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November 2, 2017

Mr. Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-1090

Re: File Nos. SR– BatsBYX–2017–11; SR–BatsBZX–2017–38; SR–BatsEDGA–2017–13; SR–BatsEDGX– 2017–22; SR–BOX–2017–16; SR–BX–2017– 023; SR–C2–2017–017; SR–CBOE–2017– 040; SR–CHX–2017–08; SR–FINRA–2017– 011; SR–GEMX–2017–17; SR–IEX–2017–16; SR–ISE–2017–45; SR–MIAX–2017–18; SR– MRX–2017–04; SR–NASDAQ–2017–046; SR–NYSE–2017–22; SR–NYSEArca–2017– 52; SR–NYSEMKT–2017–26; SR–PEARL–2017–20; SR–PHLX–2017–37

Dear Mr. Fields:

Each of the parties to the National Market System Plan Governing the Consolidated Audit Trail ("CAT NMS Plan" or "Plan") – BOX Options Exchange LLC, Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe C2 Exchange, Inc., Cboe Exchange, Inc., Chicago Stock Exchange, Inc., Financial Industry Regulatory Authority, Inc. ("FINRA"), Investors' Exchange LLC, Miami International Securities Exchange LLC, MIAX PEARL, LLC, NASDAQ BX, Inc., Nasdaq GEMX, LLC, Nasdaq ISE, LLC, Nasdaq MRX, LLC, NASDAQ PHLX LLC, The NASDAQ Stock Market LLC, New York Stock Exchange LLC, NYSE American LLC, and NYSE Arca, Inc.[1] (collectively, the "Participants") – filed the above-referenced proposed rule changes to adopt rules governing fees to be charged to their members required to report data to the consolidated audit trail ("Original Proposals").[2] Subsequently, pursuant to Section 19(b)(3)(C) of the Act, the Securities and Exchange Commission ("SEC" or "Commission") issued an order ("Suspension Order"): (1) temporarily suspending the Original Proposals; and (2) instituting proceedings to determine whether to approve or disapprove the Original Proposals.[3] The Commission received seven

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1 Although NYSE National, Inc. is also a Participant, it did not file a proposed rule change regarding fees for the consolidated audit trail.

2 Capitalized terms are defined as set forth in the CAT Fee Filings or the Plan unless otherwise indicated.

3 Securities Exchange Act Rel. No. 81067 (June 30, 2017), 82 Fed. Reg. 31656 (July 7, 2017) ("Suspension Order").

comment letters in response to the Suspension Order.[4] This letter responds to comments received by the Commission on the Original Proposals,[5] and the Suspension Order and addresses questions asked by the Commission in the Suspension Order, related to the Original Proposals.

The Participants carefully considered these comments and are proposing a number of changes to the Original Proposals to address these comments where appropriate. Specifically, the Participants are filing amendments to their Original Proposals that reflect the following changes (1) adds two additional CAT Fee tiers for Equity Execution Venues; (2) discounts the market share of Execution Venue ATSs exclusively trading OTC Equity Securities as well as the market share of the FINRA over-the-counter reporting facility ("ORF") by the average shares per trade ratio between NMS Stocks and OTC Equity Securities (calculated as 0.17% based on available data from the second quarter of 2017) when calculating the market share of Execution Venue ATSs exclusively trading OTC Equity Securities and FINRA; (3) discounts the Options Market Maker quotes by the trade to quote ratio for options (calculated as 0.01% based on available data for June 2016 through June 2017) when calculating message traffic for Options Market Makers; (4) discounts equity market maker quotes by the trade to quote ratio for equities (calculated as 5.43% based on available data for June 2016 through June 2017) when calculating message traffic for equity market makers; (5) decreases the number of tiers for Industry Members (other than the Execution Venue ATSs) from nine to seven; (6) changes the allocation of CAT costs between Equity Execution Venues and Options Execution Venues from 75%/25% to 67%/33%; (7) adjusts tier percentages and recovery allocations for Equity Execution Venues, Options Execution Venues and Industry Members (other than Execution Venue ATSs); (8) focuses the comparability of CAT Fees on the individual entity level, rather than primarily on the comparability of affiliated entities; (9) commences invoicing of CAT Reporters as promptly as possible following the latest of the operative date of the Consolidated Audit Trail Funding Fees for each of the Participants and the operative date of the CAT NMS Plan amendment adopting CAT Fees for Participants; and (10) requires the proposed fees to automatically expire two years from the operative date of the CAT NMS Plan amendment adopting CAT Fees for the Participants.

