this difference in network utilization rate, the Exchange believes that it is reasonable, equitable, and not unfairly discriminatory that the 10Gb ULL users pay for the vast majority of the shared network resources from which all Member and non-Member users benefit, but is designed and maintained from a capacity standpoint to specifically handle the message rate and performance requirements of 10Gb and 10Gb ULL users.

The Exchange also believes that the connectivity fees are equitably allocated amongst users of the network connectivity alternatives, when these fees are viewed in the context of the overall trading volume on the Exchange. To illustrate, the purchasers of the 10Gb ULL connectivity account for approximately 94% of the volume on the Exchange for the month of November 2020. This overall volume percentage (94% of total Exchange volume) is in line with the amount of network connectivity revenue collected from 10Gb ULL purchasers (98% of total Exchange connectivity revenue). For example, utilizing the same recently completed billing cycle described above, Exchange Members and non-Members that purchased 10Gb ULL connections accounted for approximately 87% of the total network connectivity revenue collected by the Exchange from all connectivity alternatives; and Members and non-Members

that purchased 1Gb and 10Gb connections accounted for approximately 13% of the revenue collected by the Exchange from all connectivity alternatives.

The Exchange further believes that the fees are equitably allocated, as the amount of the fees for the various connectivity alternatives are directly related to the actual costs associated with providing the respective connectivity alternatives. That is, the cost to the Exchange of providing a 1Gb network connection is significantly lower than the cost to the Exchange of providing a 10Gb or 10Gb ULL network connection. Pursuant to its extensive cost review described above, the Exchange believes that the average cost to provide a 10Gb ULL network connection is approximately 8 times more than the average cost to provide a 1Gb connection. The simple hardware and software component costs alone of a 10Gb ULL connection is not 8 times more than the 1Gb connection. Rather, it is the associated premium-product level network monitoring, reporting, and support services costs that accompany a 10Gb ULL connection which causes it to be 8 times more costly to provide than the 1Gb connection. Accordingly, the Exchange believes it is equitable to allocate those network infrastructure costs that accompany a 10Gb ULL connection to the purchasers of those connections, and not to purchasers of 1Gb connections.

As discussed above, the Exchange differentiates itself by offering a "premium-product" network experience, as an operator of a high performance, ultra-low latency network with unparalleled system throughput, which network can support access to three distinct options markets and multiple competing market-makers having affirmative obligations to continuously quote over 750,000 distinct trading products (per exchange), and the capacity to handle approximately 10.7 million quote messages per second. The "premium-product" network experience enables users of 10Gb and 10Gb ULL connections to receive the network monitoring and reporting services for those approximately 750,000 distinct trading products. There is a significant, quantifiable amount of research and development ("R&D") effort, employee compensation and benefits expense, and other expense associated with providing the high touch

network monitoring and reporting services that are utilized by the 10Gb and 10Gb ULL connections offered by the Exchange. These value add services are fully-discussed herein, and the actual costs associated with providing these services are the basis for the differentiated amount of the fees for the various connectivity alternatives.

In order to provide more detail and to quantify the Exchange's costs associated with providing access to the Exchange in general, the Exchange notes that there are material costs associated with providing the infrastructure and headcount to fully-support access to the Exchange. The Exchange incurs technology expense related to establishing and maintaining Information Security services, enhanced network monitoring and customer reporting, as well as Regulation SCI mandated processes, associated with its network technology. While some of the expense is fixed, much of the expense is not fixed, and thus increases as the services associated with the Proposed Access Fees increase. For example, new 10Gb ULL connections require the purchase of additional hardware to support those connections as well as enhanced monitoring and reporting of customer performance that MIAX PEARL and its affiliates provide. Further, as the total number of all connections increase, MIAX PEARL and its affiliates need to increase their data center footprint and consume more power, resulting in increased costs charged by their third-party data center provider. Accordingly, the cost to MIAX PEARL and its affiliates is not fixed. The Exchange believes the Proposed Access Fees are reasonable in order to offset the costs to the Exchange associated with providing access to its network infrastructure.

