July 26, 2018

Via Electronic Mail (rule-comments@sec.gov)

Mr. Brent J. Fields, Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: Release No. 34-83441, File No. SR-CboeBYX-2018-006;
Release No. 34-83442, File No. SR-CboeBZX-2018-037;
Release No. 34-83429, File No. SR-CboeBZX-2018-038;
Release No. 34-83449, File No. SR-CboeEDGA-2018-010;
Release No. 34-83430, File No. SR-CboeEDGX-2018-017;
Release No. 34-83450, File No. SR-CboeEDGX-2018-016;
Release No. 34-83455, File No. SR-C2-2018-014;
Release No. 34-83453, File No. SR-CBOE-2018-041

Dear Mr. Fields:

The Healthy Markets Association appreciates the opportunity to comment on the above-referenced immediately effective filings by the CBOE exchange group seeking to increase physical connectivity fees up to 25%, as well as introduce significant new fees for already existing services for which no fees are currently charged.[1]

[1] *Cboe BYX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Related to Physical Port Fees for BYX*, SEC, Exch. Act Rel. No. 34-83441, June 14, 2018, *available at* https://www.sec.gov/rules/sro/cboebyx/2018/34-83441.pdf (BYX Filing); *Cboe BZX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Related to Physical Port Fees for BZX*, SEC, Exch. Act Rel. No. 34-83442, June 14, 2018, *available at* https://www.sec.gov/rules/sro/cboebzx/2018/34-83442.pdf (BZX Equities Filing); *Cboe BZX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Related to Physical Port Fees for BZX Options*, SEC, Exch. Act Rel. No.34-83429, June 14, 2018, *available at* https://www.sec.gov/rules/sro/cboebzx/2018/34-83429.pdf (BZX Options Filing); *Cboe EDGA Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Physical Port Fees for EDGA*, SEC, Exc. Act Rel. No. 34-83449, June 15, 2018, *available at* https://www.sec.gov/rules/sro/cboeedga/2018/34-83449.pdf (EDGA Filing); *Cboe EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Physical Port Fees for EDGX Options*, SEC, Exch. Act Rel. No. 34-83430, June 14, 2018, *available at*

HEALTHY MARKETS
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The Cboe Filings are yet more examples of the non-competitive market for market data and connectivity. These economic rents demanded by the exchanges are little more than private sector taxes on other market participants--even those who do not wish to trade on the Cboe exchanges.

The Cboe Filings do not provide sufficient information to support a finding by the Commission that they

1. are an equitable allocation of reasonable dues, fees, and other charges;
2. do not unfairly discriminate between different exchange participants;
3. do not impose burdens on competition that are not necessary or appropriate; and
4. do not impose impediments to the free and open market system.

Despite the conclusory assertions made in the Cboe Filings, the proposed fees are inconsistent with the exchanges' obligations under the Exchange Act.[2] Accordingly, we request that the Commission suspend the filings and institute proceedings to disapprove each of the Cboe Filings.

About Healthy Markets and Our Interest in Market Data and Connectivity

The Healthy Markets Association is an investor-focused not-for-profit coalition working to educate market participants and promote data-driven reforms to market structure challenges. Our members, who range from a few billion to hundreds of billions of dollars in assets under management, have come together behind one basic principle: Informed investors and policymakers are essential for healthy capital markets.[3]

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https://www.sec.gov/rules/sro/cboeedgx/2018/34-83430.pdf (EDGX Options Filing); *Cboe EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Physical Port Fees for EDGX*, SEC. Exch. Act Rel. No. 34-83450, June 15, 2018, *available at* https://www.sec.gov/rules/sro/cboeedgx/2018/34-83450.pdf (EDGX Equity Filing); *Cboe C2 Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Physical Port Fees for C2*, SEC, Exch. Act Rel. No. 34-83455, June 15, 2018, *available at* https://www.sec.gov/rules/sro/c2/2018/34-83455.pdf (C2 Filing); and *Cboe Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Physical Port Fees for Cboe Options*, SEC, Exch. Act Rel. No. 34-83453, June 15, 2018, *available at* https://www.sec.gov/rules/sro/cboe/2018/34-83453.pdf (Cboe Options Filing).