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4 *See* Letter from Stuart J. Kaswell, Executive Vice President, Managing Director and General Counsel, Managed Funds Association, to Brent J. Fields, Secretary, SEC (July 28, 2017) ("MFA Letter"); Letter from Theodore R. Lazo, Managing Director and Associate General Counsel, SIFMA, to Brent J. Fields, Secretary, SEC (July 28, 2017) ("SIFMA Letter"); Joanna Mallers, Secretary, FIA Principal Traders Group, to Brent J. Fields, Secretary, SEC (July 28, 2017) ("FIA Principal Traders Group Letter"); Letter from Kevin Coleman, General Counsel & Chief Compliance Officer, Belvedere Trading LLC, to Brent J. Fields, Secretary, SEC (July 28, 2017) ("Belvedere Letter"); Letter from W. Hardy Callcott, Sidley Austin LLP, to Brent J. Fields, Secretary, SEC (July 27, 2017) ("Sidley Letter"); Letter from John Kinahan, Chief Executive Officer, Group One Trading, L.P., to Brent J. Fields, Secretary, SEC (Aug. 10, 2017) ("Group One Letter"); and Letter from Joseph Molluso, Executive Vice President, Virtu Financial, to Brent J. Fields, Secretary, SEC (Aug. 18, 2017) ("Virtu Financial Letter").

5 For a description of the comments submitted in response to the Original Proposals, *see* Suspension Order.

1. Equity Execution Venues

a. Small Equity Execution Venues

The Operating Committee originally proposed to establish two fee tiers for Equity Execution Venues. The Commission and commenters raised the concern that, by establishing only two tiers, smaller Equity Execution Venues (*e.g.*, those Equity ATSs representing less than 1% of NMS market share) would be placed in the same fee tier as larger Equity Execution Venues, thereby imposing an undue or inappropriate burden on competition.[6] To address this concern, the Operating Committee proposes to add two additional tiers for Equity Execution Venues, a third tier for smaller Equity Execution Venues and a fourth tier for the smallest Equity Execution Venues.

Specifically, the Original Proposals had two tiers of Equity Execution Venues. Tier 1 required the largest Equity Execution Venues to pay a quarterly fee of $63,375. Based on available data, these largest Equity Execution Venues were those that had equity market share of share volume greater than or equal to 1%.[7] Tier 2 required the remaining smaller Equity Execution Venues to pay a quarterly fee of $38,820.

To address concerns about the potential for the $38,820 quarterly fee to impose an undue burden on smaller Equity Execution Venues, the Operating Committee determined to move to a four tier structure for Equity Execution Venues. Tier 1 would continue to include the largest Equity Execution Venues by share volume (that is, based on currently available data, those with market share of equity share volume greater than or equal to one percent), and these Equity Execution Venues would be required to pay a quarterly fee of $81,048. The Operating Committee determined to divide the original Tier 2 into three tiers. The new Tier 2 Equity Execution Venues, which would include the next largest Equity Execution Venues by equity share volume, would be required to pay a quarterly fee of $37,062. The new Tier 3 Equity Execution Venues would be required to pay a quarterly fee of $21,126. The new Tier 4 Equity Execution Venues, which would include the smallest Equity Execution Venues by share volume, would be required to pay a quarterly fee of $129.

In developing the proposed four tier structure, the Operating Committee considered keeping the existing two tiers, as well as shifting to three, four or five Equity Execution Venue tiers (the maximum number of tiers permitted under the Plan), to address the concerns regarding small Equity Execution Venues. For each of the two, three, four and five tier alternatives, the Operating Committee considered the assignment of various percentages of Equity Execution Venues to each tier as well as various percentage of Equity Execution Venue recovery allocations for each alternative. As discussed below in more detail, each of these options was

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6 *See* Suspension Order at 31664; SIFMA Letter at 3.

7 Note that while these equity market share thresholds were referenced as data points to help differentiate between Equity Execution Venue tiers, the proposed funding model is directly driven not by market share thresholds, but rather by fixed percentages of Equity Execution Venues across tiers to account for fluctuating levels of market share across time. Actual market share in any tier will vary based on the actual market activity in a given measurement period, as well as the number of Equity Execution Venues included in the measurement period.

considered in the context of the full model, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. The Operating Committee determined that the four tier alternative addressed the spectrum of different Equity Execution Venues. The Operating Committee determined that neither a two tier structure nor a three tier structure sufficiently accounted for the range of market shares of smaller Equity Execution Venues. The Operating Committee also determined that, given the limited number of Equity Execution Venues, that a fifth tier was unnecessary to address the range of market shares of the Equity Execution Venues.