Further, because the costs of operating its own data center are significant and not economically feasible for the Exchange at this time, the Exchange does not operate its own data centers, and instead contracts with a third-party data center provider. The Exchange notes that other competing exchange operators own/operate their data centers, which offers them greater control over their data center costs. Because those exchanges own and operate their data centers as profit centers, the Exchange is subject to additional costs. The Proposed Access Fees, which

are charged for accessing the Exchange's data center network infrastructure, are directly related to the network and offset such costs.

The Exchange invests significant resources in network R&D to improve the overall performance and stability of its network. For example, the Exchange has a number of network monitoring tools (some of which were developed in-house, and some of which are licensed from third-parties), that continually monitor, detect, and report network performance, many of which serve as significant value-adds to the Exchange's Members and enable the Exchange to provide a high level of customer service. These tools detect and report performance issues, and thus enable the Exchange to proactively notify a Member (and the SIPs) when the Exchange detects a problem with a Member's connectivity. In fact, the Exchange often receives inquiries from other industry participants regarding the status of networking issues outside of the Exchange's own network environment that are impacting the industry as a whole via the SIPs, including inquiries from regulators, because the Exchange has a superior, state-of the-art network that, through its enhanced monitoring and reporting solutions, often detects and identifies industry-wide networking issues ahead of the SIPs. The Exchange also incurs costs associated with the maintenance and improvement of existing tools and the development of new tools.

Additionally, certain Exchange-developed network aggregation and monitoring tools provide the Exchange with the ability to measure network traffic with a much more granular level of variability. This is important as Exchange Members demand a higher level of network determinism and the ability to measure variability in terms of single digit nanoseconds. Also, routine R&D projects to improve the performance of the network's hardware infrastructure result in additional cost. In sum, the costs associated with maintaining and enhancing a state-of-the-art exchange network in the U.S. options industry is a significant expense for the Exchange that also increases year-over-year, and thus the Exchange believes that it is reasonable to offset those costs through the Proposed Access Fees. The Exchange invests in and offers a superior network infrastructure as part of its overall options exchange services offering, resulting in significant

costs associated with maintaining this network infrastructure, which are directly tied to the amount of the Proposed Access Fees that must be charged to access it, in order to recover those costs.

For the avoidance of doubt, none of the expenses included herein relating to the services associated with the Proposed Access Fees also relate to the provision of any other services offered by the Exchange. Stated differently, no expense amount of the Exchange is allocated twice. The Exchange notes that it made certain representations in a previous filing[12] regarding its expense allocation for the provision of additional limited service ports. The Exchange represents that none of the expenses allocated to the provision of additional limited service ports are also allocated to the services associated with the Proposed Access Fees – that is, there is no overlap of any such expenses that are included in the costs associated with services the Exchange provides for the Proposed Access Fees and for the services the Exchange provides for ports. Lastly, the Exchange notes that, with respect to the MIAX PEARL expenses included herein, those expenses only cover the MIAX PEARL options market; expenses associated with the MIAX PEARL equities market are accounted for separately and are not included within the scope of this filing.

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

The Exchange believes that the Proposed Access Fees are fair and reasonable because they will not result in excessive pricing or supra-competitive profit, when comparing the total annual expense of MIAX PEARL and MIAX associated with providing these services versus the total projected annual revenue for both exchanges from these services. For 2020, the total

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12 See Securities Exchange Act Release No. 90812 (December 29, 2020) (SR-PEARL-2020-35).

annual expense for providing network connectivity services (that is, the shared network connectivity of MIAX PEARL and MIAX, but excluding MIAX Emerald) is projected to be approximately $17.9 million. The $17.9 million in projected total annual expense is comprised of the following, all of which are directly related to the services associated with the Proposed Access Fees for MIAX PEARL and MIAX: (1) third-party expense, relating to fees paid by MIAX PEARL and MIAX to third-parties for certain products and services; and (2) internal expense, relating to the internal costs of MIAX PEARL and MIAX to provide the services associated with the Proposed Access Fees. As noted above, the Exchange believes it is more appropriate to analyze the Proposed Access Fees utilizing its 2020 (actual for the first 11 months and projected for the final 1 month) revenue and costs, which utilize the same presentation methodology as set forth in the Exchange's previously-issued Audited Unconsolidated Financial Statements.[13] The $17.9 million in projected total annual expense is directly related to the services associated with providing network connectivity services, and not any other product or service offered by the Exchange. It does not include general costs of operating matching systems and other trading technology, and no expense amount was allocated twice. As discussed, the Exchange conducted an extensive cost review in which the Exchange analyzed every expense item in the Exchange's general expense ledger (this includes over 150 separate and distinct expense items) to determine whether each such expense relates to the services associated with the Proposed Access Fees, and, if such expense did so relate, what portion (or percentage) of such expense actually supports those services, and thus bears a relationship that is, "in nature and closeness," directly related to those services. The sum of all