[2] 5 U.S.C. § 78f.

[3] To learn more about Healthy Markets, please see our website at http://www.healthymarkets.org.

The conflicts of interest and costs associated with market data have been a particular concern for Healthy Markets. This includes the market for connectivity. In November 2017, we released *US Equity Market Data: How Conflicts of Interest Overwhelm an Outdated Regulatory Model and Market Participants*, an 80-page report that outlines the history and current issues with the provision of and conflicts regarding market data.[4] As we explained in that report, the relationships between the public market data framework and the private market data framework are inextricably linked. Both serve as profit centers for the dominant exchanges, and both are largely under the control of the exchanges.

In January 2018, we filed a petition for a rulemaking to the Commission to address many of these concerns, including recommending more than a dozen specific improvements.[5] In April 2018, we filed a 191-page comment letter objecting to a CTA/CQ proposal to amend the fees.[6] Now, with this letter, we are filing an objection to a set of filings across the Cboe family of exchanges regarding exchange connectivity.

Background

Connectivity and other associated costs to market participants are significant, and rising quickly. Much of these costs have come from connectivity features such as the Cboe Filings. The Cboe Filings propose to increase the fees to connect to each of its exchanges. Market participants seeking to fulfill their regulatory obligations and meet basic business competitiveness must connect to the exchanges or enter a business relationship with another firm that does.[7] Furthermore, connectivity to one exchange cannot be reasonably substituted or replaced by connectivity to another exchange.[8]

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[4] See Healthy Markets Association, *US Equity Market Data: How Conflicts of Interest Overwhelm an Outdated Regulatory Model and Market Participants*, 4, Nov. 16, 2017 (Market Data Report).

[5] Letter from Tyler Gellasch, Healthy Markets Association, to Hon. Jay Clayton, SEC, Jan. 17, 2018, *available at* https://www.sec.gov/rules/petitions/2018/petn4-717.pdf.

[6] Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, SEC, Apr. 11, 2018, *available at* https://www.sec.gov/comments/sr-ctacq-2017-04/ctacq201704-3420092-162185.pdf. This letter objected to two market data-related filings, one of which was later abrogated. Healthy Markets later filed a similar objection to the analogous filing in the UTP Plan.

[7] These obligations include compliance with the order protection rule and best execution obligations.

[8] As described more fully below, even the Cboe Filings admit that market participants who "opt-out" of paying the new fees directly would still be forced to engage a third-party with such access to continue a similar business. Somewhat amusingly, when making this argument, the exchanges neglect to mention that they are also increasingly charging so-called end users of such third parties.

The exchanges offer two levels of connectivity: 1 gigabyte and 10 gigabyte.[9] For the 1 gigabyte connectivity, the Cboe Filings propose to increase the monthly cost from $2000 per port to $2500 per port.[10] For the 10 gigabyte connectivity level, the Cboe Filings propose to increase the monthly cost from $7000 per port to $7500 per port.[11] Notably, while not discussed in the Cboe Filings, many market participants are compelled to maintain multiple connections to the main data center so as to minimize the risks of connectivity failures, meaning that the actual costs are often double the single port costs described above.

The Cboe Filings also propose to establish a new "monthly fee of $2,000 per 1 gigabyte Disaster Recovery Physical Port and a monthly fee of $6,000 per 10 gigabyte Disaster Recovery Physical Port."[12] Although not clear from the Cboe Filings, due to the relatively small number of subscribers,[13] Cboe previously did not separately price Disaster Recovery Physical Ports. For any firms that currently have a Disaster Recovery Physical Port, the 1 gigabyte charge would remain unchanged and the 10 gigabyte line would appear to be reduced by $1,000. The Cboe Filings explain that "[t]his amount will continue to enable the Exchange to maintain the Disaster Recovery Physical Ports in case they become necessary."[14] The Disaster Recovery Physical Port connectivity will serve multiple Cboe-affiliated exchanges at the same time. While it is not entirely clear in the filings, it appears as though market participants would apparently not need to pay a Disaster Recovery Physical Port fee for each individual exchange.[15]