By increasing the number of tiers for Equity Execution Venues and reducing the proposed CAT Fees for the smaller Equity Execution Venues, the Operating Committee believes that the proposed fees for Equity Execution Venues would not impose an undue or inappropriate burden on competition under Section 6 or Section 15A of the Exchange Act. Moreover, the Operating Committee believes that the proposed fees appropriately take into account the distinctions in the securities trading operations of different Equity Execution Venues, as required under the funding principles of the CAT NMS Plan.[8] The larger number of tiers more closely tracks the variety of sizes of equity share volume of Equity Execution Venues. In addition, the reduction in the fees for the smaller Equity Execution Venues recognizes the potential burden of larger fees on smaller entities. In particular, the very small quarterly fee of $129 for Tier 4 Equity Execution Venues reflects the fact that certain Equity Execution Venues have a very small share volume due to their typically more focused business models.

b. Execution Venues for OTC Equity Securities

The Operating Committee originally proposed to group Execution Venues for OTC Equity Securities and Execution Venues for NMS Stocks in the same tier structure. The Commission and commenters raised concerns as to whether this determination to place Execution Venues for OTC Equity Securities in the same tier structure as Execution Venues for NMS Stocks would result in an undue or inappropriate burden on competition, recognizing that the application of share volume may lead to different outcomes as applied to OTC Equity Securities and NMS Stocks.[9] To address this concern, the Operating Committee proposes to discount the market share of Execution Venue ATSs exclusively trading OTC Equity Securities as well as the market share of the FINRA ORF by the average shares per trade ratio between NMS Stocks and OTC Equity Securities (0.17% for the second quarter of 2017) in order to adjust for the greater number of shares being traded in the OTC Equity Securities market, which is generally a function of a lower per share price for OTC Equity Securities when compared to NMS Stocks.

As commenters noted, many OTC Equity Securities are priced at less than one dollar—and a significant number at less than one penny—and low-priced shares tend to trade in larger quantities. Accordingly, a disproportionately large number of shares are involved in transactions involving OTC Equity Securities versus NMS Stocks, which has the effect of overstating an

8 Section 11.2(b) of the CAT NMS Plan.
9 *See* Suspension Order at 31664-5.

Execution Venue's true market share when the Execution Venue is involved in the trading of OTC Equity Securities. Because the proposed fee tiers are based on market share calculated by share volume, Execution Venue ATSs trading OTC Equity Securities and FINRA may be subject to higher tiers than their operations may warrant.[10] The Operating Committee proposes to address this concern in two ways. First, the Operating Committee proposes to increase the number of Equity Execution Venue tiers, as discussed above. Second, the Operating Committee determined to discount the market share of Execution Venue ATSs exclusively trading OTC Equity Securities as well as the market share of the FINRA ORF when calculating their tier placement. Because the disparity in share volume between Execution Venues trading in OTC Equity Securities and NMS Stocks is based on the different number of shares per trade for OTC Equity Securities and NMS Stocks, the Operating Committee believes that discounting the share volume of such Execution Venue ATSs as well as the market share of the FINRA ORF would address the difference in shares per trade for OTC Equity Securities and NMS Stocks. Specifically, the Operating Committee proposes to impose a discount based on the objective measure of the average shares per trade ratio between NMS Stocks and OTC Equity Securities. Based on available data from the second quarter of 2017, the average shares per trade ratio between NMS Stocks and OTC Equity Securities is 0.17%.

The practical effect of applying such a discount for trading in OTC Equity Securities is to shift Execution Venue ATSs exclusively trading OTC Equity Securities to tiers for smaller Execution Venues and with lower fees. For example, under the Original Proposals, one Execution Venue ATS exclusively trading OTC Equity Securities was placed in the first CAT Fee tier, which had a quarterly fee of $63,375. With the imposition of the proposed tier changes and the discount, this ATS would be ranked in Tier 3 and would owe a quarterly fee of $21,126.

In developing the proposed discount for Equity Execution Venue ATSs exclusively trading OTC Equity Securities and FINRA, the Operating Committee evaluated different alternatives to address the concerns related to OTC Equity Securities, including creating a separate tier structure for Execution Venues trading OTC Equity Securities (like the separate tier for Options Execution Venues) as well as the proposed discounting method for Execution Venue ATSs exclusively trading OTC Equity Securities and FINRA. For these alternatives, the Operating Committee considered how each alternative would affect the recovery allocations. In addition, each of these options was considered in the context of the full model, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. The Operating Committee did not adopt a separate tier structure for Equity Execution Venues trading OTC Equity Securities as they determined that the proposed discount approach appropriately addresses the concern. The Operating Committee determined to adopt the proposed discount because it directly relates to the concern regarding the trading patterns and operations in the OTC Equity Securities markets, and is an objective discounting method.

10 Suspension Order at 31664-5.

By increasing the number of tiers for Equity Execution Venues and imposing a discount on the market share of share volume calculation for trading in OTC Equity Securities, the Operating Committee believes that the proposed fees for Equity Execution Venues would not impose an undue or inappropriate burden on competition under Section 6 or Section 15A of the Exchange Act. Moreover, the Operating Committee believes that the proposed fees appropriately take into account the distinctions in the securities trading operations of different Equity Execution Venues, as required under the funding principles of the CAT NMS Plan.[11] As discussed above, the larger number of tiers more closely tracks the variety of sizes of equity share volume of Equity Execution Venues. In addition, the proposed discount recognizes the different types of trading operations at Equity Execution Venues trading OTC Equity Securities versus those trading NMS Stocks, thereby more closing matching the relative revenue generation by Equity Execution Venues trading OTC Equity Securities to their CAT Fees.