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[13] 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. 87876 (December 31, 2019), 85 FR 757 (January 7, 2020) (SR-PEARL-2019-36). Accordingly, the third-party 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.

such portions of expenses represents the total cost to the Exchange to provide the services associated with the Proposed Access Fees.

For 2020, total third-party expense, relating to fees paid by MIAX PEARL and MIAX to third-parties for certain products and services for the Exchange to be able to provide network connectivity services, is projected to be $4,079,910. 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 PEARL and MIAX trading system infrastructure; (2) Zayo Group Holdings, Inc. ("Zayo") for connectivity services (fiber and bandwidth connectivity) linking MIAX PEARL and MIAX office locations in Princeton, NJ and Miami, FL to all data center locations; (3) Secure Financial Transaction Infrastructure ("SFTI")[14], which supports connectivity and feeds for the entire U.S. options industry; (4) various other services providers (including Thompson Reuters, NYSE, Nasdaq, and Internap), which provide content, connectivity services, and infrastructure services for critical components of options connectivity; and (5) various other hardware and software providers (including Dell and Cisco, which support the production environment in which Members and non-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 PEARL and MIAX do not allocate their entire information technology and communication costs to the services associated with the Proposed Access Fees.

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[14] 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.

The Exchange believes it is reasonable to allocate such third-party expense described above towards the total cost to the Exchange to provide the services associated with the Proposed Access Fees. In particular, the Exchange believes it is reasonable to allocate the identified portion of the Equinix expense because Equinix operates the data centers (primary, secondary, and disaster recovery) that host the Exchange's network infrastructure. This includes, among other things, the necessary storage space, which continues to expand and increase in cost, power to operate the network infrastructure, and cooling apparatuses to ensure the Exchange's network infrastructure maintains stability. Without these services from Equinix, the Exchange would not be able to operate and support the network and provide the services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the Equinix expense toward the cost of providing network connectivity services, only that portion which the Exchange identified as being specifically mapped to providing network connectivity services, approximately 68% of the total Equinix expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portion of the Zayo expense because Zayo provides the internet, fiber and bandwidth connections with respect to the network, linking MIAX PEARL with its affiliates, MIAX and MIAX Emerald, 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 services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the Zayo expense toward the cost of providing network connectivity services, only that portion which the Exchange identified as being specifically mapped to providing network

connectivity services, approximately 62% of the total Zayo expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portion of the SFTI expense and various other service providers' (including Thompson Reuters, NYSE, Nasdaq, and Internap) expense because those entities provide connectivity and feeds for the entire U.S. options industry as well as the content, connectivity services, and infrastructure services for critical components of the network. Without these services from SFTI and various other service providers, the Exchange would not be able to operate and support the network and provide the services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the SFTI and other service providers' expense toward the cost of providing network connectivity services, only that portion which the Exchange identified as being specifically mapped to providing network connectivity services, approximately 89% of the total SFTI and other service providers' expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange believes it is reasonable to allocate the identified portion of the 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 services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the hardware and software provider expense toward the cost of providing network connectivity services, only that portion which the Exchange identified as being

specifically mapped to providing network connectivity services, approximately 54% 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 services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

For 2020, total projected internal expense, relating to the internal costs of MIAX PEARL and MIAX to provide network connectivity services, is projected to be $13,831,434. This includes, but is not limited to, costs associated with: (1) employee compensation and benefits for full-time employees that support the services associated with the Proposed Access Fees, including staff in network operations, trading operations, development, system operations, business, as well as staff in general corporate departments (such as legal, regulatory, and finance) that support those employees and functions; (2) depreciation and amortization of hardware and software used to provide the services associated with the Proposed Access Fees, including equipment, servers, cabling, purchased software and internally developed software used in the production environment to support the network for trading; and (3) occupancy costs for leased office space for staff that provide the services associated with the Proposed Access Fees. The breakdown of these costs is more fully-described below. For clarity, only a portion of all such internal expenses are included in the internal expense herein, and no expense amount is allocated twice. Accordingly, the Exchange and MIAX do not allocate their entire costs contained in those items to the services associated with the Proposed Access Fees.