In addition to the physical ports discussed above, the Cboe C2 filing proposed changes to the "logical" ports. C2 historically charged a logical port fee for both BOE and FIX connections for up from 20,000 messages at $650.[16] The C2 filing proposed to "increase the number of average daily orders used to determine incremental usage from 20,000 orders per trading day per logical port to 70,000 orders per day per logical port.[17]

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[9] BYX Filing, at 2.
[10] BYX Filing, at 2.
[11] BYX Filing, at 2.
[12] BYX Filing, at 3.However, the Cboe Options Filing continues to offer the current network access charges of $1,500 for a 1 gigabyte connection and $5,000 for a 10 gigabyte connection. See *Cboe Exchange, Inc Fees Schedule*, SEC, Exch. Act Rel. No. 34-83453, June 1, 2018, *available at* https://www.sec.gov/rules/sro/cboe/2018/34-83453-ex5.pdf.
[13] Usage of the Disaster Recovery Physical Ports is likely to be dominated by firms who need to comply with Regulation SCI.
[14] BYX Filing, at 3.
[15] BYX Filing, at 3.
[16] C2 Filing, at 4.
[17] C2 Filing, at 4.

According to the C2 Filing, despite the dramatic increase in the number of orders per day without hitting a new fee, the exchange argues it is "still [low enough to] encourage users to mitigate message traffic as necessary."[18] Finally, the C2 exchange proposes to redefine "port fees." in a manner that appears to increase the number of firms that would have to pay for those fees.[19]

Because these rule filings were designated as "establishing or changing a member due, fee, or other charge imposed by the Exchange",[20] the proposed rule changes became effective upon filing with the Commission.[21] Furthermore, the fee changes were filed with the Commission on June 1, 2018, and the new rates started immediately.[22]

The Cboe Filings Are Inconsistent With the Exchange Act

The Cboe Filings state that the proposed changes are consistent with the objectives of the Exchange Act because they

- provide for the equitable allocation of reasonable dues, fees and other charges among members,
- that the exchange operates in a highly-competitive markets which participants can readily direct order flow to competing venues,
- the additional revenue from the increase will enable the exchange to maintain and improve its market technology and services, and

[18] C2 Filing, at 4.
[19] C2 Filing, at 5. While not the primary focus of this letter, we note that this appears to unilaterally extend the reach of the exchanges' pricing and costs. Again, there appears to be no discussion of the purpose or impacts of this determination.
[20] See, e.g., BYX Filing, at 1.
[21] This truncated process, wherein rules are immediately effective, was enacted by the Dodd-Frank Wall Street Reform and Consumer Protection Act. As one of a very small number of organizations that reads every filing of every exchange each month, we believe that this process has enabled the proliferation of fees and complexity with little SEC oversight. With upwards of 200 SRO filings each month, and remarkably limited SEC staff resources, we have significant questions regarding the staff's ability to review the filings, identify concerns, and take appropriate action to protect investors and promote fair and efficient markets on a consistent basis.
[22] See, e.g., BYX Filing, at 1 (declaring the effective date as June 1, 2018). In this regard, we might think of this as a television cable company telling you that your cable rate just went up 25%. Setting aside the planning difficulties, it's simply offensive to consumers, and is not the type of behavior that one would typically expect from competitive markets.

- the fees are "in-line" with those charged by other venues.[23]

None of these assertions are supported, and none of them are sufficiently established so as to permit the Commission to find that the exchanges' burdens under the Exchange Act have been met.

The Cboe Filings Do Not Establish That The Proposed Fees Constitute An Equitable Allocation of Reasonable Dues, Fees, and Other Charges

By law, the proposed fees must be both (1) reasonable and (2) equitably allocated.[24] The Cboe Filings make little attempt to demonstrate compliance with either mandate. When espousing the purported justifications, the exchanges simply note:

> the proposed fees enable it to continue to maintain and improve its market technology and services and also notes that the proposed fee changes are in line with the amounts assessed by other exchanges for similar connections.[25]

The Cboe Filings Do Not Establish That the Fee Changes are Reasonable

The Cboe Filings do not offer any suggestion that these services, which are provided now, are becoming more costly to produce. They do not offer any insights as to their purported future efforts to "improve" their offerings. Nor do they offer any discussion regarding the relative benefits to users of the various potential exchange connectivity offerings, such as subscribing to the 10 gigabyte connection, the 1 gigabyte connection, or connecting through a third party.[26]

