October 14, 2022

Ms. Vanessa Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: Petition for rulemaking to amend Regulation SHO and protect investors and issuers

Dear Ms. Countryman:

To protect issuers and investors from manipulative or abusive short selling, and pursuant to Rule 192(a) of the SEC's Rules of Practice, I petition the SEC to amend Reg SHO. Specifically, I ask you to amend Reg SHO to require that exchanges keep equity short sale transaction marks confidential for a reasonable period of time. There is strong empirical evidence that transaction-level short sale data significantly predicts intraday and next day returns and can predict returns weeks into the future. Data disclosed intraday, end-of-day, or even within days or weeks could enable market abuse by sophisticated participants and undermine Reg SHO's stated purposes. To prevent this abuse, transaction-level short sale marks should be kept confidential until their predictive power fades - at least a month, and preferably two or three months.

Background

Market makers and other participants sell short to make continuous markets, hedge risk, and for various arbitrage strategies. Today's markets depend on these functions. Some short sellers are fundamental sellers, with a negative outlook on a stock's price based on the short seller's own information.

Reg SHO requires participants to mark their sales as long sales, short sales, or short exempt sales so that regulators can identify short sellers. Participants spend millions to comply. The government vigorously enforces these requirements and obligates exchanges to gather the data. At the government's direction exchanges use short sale marks to enforce Reg SHO price restrictions. Exchanges also use the marks in downstream surveillance functions, also at the government's direction. These are all regulatory functions using data created and collected exclusively for those regulatory functions - exchange trading services don't use short sale marks for any commercial purpose. Short sale data is regulatory data for regulatory purposes.

Regulators, academics, and many market participants understand that short selling "serves a critical function in the capital markets by encouraging price discovery and preventing the formation of asset bubbles."[1] Regulators, academics, and many market participants also

[1] "Petition for Rulemaking on Short and Distort," Mitts, Coffee et. al., February 2020.

understand that short selling can be manipulative or abusive. Preventing these abuses is Reg SHO's entire purpose. That purpose is undermined if short sale transaction marks are prematurely disclosed. In particular, premature disclosure could expose informed short sellers during their portfolio implementation periods. Empirical research has shown that short sales significantly predict same day and next day returns, and can predict returns on even longer horizons. Sophisticated participants can develop signals from short sale data and game markets. Opportunistic or predatory traders can pile on during portfolio implementation, exacerbate price volatility, and abuse investors and listed companies with extreme price breaks.

For that reason, among others, there have been long-standing and well known industry norms and practices to keep transaction-level short sale data confidential for weeks or months before publishing it. But there isn't any regulation that explicitly prohibits exchanges from disclosing the data. Exchanges can propose disclosing the data in real-time, at intervals during the trading day, at the end of a trading day, or on any schedule they like.

Cboe equity exchanges - Cboe BYX, Cboe BZX, Cboe EDGA, and Cboe EDGX (collectively, "Cboe Equities") - filed 19b-4s in June 2021 to do just that with a set of intraday data feeds the exchanges wanted to sell. These exchanges proposed to broadcast trading activity by stock, sale type, capacity, and a retail flag every ten minutes during the trading day (Releases 34-92147, 34-92148, 34-92149, 34-92151, and related comments, collectively "Filing 1").[2] Cboe Equities described its target subscribers for these feeds as "active equity trading firms" and said the data would allow subscribers to "make better trading decisions throughout the day" and "create and test trading models and analytical strategies" and that the data would provide "comprehensive insight into trading on the Exchange." I wrote a comment letter describing the proposals as a "brazen attempt to sell regulatory data" and wondered whether they were in plain defiance of Cboe's historic 2013 enforcement settlement with the SEC (Release 34-69726). In that settlement the SEC instructed the company to keep regulatory information confidential and separate from commercial interests. After I submitted my comment about the intraday feeds, Cboe Equities promptly withdrew its proposals.