2. Market Makers

The Operating Committee originally proposed to include both Options Market Maker quotes and equities market maker quotes in the calculation of total message traffic for such market makers for purposes of tiering for Industry Members (other than Execution Venue ATSs). The Commission and commenters raised questions as to whether the proposed treatment of Options Market Maker quotes may result in an undue or inappropriate burden on competition or may lead to a reduction in market quality.[12] To address this concern, the Operating Committee determined to discount the Options Market Maker quotes by the trade to quote ratio for options when calculating message traffic for Options Market Makers. Similarly, to avoid disincentives to quoting behavior on the equities side as well, the Operating Committee determined to discount equity market maker quotes by the trade to quote ratio for equities when calculating message traffic for equities market makers.

In the Original Proposals, market maker quotes were treated the same as other message traffic for purposes of tiering for Industry Members (other than Execution Venue ATSs). Commenters noted, however, that charging Industry Members on the basis of message traffic will impact market makers disproportionately because of their continuous quoting obligations. Moreover, in the context of options market makers, message traffic would include bids and offers for every listed options strikes and series, which are not an issue for equities.[13] The Operating Committee proposes to address this concern in two ways. First, the Operating Committee proposes to discount Options Market Maker quotes when calculating the Options Market Makers' tier placement. Specifically, the Operating Committee proposes to impose a discount based on the objective measure of the trade to quote ratio for options. Based on available data from June 2016 through June 2017, the trade to quote ratio for options is 0.01%. Second, the Operating Committee proposes to discount equities market maker quotes when calculating the equities market makers' tier placement. Specifically, the Operating Committee

[11] Section 11.2(b) of the CAT NMS Plan.
[12] *See* Suspension Order at 31663-4; SIFMA Letter at 4-6; FIA Principal Traders Group Letter at 3; Sidley Letter at 2-6; Group One Letter at 2-6; and Belvedere Letter at 2.
[13] Suspension Order at 31664.

proposes to impose a discount based on the objective measure of the trade to quote ratio for equities. Based on available data for June 2016 through June 2017, this trade to quote ratio for equities is 5.43%.

The practical effect of applying such discounts for quoting activity is to shift market makers' calculated message traffic lower, leading to the potential shift to tiers for lower message traffic and reduced fees. Such an approach would move sixteen Industry Member CAT Reporters that are market makers to a lower tier than in the Original Proposals. For example, under the Original Proposals, Broker-Dealer Firm ABC was placed in the first CAT Fee tier, which had a quarterly fee of $101,004. With the imposition of the proposed tier changes and the discount, Broker-Dealer Firm ABC, an options market maker, would be ranked in Tier 3 and would owe a quarterly fee of $40,899.

In developing the proposed market maker discounts, the Operating Committee considered various discounts for Options Market Makers and equity market makers, including discounts of 50%, 25%, 0.00002%, as well as the 5.43% for option market makers and 0.01% for equity market makers. Each of these options were considered in the context of the full model, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. The Operating Committee determined to adopt the proposed discount because it directly relates to the concern regarding the quoting requirement, is an objective discounting method, and has the desired potential to shift market makers to lower fee tiers.

By imposing a discount on Options Market Makers and equities market makers' quoting traffic for the calculation of message traffic, the Operating Committee believes that the proposed fees for market makers would not impose an undue or inappropriate burden on competition under Section 6 or Section 15A of the Exchange Act. Moreover, the Operating Committee believes that the proposed fees appropriately take into account the distinctions in the securities trading operations of different Industry Members, and avoid disincentives, such as a reduction in market quality, as required under the funding principles of the CAT NMS Plan.[14] The proposed discounts recognize the different types of trading operations presented by Options Market Makers and equities market makers, as well as the value of the market makers' quoting activity to the market as a whole. Accordingly, the Operating Committee believes that the proposed discounts will not impact the ability of small Options Market Makers or equities market makers to provide liquidity.

3. Comparability/Allocation of Costs

Under the Original Proposals, 75% of CAT costs were allocated to Industry Members (other than Execution Venue ATSs) and 25% of CAT costs were allocated to Execution Venues. This cost allocation sought to maintain the greatest level of comparability across the funding model, where comparability considered affiliations among or between CAT Reporters. The

[14] Section 11.2(b) of the CAT NMS Plan.

