May 19, 2022

Vanessa Countryman, Secretary
Securities and Exchange Commission
100 F Street NE
Washington DC

Re: Release No. 34-94782, File No. SR-CboeEDGA-2021-025; Release No. 34-94783, File No. SR-CboeEDGX-2021-049; Release No. 34-94787, File No. SR-CboeBYX-2021-028; Release No. 34-94788, File No. SR-CboeBZX-2021-078 ("Amendments");

Dear Ms. Countryman:

Thank you for the chance to comment on the Amendments.

Short sale indicators are regulatory data. Exchange matching engines use them solely to enforce Reg SHO price restrictions. Exchanges also use them in downstream exchange surveillance functions to fulfill their obligations as SROs and enforce federal law. For the exchanges, Reg SHO requires participants to identify their short sale orders so exchange matching engines know where to enforce price restrictions - a purely regulatory function to protect investors and public companies - and so exchange surveillance can identify short sales. On the first page of its adopting release for the Reg SHO Amendments (Release 34-61595, "Reg Sho Amendments") the SEC explained that Reg SHO's purpose was to prevent "potentially manipulative or abusive short selling." Reg SHO requires short sale indicators so exchanges can protect the public from these abuses. For exchanges, that's it.

Short sale indicators can also telegraph information about trading participants and trading activity. That's why they're useful in exchange surveillance. That's also why when they're published they're usually published in summary form or well after the trade date - except for one exchange group, that is. Published in greater detail on a timely schedule, these indicators could be exploited by market participants - in June of last year, Cboe EDGA, Cboe EDGX, Cboe BYX and Cboe BZX (collectively, "Cboe") called them "active equity trading firms" - in ways we can easily imagine and in some ways we probably can't easily imagine. You can bet they won't use the data to protect investors and companies.

Cboe said this kind of data was "helpful" to these firms last summer in filings for an intraday short sale data feed it wanted to sell (Releases 34-92147, 34-92148, 34-92149, 34-92151, and my related comment, collectively "Round One"). Cboe wrote, "The Exchange believes the proposed Short Sale Volume data products may also provide helpful trading information regarding investor sentiment that may allow market participants to make better trading decisions throughout the day and may be used to create and test trading models and analytical strategies and provides comprehensive insight into trading on the Exchange." My comment letter in Round One described this as a "brazen attempt to sell regulatory data" and urged disapproval. Cboe then immediately withdrew its Round One filings. I believe Cboe's immediate withdrawal amounted to an excited utterance conceding the point, belatedly acknowledging its responsibility as an SRO to keep that regulatory data confidential.

Next, late last year Cboe filed for an end-of-day short sale data feed (Releases 34-93688, 34-93689, 34-93694, and 34-93696, and related comments, collectively "Round Two"). The Round Two filings were poorly drafted and confusing. In a comment letter on the Round Two filings I stepped through why I thought so. The SEC issued disapproval notices (Releases

34-94367, 34-94373, 34-94369, and 34-94372, collectively "Orders") and called for further comment. We can be grateful it did because the Orders apparently prompted Cboe to submit the Amendments.

What hasn't been clear before the Amendments is that Cboe has been posting detailed daily trade-by-trade short sale data on its websites for a long time. The data is referenced as the "U.S. Equities Exchange Short Sale Reports" in note 11 to the Amendments and seemingly also referenced later in the Amendments under various names, as discussed below, and not previously mentioned anywhere I can find in Round One or Round Two or any other SEC filing or exchange notice.

Since the 2008 financial crisis, whether, when, and how to release short sale data has been the subject of much review within the industry. There's been plenty of discussion about confidentiality, transparency, and the effect timely disclosures would have on the market. People wondered whether the market would benefit or suffer from timely short sale data. Should it go on the tape? Would the data improve price efficiencies or would market participants pile on and create price distortions? These kinds of questions were a focus of a 2009 SEC roundtable and a 2014 Division of Economic and Risk Analysis report. Everyone involved in these discussions recognized the data has fundamental regulatory purposes. Most also recognized the data, if timely, could be informative, at least to some kinds of participants. For several reasons DERA concluded that disclosing daily summary short sale volume figures and monthly trade-by-trade short sale data, which is what it understood was current practice in 2014, shouldn't change.

But I guess Cboe's like, you know, c'mon, whatever. As far as I can determine these exchanges have been publishing their own detailed day-by-day, trade-by-trade short sale data every day since as early as 2015, or even earlier.