At root, the justification seems to really be that the proposed fees are allegedly "in line" with those of other exchanges.[27] But even that analogy if off-base. Contrary to the Cboe

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[23] See, e.g., BYX Filing, at 3.
[24] 5 U.S.C. § 78f.
[25] See, e.g., Cboe EDGX Filing, at 2-3.
[26] Notably, it is likely impossible for a market participant that subscribes to these services today to meet its basic legal and business obligations without some connectivity to the exchanges.
[27] Cboe EDGX Filing, at 2-3 (citing to NYSE Arca Equities Fees and Charges, NYSE Arca Marketplace: Other Fees and Charges, Connectivity Fees and Nasdaq Phlx LLC Pricing Schedule, Section XI, Direct Connectivity to Phlx). Interestingly, it appears likely that CBOE, having seen and referencing the April filing by PHLX, simply raised prices by this arbitrary amount of $500 for each product. We also found it

Filings' citations, Nasdaq's charge for a 10 gigabyte connection in Metro NY/NY is 29% less[28] than the proposed monthly charge by CBOE of $7,500. And somewhat more appallingly, NYSE ARCA charges $14,000 per month for a 10 Gigabyte circuit or nearly 87% more than those proposed in the the Cboe Filings.[29] So they are not close to the proposed fees.

Even if Cboe's proposed fees were somehow viewed as "in line" with those charged by other monopoly exchanges, that does not mean that they are reasonable. Outside of the exchange world, where consumers have choice and corporations are subject to real competition, the costs for this level of connectivity is significantly lower. For example, a consumer can purchase a dedicated 1 gigabyte line in the outside world for as little as $850 per month.[30]

Granted, the exchanges could be offering more services that might account for the massive upcharges, but the Cboe Filings also fail to address the overall service specifications offered through the connectivity options. The details of the connectivity offerings are not provided in the filings, nor are any potential changes discussed. Again, in the outside world, key information would be provided such as Service Level Agreements, packet loss or network availability performance, or even if the connection is dedicated. This vital information is absent from the Cboe Filings, and we were unable to readily locate any information about performance from the Cboe website.

Outside of the exchange connectivity context, pricing for data transmission is generally competitive and one finds little variation from one vendor to the next. Further, rather

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odd that the Cboe Filings neglected to note for the Commission that NYSE recently filed to offer a 50% discount for services which is absent from discussion in the CBOE filings. *NYSE Arca, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Amend the NYSE Arca Options Fees and Charges and the NYSE Arca Equities Fees and Charges to Modify the Fees Related to Four Bundles of Co-location Services in Connection with the Exchange's Co-location Services*, SEC, Exch. Act Rel. No. 34-82226, Dec. 6, 2017, *available at* https://www.sec.gov/rules/sro/nysearca/2017/34-82226.pdf. To be clear, we believe the connectivity fees for all three major exchange families, NYSE, Nasdaq, and Cboe, are largely inconsistent with the Exchange Act, and the SEC should take action to review them holistically. That said, that is not the subject of this letter. Furthermore, we note that not all exchanges charge for connectivity or port fees.