Commission and commenters expressed concerns regarding whether the proposed 75%/25% allocation of CAT costs is consistent with the Plan's funding principles and the Exchange Act, including whether the allocation places a burden on competition or reduces market quality. The Commission and commenters also questioned whether the approach of accounting for affiliations among CAT Reporters in setting CAT Fees disadvantages non-affiliated CAT Reporters or otherwise burdens competition in the market for trading services.[15]

In response to these concerns, the Operating Committee determined to revise the proposed funding model to focus the comparability of CAT Fees on the individual entity level, rather than primarily on the comparability of affiliated entities. In light of the interconnected nature of the various aspects of the funding model, the Operating Committee determined to revise various aspects of the model to enhance comparability at the individual entity level. Specifically, to achieve such comparability, the Operating Committee determined to (1) decrease the number of tiers for Industry Members (other than Execution Venue ATSs) from nine to seven; (2) change the allocation of CAT costs between Equity Execution Venues and Options Execution Venues from 75%/25% to 67%/33%; and (3) adjust tier percentages and recovery allocations for Equity Execution Venues, Options Execution Venues and Industry Members (other than Execution Venue ATSs). With these changes, the proposed funding model provides fee comparability for the largest individual entities, with the largest Industry Members (other than Execution Venue ATSs), Equity Execution Venues and Options Execution Venues each paying a CAT Fee of approximately $81,000 each quarter.

a. Number of Industry Member Tiers

In the Original Proposals, the proposed funding model had nine tiers for Industry Members (other than Execution Venue ATSs). The Operating Committee determined that reducing the number of tiers from nine tiers to seven tiers (and adjusting the predefined Industry Member Percentages as well) continues to provide a fair allocation of fees among Industry Members and appropriately distinguishes between Industry Members with differing levels of message traffic. In reaching this conclusion, the Operating Committee considered historical message traffic generated by Industry Members across all exchanges and as submitted to FINRA's OATS, and considered the distribution of firms with similar levels of message traffic, grouping together firms with similar levels of message traffic. Based on this, the Operating Committee determined that seven tiers would group firms with similar levels of message traffic, while also achieving greater comparability in the model for the individual CAT Reporters with the greatest market share or message traffic.

In developing the proposed seven tier structure, the Operating Committee considered remaining at nine tiers, as well as reducing the number of tiers down to seven when considering how to address the concerns raised regarding comparability. For each of the alternatives, the Operating Committee considered the assignment of various percentages of Industry Members to each tier as well as various percentages of Industry Member recovery allocations for each

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[15] *See* Suspension Order at 31662-3; SIFMA Letter at 3; Sidley Letter at 6-7; Group One Letter at 2; and Belvedere Letter at 2.

alternative. Each of these options was considered in the context of its effects on the full funding model, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. The Operating Committee determined that the seven tier alternative provided the most fee comparability at the individual entity level for the largest CAT Reporters, while both providing logical breaks in tiering for Industry Members with different levels of message traffic and a sufficient number of tiers to provide for the full spectrum of different levels of message traffic for all Industry Members.

b. Allocation of CAT Costs between Equity and Options Execution Venues

The Operating Committee also determined to adjust the allocation of CAT costs between Equity Execution Venues and Options Execution Venues to enhance comparability at the individual entity level. In the Original Proposals, 75% of Execution Venue CAT costs were allocated to Equity Execution Venues, and 25% of Execution Venue CAT costs were allocated to Options Execution Venues. To achieve the goal of increased comparability at the individual entity level, the Operating Committee analyzed a range of alternative splits for revenue recovery between Equity and Options Execution Venues, along with other changes in the proposed funding model. Based on this analysis, the Operating Committee determined to allocate 67 percent of Execution Venue costs recovered to Equity Execution Venues and 33 percent to Options Execution Venues. The Operating Committee determined that a 67/33 allocation between Equity and Options Execution Venues enhances the level of fee comparability for the largest CAT Reporters. Specifically, the largest Equity and Options Execution Venues would pay a quarterly CAT Fee of approximately $81,000.

In developing the proposed allocation of CAT costs between Equity and Options Execution Venues, the Operating Committee considered various different options for such allocation, including keeping the original 75%25% allocation, as well as shifting to a 70%/30%, 67%/33%, or 57.75%/42.25% allocation. For each of the alternatives, the Operating Committee considered the effect each allocation would have on the assignment of various percentages of Equity Execution Venues to each tier as well as various percentages of Equity Execution Venue recovery allocations for each alternative. Moreover, each of these options was considered in the context of the full model, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. The Operating Committee determined that the 67%/33% allocation between Equity and Options Execution Venues provided the greatest level of fee comparability at the individual entity level for the largest CAT Reporters, while still providing for appropriate fee levels across all tiers for all CAT Reporters.

c. Allocation of Costs between Execution Venues and Industry Members

The Operating Committee determined to allocate 25% of CAT costs to Execution Venues and 75% to Industry Members (other than Execution Venue ATSs), as it had originally proposed. The Operating Committee determined that this 75%/25% allocation, along with the other changes proposed above, led to the most comparable fees for the largest Equity Execution Venues, Options Execution Venues and Industry Members (other than Execution Venue ATSs).

The largest Equity Execution Venues, Options Execution Venues and Industry Members (other than Execution Venue ATSs) would each pay a quarterly CAT Fee of approximately $81,000.