Double Secret Short Sale Feeds

Here's what Cboe is posting on its website, day-by-day and trade-by-trade, every day after the close for the current day's trading, for each of the four exchanges, and free for the taking:

- Symbol
- Trade date
- Trade time
- Short sale type
- Trade size
- Trade price
- Link indicator
- Short size

I can't find a file specification but most of these fields are standard. Other fields like "Link indicator" or "Short size" presumably track similarly named fields in monthly data feeds from NYSE and Nasdaq - I'll discuss those monthly feeds later - and for now they appear to be empty. "Short sale type" contains one of two values, "S" or "M," which I infer indicates whether the trade is short or short exempt.

These feeds might be the most timely detailed short sale data U.S. exchanges have distributed, ever. They have about as much detail as a high frequency trading firm could hope for, short of a peek directly inside Cboe's matching engines. The data is in pipe-delimited, machine readable format, so I doubt retail investors like Mrs. Betty Johanssen of Red Lake, Minnesota are Cboe's target audience.

Before the Amendments, who knew this data existed? So far as I can tell none of the exchanges has issued any notices or filed any 19b-4s announcing this data before mentioning it in the Amendments ("Double Secret Short Sale Feeds" or "Double Secret Feeds"). If they did, Cboe should say where. And if they didn't, Cboe should say why. The apparent link to the data Cboe supplied in a draft amendment posted in Round Two is a dead link, so that's a problem, and the Amendments themselves don't include links, another problem. You have to poke around until you find it.

Even here in the Amendments it seems Cboe didn't cite the Double Secret Feeds to formally announce them in a 19b-4 or to seek approval but simply to use them as precedent. For example, they first appear on page three, where Cboe says its proposal will include "information that is currently available or determinable from other publicly available sources such as Cboe DataShop, the Cboe website, or the CTA and UTP feeds made available by the Securities Information Processor ('SIP')." When they appear again on page seven Cboe writes its proposal merely features data that is "available or determinable from other publicly available sources such as Cboe DataShop, the Cboe website, or the SIP."

Why didn't Cboe mention the Double Secret Feeds months ago in Round One or Round Two? Why did it wait for these amendments to cite them? Pondering that, you might wonder when Cboe's legal and regulatory officials first learned about them. The next mystery is to wonder what kind of chutzpah it takes to use your own (spectacularly improper, in my view) distribution of timely and sensitive regulatory data in one place - the website - as precedent to the SEC for distributing it in another. Fouling the couch isn't good precedent to foul the bed.

Puff Daddy

I criticized the original Round Two filings because I believed they failed to meet the SEC's 19b-4 filing requirements. There wasn't enough in them for someone to understand what Cboe was proposing. Cboe used unusual terms without explaining what those terms meant, was materially inaccurate when it described data from another exchange, and was confusing enough in its descriptions a reader had to play pin-the-tail-on-the-19b to figure it out. The Amendments, though they may seem to show more thought and attention, aren't much better. In some important ways they're worse.

As I noted, Cboe doesn't go into any great detail about what's in the Double Secret Feeds it uses as precedent. It's only on page 11 of the Amendments we get a hint they might be something special - more on that later. Cboe mentions "Short Sale Daily Reports" on page 11 and footnotes them to a previous citation ("Supra note 5") but that citation, note 5, is to "15 U.S.C. 78s(b)(2)," which is the Exchange Act. The reader might know enough to go back to the draft amendment posted in Round Two and use that draft as a key to the Amendments, and so figure out that "Supra note 5" is meant to point to note 11 in the published Amendments. Note 11 refers to "U.S. Equities Exchange Short Sale Reports," which are hosted somewhere on Cboe's website (no link is provided). The Amendment text on page 11 then refers to a "Short Sale Daily Transaction Report" without citation but cited later in the Amendments to the Exchange Act.

The reader might then understand that to this point there are three names for the Double Secret Short Sale Feeds which may all refer to the same product or product family or to different products within a product family - or not, we don't really know for sure. Are there any other names for this data? It has more names than Puff Daddy. So far, though, I think we have:

- U.S. Equities Exchange Short Sale Reports (footnote 11)
- Short Sale Daily Reports (page 11, cited to the Exchange Act?)
- Short Sale Daily Transaction Report (page 11; cited on page 13 to the Exchange Act?)

Whatever the data might be called, I believe Cboe minimizes what it contains by describing these feeds as merely including "short sale executions on the Exchange as they appeared on the consolidated tape."