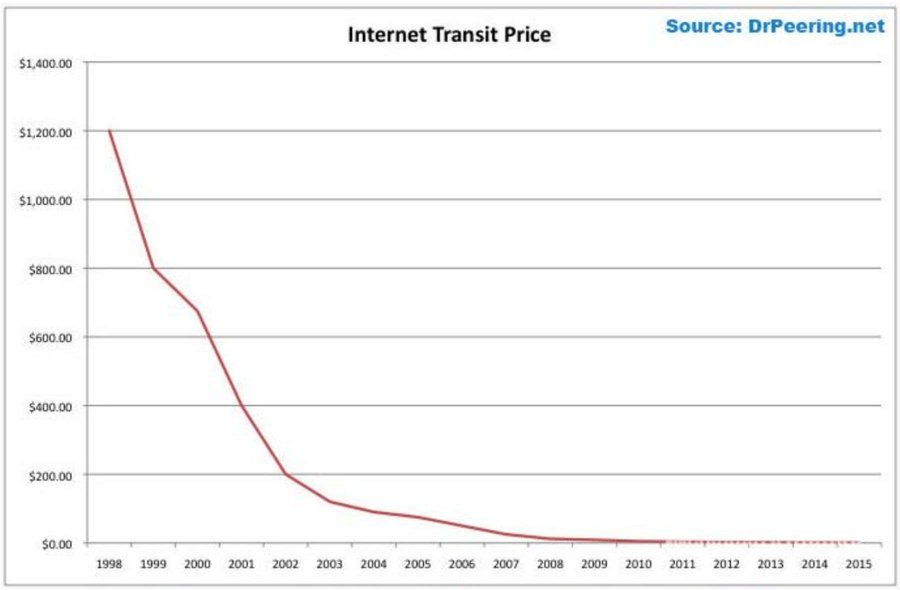
[28] Nasdaq Phlx LLC Pricing Schedule, SEC, Exch. Act Rel. No. 34-83465, *available at* https://www.sec.gov/rules/sro/phlx/2018/34-83465-ex5.pdf.

[29] See NYSE Arca Equites Fees and Charges, NYSE Arca, June 11, 2018, *available at* https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf.

[30] See e.g., Stealth Communications Price Schedule, Stealth Communications, *available at* https://stealth.net/services/fiber/nyc/gigabit/dedicated.

than double and triple digit fee hikes, actual costs in the sector have been falling for data delivery.

While prices for connectivity for all areas outside of the exchange server room have fallen, they have been quite the opposite for the monopoly exchanges. Cost projections for the public "internet backbone" have fallen substantially since 1998 as depicted in the below chart:



Evidence from Internet Operations Forums shows transit prices quickly approaching zero. Image Source: DrPeering.net

The assertion that these increases are justified by the need to "maintain and improve" technology and services is illusory. And it's been said before. For example, on July 13, 2015, Cboe BYX filed to increase port charges by 100% for a 1 gigabyte circuit and 60% for the 10 gigabyte circuit.[31] At that time, just as in the current round of filings, BYX Filing stated that the "Exchange believes that the increased fees obtained will enable it to cover its increased infrastructure costs associated with establishing physical ports to connect to the Exchange's Systems. The additional revenue from the increased fees will also enable the Exchange to continue to maintain and improve its market technology and services."[32] That sounds familiar.

[31] See *BATS Y-Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Fees for Use of BATS Y-Exchange, Inc*, SEC, Exch. Act Rel. No. 34-75439, July 13, 2015, *available at* https://www.sec.gov/rules/sro/byx/2015/34-75439.pdf.
[32] BYX Filing, at 2-3.

Cboe Filings do not say what improvements were made to improve its market technology and services then, nor do they offer any hints as to what would now warrant yet another fee hike. In fact, it's difficult to understand how charges could increase by 150% in just 3 years while the overall cost of data transmission everywhere else has gone down.

With respect to the Disaster Recovery Physical Port fees, again, there is no substantive discussion about the justifications for the fees. There is no discussion about why those fees are different than for the regular facility (presumably, costs for the exchanges would be similar). Nor is there any recognition about the types of firms who will utilize the ports or the impacts upon them.[33]

The revised fees appear to be completely arbitrary, and based largely on what the exchanges believe they can sneak by their regulator without major objection. If the exchanges have facts to support their assertion that the fees are reasonable, they have not offered them.

The CBOE Filings offer nothing to establish how their proposed fees are reasonable, and so they should be disapproved.

<u>The Cboe Filings Do Not Establish That The Fees Are Equitably Allocated</u>

The Cboe Filings simply declare that "the fees are equitable and non-discriminatory in that it applies uniformly to all Members."[34] That is not accurate. While the *fee schedule* may apply to all members, the *actual impact of those fees* is extremely inequitable.