As a preliminary matter, the Operating Committee determined that it is appropriate to allocate most of the costs to create, implement and maintain the CAT to Industry Members for several reasons. First, there are many more broker-dealers expected to report to the CAT than Participants (*i.e.*, 1,541 broker-dealer CAT Reporters versus 22 Participants). Second, since most of the costs to process CAT reportable data is generated by Industry Members, Industry Members could be expected to contribute toward such costs. Finally, as noted by the SEC, the CAT "substantially enhance[s] the ability of the SROs and the Commission to oversee today's securities markets,"[16] thereby benefitting all market participants. After making this determination, the Operating Committee analyzed several different cost allocations, as discussed further below, and determined that an allocation where 75% of the CAT costs should be borne by the Industry Members (other than Execution Venue ATSs) and 25% should be paid by Execution Venues was most appropriate and led to the greatest comparability of CAT Fees for the largest CAT Reporters.

In developing the proposed allocation of CAT costs between Execution Venues and Industry Members (other than Execution Venue ATSs), the Operating Committee considered various different options for such allocation, including keeping the original 75%/25% allocation, as well as shifting to an 80%/20%, 70%/30%, or 65%/35% allocation. Each of these options was considered in the context of the full model, including the effect on each of the changes discussed above, as changes in each variable in the model affect other variables in the model when allocating the total CAT costs among CAT Reporters. In particular, for each of the alternatives, the Operating Committee considered the effect each allocation had on the assignment of various percentages of Equity Execution Venues, Options Execution Venues and Industry Members (other than Execution Venue ATSs) to each relevant tier as well as various percentages of recovery allocations for each tier. The Operating Committee determined that the 75%/25% allocation between Execution Venues and Industry Members (other than Execution Venue ATSs) provided the greatest level of fee comparability at the individual entity level for the largest CAT Reporters, while still providing for appropriate fee levels across all tiers for all CAT Reporters.

d. Affiliations

The funding principles set forth in Section 11.2 of the Plan require that the fees charged to CAT Reporters with the most CAT-related activity (measured by market share and/or message traffic, as applicable) are generally comparable (where, for these comparability purposes, the tiered fee structure takes into consideration affiliations between or among CAT Reporters, whether Execution Venue and/or Industry Members). The proposed revised funding model satisfies this requirement. Under the proposed funding model, the largest Equity Execution Venues, Options Execution Venues, and Industry Members (other than Execution Venue ATSs)

[16] Securities Exchange Act Rel. No. 67457 (Jul 18, 2012), 77 Fed. Reg. 45722, 45726 (Aug. 1, 2012) ("Rule 613 Adopting Release").

pay approximately the same fee. Moreover, the Operating Committee believes that the proposed funding model takes into consideration affiliations between or among CAT Reporters as complexes with multiple CAT Reporters will pay the appropriate fee based on the proposed fee schedule for each of the CAT Reporters in the complex. For example, a complex with a Tier 1 Equity Execution Venue and Tier 2 Industry Member will a pay the same as another complex with a Tier 1 Equity Execution Venue and Tier 2 Industry Member.

4. Market Share/Message Traffic

The Operating Committee originally proposed to charge Execution Venues based on market share and Industry Members (other than Execution Venue ATSs) based on message traffic. Commenters questioned the use of the two different metrics for calculating CAT Fees.[17] The Operating Committee continues to believe that the proposed use of market share and message traffic satisfies the requirements of the Exchange Act and the funding principles set forth in the CAT NMS Plan. Accordingly, the proposed funding model continues to charge Execution Venues based on market share and Industry Members (other than Execution Venue ATSs) based on message traffic.

In drafting the Plan and the Original Proposals, the Operating Committee and the Participants expressed the view that the correlation between message traffic and size does not apply to Execution Venues, which they described as producing similar amounts of message traffic regardless of size. The Operating Committee believed that charging Execution Venues based on message traffic would result in both large and small Execution Venues paying comparable fees, which would be inequitable, so the Operating Committee determined that it would be more appropriate to treat Execution Venues differently from Industry Members in the funding model. Upon a more detailed analysis of available data, however, the Operating Committee noted that Execution Venues have varying levels of message traffic. Nevertheless, the Operating Committee continues to believe that a bifurcated funding model – where Industry Members (other than Execution Venue ATSs) are charged fees based on message traffic and Execution Venues are charged based on market share – complies with the Plan and meets the standards of the Exchange Act for the reasons set forth below.

Charging Industry Members based on message traffic is the most equitable means for establishing fees for Industry Members (other than Execution Venue ATSs). This approach will assess fees to Industry Members that create larger volumes of message traffic that are relatively higher than those fees charged to Industry Members that create smaller volumes of message traffic. Since message traffic, along with fixed costs of the Plan Processor, is a key component of the costs of operating the CAT, message traffic is an appropriate criterion for placing Industry Members in a particular fee tier.