Based on Cboe's description a reader could reasonably think the Double Secret Feeds just include transaction data that's appeared on the consolidated tape and is already well known. But short sales aren't and never have been identified as such on the consolidated tape. Cboe has filtered this data to extract short sales on its exchanges every day and enriched the data to separately identify individual shorts and short exempts. None of this would be generally understood by the public or even widely understood within the industry. But Cboe knows - exchanges feed the SIPs, help run the SIPs, and know SIP data very well. On the other hand it would be unusual for any member of the public - and for many in the industry - to know enough of the details of the consolidated tapes to know what's not said. Now let's stand it all up against the 19b-4 standard for "all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal."

Though its description of them is incomplete, Cboe surely understands how useful the Double Secret Feeds might be, describing the less detailed data it's proposing in the Amendments as "useful information" which will "allow for more informed trading decisions" and "provide subscribers with valuable information" that reveals "short sale activity in a specific security." And since the data proposed in the Amendments is "useful" and "valuable" and will allow for "more informed trading decisions," how much more so is Cboe's detailed trade-by-trade short sale data?

All this is surprising to me for several reasons. If this is correct, "active equity trading firms" can scoop up Cboe's Double Secret feeds every day and get trade-by-trade details on short sales, analyze the data to inform their models, and then use those insights in the very next day's trading. (DERA wrote in its 2014 report that high frequency and algorithmic traders might be the only firms capable of interpreting and using this kind of trade-by-trade data.) And if those firms sniff out a gathering bear raid? Jump on board! If they suspect informed short selling? Ride the pony, pal!

As the Reg SHO Amendments say clearly, "Although short selling serves useful market purposes, it also may be used to drive down the price of a security or as a tool to accelerate a declining market in a security. In addition, short selling may be used to illegally manipulate stock prices....short selling could exacerbate a declining market in a security by increasing pressure from the sell-side, eliminating bids, and causing a further reduction in the price of a security by creating an appearance that the security's price is falling for fundamental reasons, when the decline, or the speed of the decline, is being driven by other factors." Other factors - how about if you have enough data to spot these schemes in action and pile on? Giddyup!

When Did They Know

Lots of questions:

- Which firms knew about the Double Secret Feeds and when did they first know it? Did these exchanges start publishing the data to accommodate one or more specific firms? Exactly when did the exchanges start publishing this data?

- The Double Secret feeds today include Symbol, Trade date, Trade time, Short sale type, Trade size (single-counted), Trade price, Link indicator, and Short size data fields. Have they ever included any other data fields?

- Assuming Cboe hasn't filed about these feeds, can Cboe explain why it believes the feeds described in Round Two and the Amendments merit 19b-4 filings but the far more detailed Double Secret Short Sale Trade Feeds don't?

- Is the website Cboe's only facility for distributing the Double Secret Feeds?

- When did Cboe's regulatory officials and general counsel's office learn Cboe was posting this data? If they knew about it before June, 2021, why only now is it cited as precedent for any of these proposals? If they didn't know until recently, why is that?

The Amendments

Even if Cboe stops posting the Double Secret Short Sale Trade Feeds - and the SEC should stop them as soon as possible - there's a chance the data feeds proposed in the Amendments might go forward. I'll repeat here concerns I had in a previous comment letter about that.

First, and very unusually, the Cboe exchanges plan to double-count volume. The feeds will show trade volume for each side, buy and sell. The "buy [trade] volume" field in the feed will of course simply equal the sum of the sale type volume fields because, well, no kidding. The exchanges will handle it that way, I suppose, in case their customers don't know how to add. If their customers do know how to add, Cboe says they can help QA the data by checking that the buy volume field really does equal the sale volume fields, which is pretty funny. Are these the first exchange rule filings to prompt customers to make sure buy equals sell? Maybe we can add that idea to Reg SCI. And finally, the "total volume" field will be that buy volume number plus all the sale type volume numbers, which means the "total volume" field will be twice what people usually think of as total volume.

In my experience all this is a unique - and bizarre - approach for exchange volume reporting. If I have the details right, the Amendments just explain nonsense with more nonsense. And if this mess is approved the SEC should at least insist that "total volume" is renamed "total total volume" so the public knows it's two times bigger. The proposed rule texts explain the field is the sum of buy, sell, sell short, and sell short exempt volume, but I believe it's still confusing - not only to the public but even to practitioners - and the field should be renamed "total total volume" to make it clear.