The Exchange believes it is reasonable to allocate such internal expense described above towards the total cost to the Exchange to provide the services associated with the Proposed Access Fee. In particular, MIAX PEARL's and MIAX's combined employee compensation and benefits expense relating to providing network connectivity services is projected to be approximately $6,892,689, which is only a portion of the $9,727,857 (for MIAX PEARL) and $11,811,796 (for MIAX) total projected expense for employee

compensation and benefits. The Exchange believes it is reasonable to allocate the identified portion of such expense because this includes the time spent by employees of several departments, including Technology, Back Office, Systems Operations, Networking, Business Strategy Development (who create the business requirement documents that the Technology staff use to develop network features and enhancements), Trade Operations, Finance (who provide billing and accounting services relating to the network), and Legal (who provide legal services relating to the network, such as rule filings and various license agreements and other contracts). As part of the extensive cost review conducted by the Exchange, the Exchange reviewed the amount of time spent by each employee on matters relating to the provision of services associated with the Proposed Access Fees. Without these employees, the Exchange would not be able to operate and support the network and provide network and provide the services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the employee compensation and benefits expense toward the cost of providing network connectivity services, only the portions which the Exchange identified as being specifically mapped to providing network connectivity services, approximately 32% 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 services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX PEARL's and MIAX's combined depreciation and amortization expense relating to providing network connectivity services is projected to be $6,378,337, which is only a portion of the $3,342,621 (for MIAX PEARL) and $5,276,753 (for MIAX) 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 services associated with the Proposed Access Fees. Without this equipment, the Exchange would not be able to operate the network and provide the services associated with the Proposed Access Fees to its Members and non-Members and their customers. The Exchange did not allocate all of the depreciation and amortization expense toward the cost of providing network connectivity services, only the portion which the Exchange identified as being specifically mapped to providing network connectivity services, approximately 74% of the total depreciation and amortization expense, as these services would not be possible without relying on such equipment. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

MIAX PEARL's and MIAX's combined occupancy expense relating to providing network connectivity services is projected to be $560,408, which is only a portion of the $528,425 (for MIAX PEARL) and $615,264 (for MIAX) total projected expense for occupancy. The Exchange believes it is reasonable to allocate the identified portion of such expense because such expense represents the portion of the Exchange's cost to rent and maintain a physical location for the Exchange's staff who operate and support the network, including providing the services associated with the Proposed Access Fees. This amount consists primarily of rent for the Exchange's Princeton, NJ office, as well as various related costs, such as physical security, property management fees, property taxes, and utilities. The Exchange operates its Network Operations Center ("NOC") and Security Operations Center ("SOC") from its Princeton, New Jersey office location. A centralized office space is required to house the staff that operates and supports the network. The Exchange currently has approximately 150 employees. Approximately two-thirds of the Exchange's staff are in the Technology department, and the majority of those staff have some role in the operation and performance of the services associated with the Proposed Access Fees. Without this office

space, the Exchange would not be able to operate and support the network and provide the services associated with the Proposed Access Fees to its Members and non-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 services associated with the Proposed Access Fees. The Exchange did not allocate all of the occupancy expense toward the cost of providing network connectivity services, only that portion which the Exchange identified as being specifically mapped to providing the services associated with the Proposed Access Fees, approximately 49% of the total occupancy expense. The Exchange believes this allocation is reasonable because it represents the Exchange's actual cost to provide the services associated with the Proposed Access Fees, and not any other service, as supported by its cost review.