The Operating Committee also believes that it is appropriate to charge Execution Venues CAT Fees based on their market share. In contrast to Industry Members (other than Execution

17 Suspension Order at 31663; FIA Principal Traders Group Letter at 2.

Venue ATSs), which determine the degree to which they produce the message traffic that constitutes CAT Reportable Events, the CAT Reportable Events of Execution Venues are largely derivative of quotations and orders received from Industry Members that the Execution Venues are required to display. The business model for Execution Venues, however, is focused on executions in their markets. As a result, the Operating Committee believes that it is more equitable to charge Execution Venues based on their market share rather than their message traffic.

Similarly, focusing on message traffic would make it more difficult to draw distinctions between large and small exchanges, including options exchanges in particular. For instance, the Operating Committee analyzed the message traffic of Execution Venues and Industry Members for the period of April 2017 to June 2017 and placed all CAT Reporters into a nine-tier framework (*i.e.*, a single tier may include both Execution Venues and Industry Members). The Operating Committee's analysis found that the majority of exchanges (15 total) were grouped in Tiers 1 and 2. Moreover, virtually all of the options exchanges were in Tiers 1 and 2.[18] Given the concentration of options exchanges in Tiers 1 and 2, the Operating Committee believes that using a funding model based purely on message traffic would make it more difficult to distinguish between large and small options exchanges, as compared to the proposed bifurcated fee approach.

In addition, the Operating Committee also believes that it is appropriate to treat ATSs as Execution Venues under the proposed funding model since ATSs have business models that are similar to those of exchanges, and ATSs also compete with exchanges. For these reasons, the Operating Committee believes that charging Execution Venues based on market share is more appropriate and equitable than charging Execution Venues based on message traffic.

5. Time Limit

The Operating Committee did not impose any time limit on the application of the proposed CAT Fees as the model was originally proposed. As discussed above, the Operating Committee developed the proposed funding model by analyzing currently available historical data. Such historical data, however, is not as comprehensive as data that will be submitted to the CAT. Accordingly, the Operating Committee believes that it will be appropriate to revisit the funding model once CAT Reporters have actual experience with the funding model. Accordingly, the Operating Committee proposes to include a sunsetting provision in the proposed fee model. The proposed CAT Fees will sunset two years after the operative date of the CAT NMS Plan amendment adopting CAT Fees for Participants.

6. Tier Structure/Decreasing Cost per Unit

In the original funding model, the Operating Committee determined to use a tiered fee structure. The Commission and commenters questioned whether the decreasing cost per

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18 The Participants note that this analysis did not place MIAX PEARL in Tier 1 or Tier 2 since the exchange commenced trading on February 6, 2017.

additional unit (of message traffic in the case of Industry Members, or of share volume in the case of Execution Venues) in the proposed fee schedules burdens competition by disadvantaging small Industry Members and Execution Venues and/or by creating barriers to entry in the market for trading services and/or the market for broker-dealer services.[19]

The Operating Committee does not believe that decreasing cost per additional unit in the proposed fee schedules places an unfair competitive burden on Small Industry Members and Execution Venues. While the cost per unit of message traffic or share volume necessarily will decrease as volume increases in any tiered fee model using fixed fee percentages and, as a result, Small Industry Members and small Execution Venues may pay a larger fee per message or share, this comment fails to take account of the substantial differences in the absolute fees paid by Small Industry Members and small Execution Venues as opposed to large Industry Members and large Execution Venues. For example, under the fee proposals, Tier 7 Industry Members would pay a quarterly fee of $105, while Tier 1 Industry Members would pay a quarterly fee of $81,483. Similarly, a Tier 4 Equity Execution Venue would pay a quarterly fee of $129, while a Tier 1 Equity Execution Venue would pay a quarterly fee of $81,048. Thus, Small Industry Members and small Execution Venues are not disadvantaged in terms of the total fees that they actually pay. In contrast to a tiered model using fixed fee percentages, the Operating Committee believes that strictly variable or metered funding models based on message traffic or share volume would be more likely to affect market behavior and may present administrative challenges (*e.g.*, the costs to calculate and monitor fees may exceed the fees charged to the smallest CAT Reporters).

7. Other Alternatives Considered

In addition to the various funding model alternatives discussed above regarding discounts, number of tiers and allocation percentages, the Operating Committee also discussed other possible funding models. For example, the Operating Committee considered allocating the total CAT costs equally among each of the Participants, and then permitting each Participant to charge its own members as it deems appropriate.[20] The Operating Committee determined that such an approach raised a variety of issues, including the likely inconsistency of the ensuing charges, potential for lack of transparency, and the impracticality of multiple SROs submitting invoices for CAT charges. The Operating Committee therefore determined that the proposed funding model was preferable to this alternative.