Later that year, Cboe Equities tried again. It filed another set of proposals in December 2021, this time for an end-of-day summary short sale data feed it wanted to sell (Releases 34-93688, 34-93689, 34-93694, 34-93696, and related comments, collectively "Filings 2").[3] In a comment letter, I argued the filings included undefined idiosyncratic terms and made at least one materially inaccurate claim about a New York Stock Exchange data feed, which Cboe Equities incorrectly pointed to as precedent to sell transaction-level short sale data. The SEC instituted proceedings (Releases 34-94367, 34-94373, 34-94369, and 34-94372). Next, Cboe Equities filed amendments in April 2022 to clarify its proposal (Releases 34-94782, 34-94783, 34-94787, 34-94788, and related comments, collectively "Amendments").[4] In a comment letter on these filings, I argued the Amendments also made at least one materially inaccurate claim, this time

[2] For example see https://www.sec.gov/rules/sro/cboebyx/cboebyxarchive/cboebyxarchive2021.htm#SR-CboeBYX-2021-013.
[3] For example see https://www.sec.gov/rules/sro/cboebyx/cboebyxarchive/cboebyxarchive2021.htm#SR-CboeBYX-2021-028.
[4] For example see https://www.sec.gov/rules/sro/cboebyx/2022/34-94787.pdf.

about core securities information processor ("SIP") products Cboe Equities incorrectly cited as precedent to sell transaction-level short sale data. Importantly, given trading activity levels at the exchanges, I argued subscribers to those particular end-of-day feeds could use them to infer exactly which trades were long, short, and short exempt for perhaps thousands of stocks every day, and then use those insights in the next day's trading. Time passed. Cboe Equities withdrew. More time passed. In what might be the final chapter to all this, Cboe Equities then submitted a collection of "me too" effective on filing 19b-4s in August 2022 for data feeds Cboe Equities said were little or no different from summary data feeds other exchanges have offered for years.

The Amendments were also extraordinary in that for the first time, so far as I can determine, Cboe Equities publicly disclosed in a filing or notice that it was *already* posting complete transaction-level short sale trade data on its website, every trade day after the close. The data is voluminous and exhaustive, details each and every short and short exempt trade on Cboe Equities for the day just ended, and is free to anyone. Despite publishing this data for years, perhaps since 2015 or even earlier, as far as I can tell Cboe Equities had never before filed to announce these data feeds and had never issued notices about them. As of today Cboe Equities still publishes this data every trade day. So far as I know no other U.S. exchange has ever done it. Cboe Equities makes this short sale data - created for regulatory purposes at the government's continuing direction, used for regulatory purposes at the government's continuing direction, and intended solely to protect investors and public companies from market abuses - available every day after the close to anyone, including to high frequency and algorithmic trading firms. These firms can then use the data however they like, even to the detriment of the very same investors and issuers the government intends to protect.

As discussed below, the government concluded years ago that high frequency and algorithmic trading firms are the only market participants who have the interest, incentives, and ability to process that kind of detailed data and develop trading strategies from it, which the government then concluded could potentially degrade price efficiency and enable market abuse. And as discussed below, just last year researchers showed that the Cboe Equities data itself is informative and significantly predicts same day, next day, and longer term returns. Put together, it seems clear that high frequency and algorithmic trading firms can use the data to extract information, use that information to exacerbate volatility if they wish, and then ride that volatility to pump their own profits.

I've gone over this history with Cboe Equities in part to show that regardless of industry norms and practices around the data, there is a surprising amount of ignorance and confusion in some surprising places about where and how the data is disclosed and who is disclosing it, and a surprising amount of intrigue about whether, how, and when it should be disclosed at all. As a public policy concern and to protect investors and the public interest, the SEC should clarify these matters with prescriptive rulemaking. I believe the best place to clarify them is in Reg SHO, where the data is made.

Discussion

In modern memory transaction-level short sale data has been widely disclosed with the industry's and the SEC's blessings just twice that I know of, first in 2005 for the Reg SHO Pilot and then in 2009 in the aftermath of the financial crisis. The data was disclosed in the public interest. In 2005 the public interest was to give researchers data to evaluate short sale reform. In 2009 the public interest was to give researchers data in the wake of the country's catastrophic 2008 financial crisis and market collapse. In both cases the data was delayed before release, no doubt because the SEC and the industry understood it was sensitive and informative regulatory data. In 2005 it was delayed as much as two months and in 2009 as much as a month. Short sale transaction data available today descends from the 2009 initiative, and every exchange which publishes this data continues to delay it by as much as a month - except for Cboe Equities, which publishes it every day.