Under the exchanges' logic, it would be "equitable and non-discriminatory" for the exchanges to implement a fee of $100,000 per month, if it was adopted for all members. Of course, smaller firms would be effectively prohibited from paying for the service, while larger firms would not. This would effectively exclude smaller firms from the opportunity to participate in the markets and compete, leading to greater market consolidation and weaker markets. Such a fee would be facially inequitable,

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[33] We note that connectivity to the exchanges' backup centers are most likely to be firms that are required to comply with Regulation SCI, as well as other firms that may be otherwise compelled by the exchanges themselves as necessary market participants. As we have repeatedly stated, this is yet another example of an exchange potentially being able to use its regulatory status to support its for-profit businesses.
[34] BYX Filing, at 4.

discriminatory, an unnecessary barrier to competition, and contrary to fair and open markets.

The question is whether we have already reached that point with the proposed fee levels. We posit that market data and connectivity fee levels and market reactions -- including consolidation by broker-dealers and other market participants -- suggest that they have already passed that point.

It is not entirely clear what constitutes the "equitable allocation of reasonable dues, fees, and other charges" under the Exchange Act. We understand that this should mean, at a minimum, that the collection of "dues, fees, and other charges" should be both: (1) equitably allocated across different types costs for users; and (2) equitably allocated amongst potential customers of the exchange.

The Cboe Filings offer no discussion as to either.

Whether for the 1 gigabyte or the 10 gigabyte connection, the connection is just that. It is, quite simply, a barrier to entry to the exchange itself. Thereafter, within each connectivity level, the amount of the fee assessed does not vary based upon usage. Of course, larger firms with more complex systems and usage are likely to subscribe to the 10 gigabyte connection, while those with less demand may subscribe to the 1 gigabyte connection.

We might think of this as just the rental of the cable box. That gives the user access to data, but that does not yet include content. Market participants must then purchase the data as well. They need to figure out what cable package they want. And each of those data options comes with its own significant costs.

We have no understanding as to whether the mix of fees spread between access (connectivity) and content (market data) is equitable. And that also doesn't account for actual trading costs. While all of these fees may be barriers to entry for market participants--they act in different ways. And the different impacts of different fee levels may have significantly different impacts on different firms. For example, if the connectivity fees were low, but trading fees high, then a smaller firm with infrequent trading could still access the exchange as necessitated by its best execution obligations and business competitiveness. However, if the connectivity fees are high, and trading fees low, then a smaller firm may be unable to clear the initial cost burden. Unfortunately, the exchanges fail to even offer any recognition of these impacts.

Additionally, we have significant questions about the nature of the distributive impact of the fees on different customers of the exchanges. The Cboe Filings do not provide information about how many subscribers currently purchase either level of connectivity. The Cboe Filings do not provide details of how much revenues will be generated from the changes to each. Nor do the Cboe Filings offer any specific details for how those revenues would be spent (and to whose benefit). For example, if the majority of the fees generated were from 1 gigabyte subscribers, and all of those revenues were used to provide commensurate new benefits for those subscribers, that would be important information for this determination. But we do not know that.

While the fee increases for each level is the same flat $500 per month, the differences in the relative impacts of those fees is significant. The exchanges are generally raising rates by 25% for a 1 gigabyte connection and only 7.14% for a 10 gigabyte connection. At face value, this appears to disproportionately favor the exchanges' higher-volume users over others. Unfortunately, the Cboe Filings do not explain or provide any rationale as to why this is equitable.

Lastly, it is unclear why the fees associated with the Cboe Exchange Filing remain as is, and substantially lower than the proposed fees for the other exchanges.[35]

The CBOE Filings offer nothing to establish how their proposed fees are equitable, and so they should be disapproved.

The Fees Impose a Burden on Competition That is Not Necessary or Appropriate, Unfairly Discriminate Between Different Exchange Participants, and Impose Impediments to the Free and Open Market System

In each of the Cboe Filings, the exchanges offer a statement on the 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. As discussed above, the Exchange believes that

[35] Cboe Exchange Filing.

> fees for connectivity are constrained by the robust competition for order flow among exchanges and non-exchange markets. The Exchange does not believe that the proposed changes represent a significant departure from previous pricing offered by the Exchange or pricing offered by the Exchange's competitors.Additionally, Members may opt to disfavor the Exchange's pricing if they believe that alternatives offer them better value. Further, excessive fees for connectivity would serve to impair an exchange's ability to compete for order flow rather than burdening competition. [36]

This statement is little more than the unsupported assertion that they don't "believe" the filings will impose any burden on competition and the equally unpersuasive assertion that competition for order flow is somehow competition for the services whose fees are being hiked.