The Exchange's monthly projected revenue for the Proposed Access Fees is based on MIAX PEARL and MIAX Members and non-Members purchasing 140 10Gb ULL connections, based on a recent billing cycle. Accordingly, based on current assumptions and approximations, the Exchange and MIAX PEARL project total combined monthly revenue from 10Gb ULL connections of approximately $1,400,000.[15]

On a going-forward, fully-annualized basis, the Exchange and MIAX project that their annualized revenue for providing the services associated with the Proposed Access Fees to be approximately $16.8 million per annum, based on a most recently completed billing cycle. The Exchange and MIAX project that their annualized revenue for providing network connectivity services (all connectivity alternatives) to be approximately $19.4 million per annum.[16] The Exchange and MIAX project that their annualized expense for providing network connectivity

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15 The Exchange also projects an additional $215,000 in monthly revenue through non-10Gb ULL connections, however the Exchange is not proposing to adjust the fees for those connections at this time.

16 See id.

services (all connectivity alternatives) to be approximately $17.9 million per annum. Accordingly, on a fully-annualized basis, the Exchange believes its total projected revenue for the providing network connectivity services (all additional connectivity alternatives) will not result in excessive pricing or supra-competitive profit, as the Exchange will make only an 8% profit margin on network connectivity services ($19.4 million – $17.9 million = $1.5 million per annum). Additionally, this profit margin does not take into account the cost of capital expenditures ("CapEX") the Exchange and MIAX are projected to spend in each year on CapEx going forward.

The Exchange believes it is reasonable, equitable and not unfairly discriminatory to allocate the respective percentages of each expense category described above towards the total cost to the Exchange of operating and supporting the network, including providing the services associated with the Proposed Access Fees because the Exchange performed a line-by-line item analysis of all the expenses of the Exchange, and has determined the expenses that directly relate to operation and support of the network. Further, the Exchange notes that, without the specific third-party and internal items listed above, the Exchange would not be able to operate and support the network, including providing the services associated with the Proposed Access Fees to its Members and non-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 the operation and support of the network. The Proposed Access Fees are intended to recover the Exchange's costs of operating and supporting the network. Accordingly, the Exchange believes that the Proposed Access Fee increases are fair and reasonable because they do not result in excessive pricing or supra-competitive profit, when comparing the actual network operation and support costs to the Exchange versus the projected annual revenue from the Proposed Access Fees, including the increased amount.

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

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

Intra-Market Competition

The Exchange does not believe that the proposed rule change would place certain market participants at the Exchange at a relative disadvantage compared to other market participants or affect the ability of such market participants to compete. In particular, the Exchange has received no official complaints from Members, non-Members (extranets and service bureaus), third-parties that purchase the Exchange's connectivity and resell it, and customers of those resellers, that the Exchange's fees or the Proposed Access Fees are negatively impacting or would negatively impact their abilities to compete with other market participants or that they are placed at a disadvantage.

The Exchange believes that the Proposed Access Fees do not place certain market participants at a relative disadvantage to other market participants because the connectivity pricing is associated with relative usage of the various market participants and does not impose a barrier to entry to smaller participants. As described above, the less expensive 1Gb direct connection is generally purchased by market participants that utilize less bandwidth. The market participants that purchase 10Gb ULL direct connections utilize the most bandwidth, and those are the participants that consume the most resources from the network. Accordingly, the Proposed Access Fees do not favor certain categories of market participants in a manner that would impose a burden on competition; rather, the allocation of the Proposed Access Fees reflects the network resources consumed by the various size of market participants – lowest bandwidth consuming members pay the least, and highest bandwidth consuming members pays the most, particularly since higher bandwidth consumption translates to higher costs to the Exchange.

Inter-Market Competition

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

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

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

Written comments were neither solicited nor received.

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

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,[17] and Rule 19b-4(f)(2)[18] 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-PEARL-2021-01 on the subject line.

Paper Comments:

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

All submissions should refer to File Number SR-PEARL-2021-01. 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

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[17] 15 U.S.C. 78s(b)(3)(A)(ii).

[18] 17 CFR 240.19b-4(f)(2).

relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-PEARL-2021-01 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.[19]

J. Matthew DeLesDernier,

Assistant Secretary.

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[19] 17 CFR 200.30-3(a)(12).