I've thought about this because it seems so odd. I suppose one explanation could be that the exchanges had something else in mind for the feed and then pivoted to this gibberish. (From what I can tell Cboe counts volume only once in the Double Secret Feeds, which shows how strange this gibberish is even for Cboe.) Maybe the exchanges think they're 1990s-era ECNs and should double-count volume, just like ECNs used to do. You can't regulate that kind of nostalgia but you can make fun of it. It's been a while but I recall ECNs dropped their double-counting convention decades ago because it was a nervous affectation, like wearing a toupee. Cboe should look to its friends at NYSE and Nasdaq for some direction here. So far as I know those exchange families have never used the phrase "buy trade" in any context and have always single-counted trade volume.

Since we're now on the topic of how 1990s-era ECNs counted volume, will executions from outbound routed orders be included in this data? The Amendments say the data will reflect "certain equity trading activity on the Exchange" and refer to "trades executed on the Exchange" and so on, but I wouldn't be surprised if Cboe believes an outbound buy order results in a "buy trade" on Cboe.

Trade Counts

The Amendments propose including trade counts in the feeds. That might seem benign but the trade counts will be by exchange. Two of these exchanges are quite small. The other two, like other exchanges, do the bulk of their volume in the biggest names. Less active names then might have at most a handful of short trades per day. A look at Cboe's Double Secret Feeds data shows that thousands of less active stocks have at most a dozen short sales a day on some of these exchanges. For many stocks it should be straightforward to use daily short trade counts and volume totals to find individual short trades on any given day. Any deviation from norms - clustering and arrival rates, shifts in long/short sale ratios, shifts in short/short exempt ratios, other variations over time - will be apparent. Deviations are opportunities - giddyup!

In part because of the order protection rule and how algorithms operate, you can think of smaller exchanges as a sample of the larger universe of trading activity, in the same sense in which a pollster samples voters to estimate the outcome of an election. If you can get an insight into activity on a smaller exchange - more information about a small set of trades makes that easier - there's a fair chance you can extrapolate that insight to market-wide behavior.

In other words for perhaps thousands of stocks, Cboe's customers can likely figure out on a trade-by-trade basis which trades are shorts and reasonably assume they track activity in the market at large. Armed with that knowledge firms can tee up strategies to take advantage of it on the next trading day.

Cboe justifies the trade counts because they might show the "qualitative nature of sell side activity" and says a "marked increase or decrease in short exempt trade count can perhaps indicate whether investors are willing to pay a higher price for a security" when Reg SHO price restrictions are in effect. That made me laugh out loud. Why wasn't this mentioned in Cboe's original Round Two filings or in its abandoned Round One filings for the intraday feed last summer? And Cboe appears to believe participants mark their orders short exempt only when Reg SHO price restrictions are in effect. Cboe should look at its own Double Secret Feeds to see that isn't true. Participants mark their orders exempt all the time - I expect much of this comes from high frequency market makers - a habit that might neatly flag aggressive and passive shorts and informed and uninformed flow. So obviously the much darker inverse is true too, that customers of these feeds will look at the "qualitative nature of sell side activity" to learn whether investors are not willing to pay the spread for a security while informed participants are aggressively shorting it. They won't just do it when Reg SHO price restrictions are in effect. They can do it whenever they want to. Ride the pony!

Who has the skill and incentive to figure all this out? Cboe gave us a hint - "active equity trading firms." Trade counts help you do that, it's information valuable enough for Cboe to want to sell it, and I believe its primary use case will be to the detriment of investors and public companies and not to their benefit. It's a bitter spoonful to see the usual boilerplate in Cboe's Amendments that its proposal will "protect investors and the public interest." Never imagine Cboe has a sense of irony.

Precedents

Apart from the detailed, timely, and sensitive Double Secret Feeds it distributes on its own website, Cboe uses other exchange data feeds as precedent for its proposal. Exchanges distribute daily summary short sale volume data feeds. These feeds contain aggregate short trade volume figures by stock for the day (NYSE splits out short exempt volume). They're no reason to let Cboe enhance these products by one jot - certainly not by reporting long and short sale trade counts - and give more fuel to predatory high frequency trading firms.

The Nasdaq and NYSE exchange families also publish monthly data feeds containing trade-by-trade short sale data for the month just ended. Cboe cites this data as precedent. These monthly trade feeds, along with the daily summary volume data, have an important history. The SEC asked exchanges to publish them. In the aftermath of the 2008 financial crisis the SEC asked exchanges to distribute this data, no doubt in part to reassure the public that unrestrained short selling didn't cause the 2008-2009 market crash. The monthly files were designed to contain mostly stale data and still do.