8. Industry Member Input

Commenters expressed concern regarding the level of Industry Member input into the development of the proposed funding model, and certain commenters have recommended a greater role in the governance of the CAT.[21] The Participants previously addressed this concern

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[19] Suspension Order at 31667.
[20] *See* FIA Principal Traders Group Letter at 2; Belvedere Letter at 4.
[21] *See* Suspension Order at 31662; MFA Letter at 1-2.

in its letters responding to comments on the Plan and the CAT Fees.[22] As discussed in those letters, the Participants discussed the funding model with the Development Advisory Group ("DAG"), the advisory group formed to assist in the development of the Plan, during its original development.[23] Moreover, Industry Members currently have a voice in the affairs of the Operating Committee and operation of the CAT generally through the Advisory Committee established pursuant to Rule 613(b)(7) and Section 4.13 of the Plan. The Advisory Committee attends all meetings of the Operating Committee, as well as meetings of various subcommittees and working groups, and provides valuable and critical input for the Participants' and Operating Committee's consideration. The Operating Committee continues to believe that that Industry Members have an appropriate voice regarding the funding of the Company.

9. Conflicts of Interest

Commenters also raised concerns regarding Participant conflicts of interest in setting the CAT Fees.[24] The Participants previously responded to this concern in both the Plan Response Letter and the Fee Rule Response Letter.[25] As discussed in those letters, the Plan, as approved by the SEC, adopts various measures to protect against the potential conflicts issues raised by the Participants' fee-setting authority. Such measures include the operation of the Company as a not for profit business league and on a break-even basis, and the requirement that the Participants file all CAT Fees under Section 19(b) of the Exchange Act. The Operating Committee continues to believe that these measures adequately protect against concerns regarding conflicts of interest in setting fees, and that additional measures, such as an independent third party to evaluate an appropriate CAT Fee, are unnecessary.

10. Fee Transparency

Commenters also argued that they could not adequately assess whether the CAT Fees were fair and equitable because the Operating Committee has not provided details as to what the Participants are receiving in return for the CAT Fees.[26] The Operating Committee provided a detailed discussion of the proposed funding model in the Plan, including the expenses to be covered by the CAT Fees. In addition, the agreement between the Company and the Plan Processor sets forth a comprehensive set of services to be provided to the Company with regard to the CAT. Such services include, without limitation: user support services (*e.g.*, a help desk); tools to allow each CAT Reporter to monitor and correct their submissions; a comprehensive compliance program to monitor CAT Reporters' adherence to Rule 613; publication of detailed Technical Specifications for Industry Members and Participants; performing data linkage functions; creating comprehensive data security and confidentiality safeguards; creating query functionality for regulatory users (*i.e.*, the Participants, and the SEC and SEC staff); and performing billing and collection functions. The Operating Committee further notes that the

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22 Letter from Participants to Brent J. Fields, Secretary, SEC (Sept. 23, 2016) ("Plan Response Letter"); Letter from CAT NMS Plan Participants to Brent J. Fields, Secretary, SEC (June 29, 2017) ("Fee Rule Response Letter").
23 Fee Rule Response Letter at 2; Plan Response Letter at 18.
24 *See* Suspension Order at 31662; FIA Principal Traders Group at 3.
25 *See* Plan Response Letter at 16, 17; Fee Rule Response Letter at 10-12.
26 *See* FIA Principal Traders Group at 3; SIFMA Letter at 3.

services provided by the Plan Processor and the costs related thereto were subject to a bidding process.

11. Funding Authority

Commenters also questioned the authority of the Operating Committee to impose CAT Fees on Industry Members.[27] The Participants previously responded to this same comment in the Plan Response Letter and the Fee Rule Response Letter.[28] As the Participants previously noted, SEC Rule 613 specifically contemplates broker-dealers contributing to the funding of the CAT. In addition, as noted by the SEC, the CAT "substantially enhance[s] the ability of the SROs and the Commission to oversee today's securities markets,"[29] thereby benefitting all market participants. Therefore, the Operating Committing continues to believe that it is equitable for both Participants and Industry Members to contribute to funding the cost of the CAT.

We appreciate the opportunity to share our views regarding the comments on the Original Proposals. Please feel free to contact me at [redacted] with any questions regarding this letter.

Sincerely,

Michael Simon
CAT NMS Plan Operating Committee Chair

cc: The Hon. Jay Clayton, Chairman
The Hon. Michael S. Piwowar, Commissioner
The Hon. Kara M. Stein, Commissioner
Ms. Heather Seidel, Acting Director, Division of Trading and Markets
Mr. Gary L. Goldsholle, Deputy Director, Division of Trading and Markets
Mr. David S. Shillman, Associate Director, Division of Trading and Markets
Mr. David Hsu, Assistant Director, Division of Trading and Markets
CAT NMS Plan Participants

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27 *See* Suspension Order at 31661-2; SIFMA Letter at 2.
28 *See* Plan Response Letter at 9-10; Fee Rule Response Letter at 3-4.
29 Rule 613 Adopting Release at 45726.