There is good reason to delay short sale transaction data. Academic researchers and the government have concluded the data is informative, that is, in effect, the data can predict prices. Long ago academic researchers discovered short sale data predicted prices and found that short sellers are informed participants.[5] Using the *very same* short sale transaction feeds Cboe Equities posts every night on its website, researchers recently discovered the data can "significantly predict next-day returns."[6] These researchers learned the Cboe Equities transaction-level short sale data predicts prices on a variety of time horizons ranging from hours to several months, and also learned that the time of day when short sales trade significantly enhances the data's predictive power. In particular, "[Cboe Equities short sale data near the open] seems to be able to predict returns over the next 12 weeks....In other words, can predict both short and long-term information, while the predictive power is much stronger over the short term" and "shorting near the open, especially shorting on exchanges that offer immediacy [like Cboe Equities], has the strongest predictability for rest-of-day returns and next day returns."

In 2014 the SEC's Division of Economic and Risk Analysis (DERA) issued a report on short sale disclosures.[7] The report was mandated by Congress and specifically addressed whether transaction-level short sale data should be disclosed on a more timely basis than it was at the time. DERA decided that disclosing short sale transaction data only at the end of the month, which is what it understood was current practice in 2014, shouldn't change. DERA had several concerns about more timely disclosure, in particular, real-time disclosure. DERA's concerns easily apply to the daily data Cboe Equities posts on its website.

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[5] See for example Boehmer, Jones, Zhang, "Which Shorts Are Informed?" (February 2007). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=855044.

[6] Hu, Jones, Zhang, "When Do Informed Short Sellers Trade?" (June 2021). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3761523. This version of a paper announcing that Cboe Equities short sale data significantly predicts returns is dated the very same month Cboe Equities filed to sell intraday short sale data in Filing 1. I won't reflect on that coincidence here, but I do find it remarkable. If it's interested, the SEC can ask Cboe Equities if it knew about this research when it devised the product, particularly since its proposal included data to specifically identify retail activity and data which could be used to infer institutional activity, two material categories in this study.

[7] "Short Sale Position and Transaction Reporting," Securities and Exchange Commission, Division of Economic and Risk Analysis (June 2014).

As a first question, DERA wondered who could use transaction-level data. Would the data help retail investors? DERA wrote "Retail investors, in particular, would be even less likely than other market participants to directly analyze" transaction data. How about issuers? DERA "believes, along with most of the issuers with which it met, that issuers would be unlikely" to use transaction data and would instead rely on regulators to process it. Academics? DERA wrote that researchers will be just fine with data delivered on a "reasonable delay." Institutional investors? "Many market participants, with the possible exception of HFTs [high frequency traders] and other entities with sufficient resources to devote to the analysis of the data, would be unable to directly analyze these large data sets in a meaningful way." So who benefits from all this data? DERA wrote "Large professional market participants, such as HFTs or algorithmic traders, might learn relatively quickly how to best interpret the information from [the data]. Their trading would therefore likely correctly interpret the information." How would they benefit? After studying the data, DERA concluded "the Division believes that the [transaction] data is precise enough to be informative," or in other words that it can predict returns. And so, "Professional traders, particularly HFTs or other algorithmic traders, might seek to profit by developing trading strategies based on signals" from it. DERA speculated that could improve price efficiency, presumably if prices reflected information more quickly, but could also degrade it, presumably if high frequency firms triggered excess price volatility, and DERA worried whether the data "could increase the effectiveness of short selling manipulation techniques because it could render coordination easier and manipulative short selling strategies more profitable." DERA also wrote short sale marks "are used for regulatory purposes," in case there was any doubt.

Conclusion

The SEC can't let exchanges pervert this data into a subsidy for professionals. Published every day, transaction-level short sale data could be used more often by "active equity trading firms" to abuse the public than by regulators to protect the public, a bitter thought. The SEC can't let exchanges transform the millions spent on Reg SHO compliance into a gift to high frequency traders, and make a buck themselves if they get more business by doing it.

The SEC must safeguard the data, and not only to protect investors and listed companies today, but to protect future regulatory initiatives. If the SEC doesn't protect this data, any future regulatory reforms that need participant data will be ridiculed. We'll wonder - correctly - when exchanges will shrink wrap the data for their customers, and we'll wonder - correctly - whether the government will stop them.

Exchanges should keep equity short sale transaction marks confidential for at least a month, and preferably two or three. Please amend Reg SHO to require it.

Sincerely,

R. T. Leuchtkafer