We agree with the exchanges' assertions that there is robust competition for order flow, [37] but that is irrelevant to the issue of whether there is competition for connectivity to each of the exchanges. In the latter instance, there is no competition.

Connectivity to Cboe EDGX Exchange is exclusively under the purview of that exchange. Further, because it is a registered exchange with protected quotes, market participants are legally required -- in addition to being forced by business necessity -- to access it.[38] So while market participants may freely chose to where they may send their orders in the abstract, they cannot practically or legally choose to not connect to them.

Of course, the exchanges correctly point out that those who cannot reasonably afford the new fees "may opt to terminate their connectivity arrangements with that exchange, and adopt a possible range of alternative strategies, including routing to the applicable

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[36] EDGX Equity Filing, at 5-6.

[37] As we have repeatedly noted, we are concerned with how that competition is also being waged, and that despite the requirements of the Exchange Act, market participants are nevertheless subjected to discriminatory and non-transparent pricing structures which often preference some market venue participants over others.

[38] For example, if the venue has the best price, brokers may be obligated to not only evaluate a venue, but also connect and use it. See, e.g., *Best Execution Guidance on Best Execution Obligations in Equity, Options and Fixed Income Markets*, FINRA, Reg. Notice 15-46 (Nov. 2015), *available at* http://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-46.pdf.

exchange through another participant or market center or taking that exchange's data indirectly."[39]

The exchanges are explicitly accepting the reality that these rising fees may lead to firms disconnecting from the exchange. But the exchanges are also acknowledging that market participants must ultimately connect to the exchange, either directly or indirectly.

Already, because of the massive differences in costs between the two connection speeds, smaller firms are already likely slotted to the slower connections and the higher-volume, more sophisticated firms are likely slotted into purchasing the 10 gigabyte connection. But it is also these higher-volume, more sophisticated traders that would see the lower relative fee increase (7% versus 25%). This is facially discriminatory against smaller, lower-volume users.

Assume for a moment that a smaller firm that is now priced out of directly connecting to an exchange decides to try to connect through a third party who has such a connection. That third party is still paying the exchange this fee. The connected firm will need to be compensated for incurring that expense. There is no free lunch. So, after being excluded from the market center by the exchanges' fees, the smaller firm must instead pay the connected firm.

Worse, smaller firms that are priced out of acquiring direct connectivity to the exchange will be forced to trade through another party, likely slowing them down even further, while at the same time incurring other risks and costs associated with that new relationship. This is not likely a viable alternative for any firm that may be latency sensitive. Collectively, these complications and costs may also render the entire business of the smaller firm uncompetitive.

Lastly, the Cboe Filings make no effort to explain the various benefits and full costs (such as lost opportunity costs and third party fees) that are inherent in each of the different connectivity options for the relevant market participants. For example, those with faster connections may be able to act more quickly, providing them with both information and the ability to act upon it more quickly. This will likely impact their overall execution costs, and potentially even the decisions of whether to trade at all. These impacts may be increased yet again for participants who trade through third parties. And while these concerns would shed significant light on the impacts of this disparity

[39] *See, e.g.*, BYX Filing, at 4.

between market participants, there is no discussion in any of the Cboe Filings of these impacts.

Because the Cboe Filings impose fees and limits impose a burden on competition that is not necessary or appropriate, unfairly discriminate between different exchange participants, and impose impediments to the free and open market system, they should be disapproved.

Conclusion

In sum, the CBOE Filings are yet another example of a conflicted process wherein exchanges utilize their monopoly positions to further their own benefit at the expense of other market participants and the markets overall. They are inconsistent with the exchanges' obligations under the Exchange Act, and should be disapproved.

Thank you for the opportunity to highlight our concerns contained within the Cboe Filings. Should you have any questions or seek further information please contact Chris Nagy at [redacted].

Sincerely,

Tyler Gellasch
Executive Director

Cc: Brett Redfearn, Director of the Division of Trading and Markets
John Roeser, Associate Director, Division of Trading and Markets