At some point, though, Cboe's four exchanges apparently switched to providing daily trade-by-trade short sale data feeds. That timeline is difficult to parse but may begin in 2015, or even earlier. The SEC, however, still believes the Cboe exchanges are distributing monthly files with stale data, because links to their data on Investor.gov describe it as "The SROs are also providing website disclosure on a one-month delayed basis of information regarding individual short sale transactions in all exchange-listed equity securities." The first SRO link on the page today points to Cboe's day-by-day, trade-by-trade data.

The monthly feeds were created in simpler times. We know better today how, and how quickly, that kind of data can be used. NYSE and Nasdaq's monthly feeds should be distributed on a longer delay than they are now. Regardless, they shouldn't count as any precedent at all for Cboe's attempts to commercialize more daily short sale data. Only the last day's data in those monthly feeds is as timely as what Cboe distributes every day in the Double Secret Feeds and the trade counts Cboe proposes in the Amendments. The rest of Nasdaq's and NYSE's monthly data is on average two weeks old and some of it is as much as a month old. They aren't relevant precedents at all for the Amendments. It's one thing to distribute data that's on average two weeks old and another to distribute data that's on average just a few hours old.

Adult Supervision

All this data in any shape or size exists only because it is required under federal regulations to protect investors and listed companies. It's also loaded with information. Professionals will not hesitate to use that information against the same investors and companies the data has always been intended to protect. The SEC has never agreed to that and should not agree to it here.

Throughout this saga, from last summer to today, Cboe hasn't grappled with the fact that short sale indicators are regulatory data intended for Cboe to fulfill its duties under Reg SHO and as an SRO. Cboe also hasn't grappled with the fact that the exchange short sale data disclosed today was done at the SEC's request to inform and reassure the public in the wake of the biggest economic crisis since the Great Depression. That data wasn't set up to inform anyone's trading decisions. It was summarized or purposely delayed to avoid informing anyone's trading decisions. (Let's hope Cboe or the SEC will let us know if, where, and when the SEC asked for or approved Cboe's daily trade feeds.)

Apparently crippled by the institutional memory of a goldfish, Cboe's stacked up three versions of this stuff since last June and a discussion of these factors is not only long overdue, its absence is bewildering. Cboe is aware it's a regulator, isn't it? As a fundamental legal and ethical question, why is it proper for Cboe to publish this data so some of its customers can evaluate, as Cboe says, the "qualitative nature of sell side activity" to inform their "trading decisions"? What other data would inform their trading decisions? How about participant identifiers, reserve sizes, discretionary prices, undisplayed orders, conversations with the SEC, or surveillance methods and investigations?

After all this, the SEC should consider whether these exchanges need some serious adult supervision. To start, the Division of Enforcement should explore whether the entire exchange family is living up to the terms of a 2013 historic settlement with the SEC (Release 34-69726, "Settlement"). The SEC determined that the company at the time had "failed to fulfill its fundamental responsibilities as an SRO and exchange," and the Settlement made it very clear that regulatory information had to be kept confidential and separate from commercial interests.

Next, the Division of Examinations should explore Cboe's product development and regulatory functions to see if there are any grown-ups in the room when Cboe coughs this stuff up. And since Cboe believes this kind of data will "allow for more informed trading decisions" and "provide subscribers with valuable information" that reveals "short sale activity in a specific security," Trading and Markets should ask Cboe to explain why it isn't directly undermining Reg SHO itself when every day it publishes - available for any professionals hungry to exploit it - the very same detailed regulatory data Reg SHO obligates Cboe to collect.

Since at least 2009 the SEC, the industry, academics, and the public have struggled with the question of whether, when, and how to release short sale data. The only reason this data exists is for regulators to detect and deter fraud and market abuse. The data is also information rich, which is why Cboe is distributing it, and has tried to distribute more of it. If the SEC plans to let exchanges release more of this data every day so high frequency and algorithmic trading firms can make more money, the SEC should have a long discussion about that with all stakeholders, including listed companies, retail investors, long-only asset managers, other asset managers, data vendors, academics, and more. This is particularly so in light of everything we've learned about "active equity trading firms" in the years since the SEC's 2009 roundtable and the 2014 DERA report. If the SEC hasn't decided to let exchanges release more of this data every day, the SEC should stop it.

Please say no to the Amendments, and please stop the Double Secret Short Sale Feeds.

Sincerely,

R. T. Leuchtkafer