

RE: File Number SR-CboeBZX-2018-040

Dear Secretary Brent J. Fields:

This comment is in response to the SEC's request for comments for the Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to List and Trade Shares of SolidX Bitcoin Shares Issued by the VanEck SolidX Bitcoin Trust under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares. In this letter, I will specifically address questions 1, 4, 5, 7, 11, and 14 as related to bitcoin and other digital assets susceptibility to market manipulation. I hold a Series 65 license and am the CEO of Lavalier Capital Management, a pre-launch digital asset hedge fund.

I will provide evidence from Lavalier Capital Management's research, supported by publicly available information, to demonstrate that the current bitcoin and other digital asset markets, despite claims of fragmentation and decentralization, are routinely manipulated by a group or groups of unsavory actors.

Two major incidents,^{1 2} occurring from July 31st to August 7th and on August 22nd of 2018, are evidence that malicious actor(s) can, and do, work in tandem across multiple exchanges and can cause market swings in excess of 10% in under 10 minutes. Price swings of this magnitude would generally trigger circuit breakers in a regulated environment, such as the NYSE, but do not on the largest and most prominent digital asset exchanges.

The first example of market manipulation occurred primarily on the OKEx trading platform. OKEx is a digital asset exchange that "provides hundreds of token and futures trading pairs to help traders optimize their strategy."³ OKEx provided a "leaderboard" of the top contract holders of bitcoin futures.⁴ As of July 31st, the highest position was occupied by a single trader with 4,656,031 contracts long the future expiring on August 3rd. Each contract represents a notional position of \$100 dollars with the total open position being approximately \$465MM long bitcoin. These contracts were purchased with approximately 10x leverage and opened near a local high in Bitcoin with an average price of around \$8100-8200 and the liquidation price of the account at \$8020.49.

The account which opened this enormous position was not subject to any KYC/AML procedures and could have been entirely anonymous. As the price dipped, OKEx requested that the account close positions or deposit more collateral and was ignored by the mystery trader.⁵ 4,168,515 contracts representing \$417MM were dumped into a massive sell wall at \$8020.49 and was

¹ <https://ethereumworldnews.com/bitcoin-price-gains-400-in-20-minutes-following-bitmex-shutdown/>

² https://medium.com/@Austerity_Sucks/the-415-million-elephant-in-the-room-okex-futures-unfilled-btcusd-liquidation-aa601b188005

³ <https://www.okex.com/pages/company/about.html>

⁴ As of the time of writing, this feature has been removed from the OKEx website

⁵ <https://support.okex.com/hc/en-us/articles/360011941512-Regarding-the-Forced-Liquidation-Incident-on-Jul-31-2018>

mostly responsible for the subsequent collapse in bitcoin price to around ~\$7385 by Friday, August 3rd, the day of the futures expiration. OKEx clawed back 18% of all profits from profitable traders, approximately 1200 BTC, and paid a further 2500 BTC from their own funds to cover losses.⁶

Why did this trader intentionally lose ~\$45MM expecting a price increase at the peak of a runup? The most plausible answer is this individual, or group of individuals, almost certainly took up similarly large positions going short simultaneously in the hopes of driving the price below his liquidation point. An equal short position opened on the same exchange, or on another or multiple other exchanges, would perfectly hedge this position should the price remain above the liquidation point and the only trading cost would be the margin fees. When this extremely large long position is forced to be liquidated the resulting market sell of such a large quantity of contracts would depress the price to near zero. Liquidity in digital asset markets is very thin compared to the same volume of a company of similar market cap as listed on the NYSE or other traditional financial market. The trader profits as the price free falls, as there is no recourse on the trader's leveraged position's losses in excess of the deposited collateral while the offsetting short positions continue to be profitable.

The second incident is clearer cut. On August 22nd, 2018, BitMEX went down for maintenance^{7 8} for 30 minutes. BitMEX issued many warnings to close positions during maintenance to try to prevent a large-scale dump event in case of large price swings during the maintenance period, but many traders did not heed the warnings. During the last 15 minutes of this downtime, a massive and almost certainly coordinated runup occurred on the trading pair on many exchanges that were still online. This caused a "short squeeze" on traders with open positions on BitMEX, who were unable to trade or change their positions because the exchange was down, which liquidated immediately at the end of maintenance. This act of manipulation caused 5% increase in the BTC price in 7 minutes on non BitMEX exchanges⁹. The BitMEX bitcoin price rose more than 10% and many other trading pairs saw short lived shocks of over 100%, such as 400% on the XRPXBT (Ripple:Bitcoin) pair¹⁰ and 200% on the ADAXBT (Cardano:Bitcoin) pair.¹¹ This example is particularly egregious because BitMEX allows 100x leverage for unsophisticated investors who were exposed to market movements without any ability to respond. Within a few hours, the price adjusted back to the pre-maintenance price.

Based on the above information, my responses to the questions are below:

⁶ <https://cryptovest.com/news/okex-pours-2500-bitcoin-btc-to-help-cover-huge-futures-loss-traders-still-face-significant-clawback/>

⁷ <https://twitter.com/BitMEXdotcom/status/1031391874894966784>

⁸ https://blog.bitmex.com/site_announcement/scheduled-downtime-weds-aug-22-0100-utc/ This has been deleted

⁹ Using publicly available historic data from <https://www.coindesk.com/price/>; the price runup varied by exchange

¹⁰ <https://www.tradingview.com/x/fKWQgAt>

¹¹ <https://www.tradingview.com/x/f4NR6Nwi>

1. Bitcoin prices are significantly easier to manipulate than those of traditional exchanges. Significant margin leverage of up to 100x¹² (e.g. 1 dollar is the margin requirement to purchase \$100 of digital assets) is offered to unsophisticated investors. Many large exchanges do not participate in KYC/AML and at least one malicious actor is able to cause double digit price changes in under ten minutes time.
4. The Sponsor's assert that "OTC desks represent approximately 50% of the market", which would then leave the remaining 50% of the market volume to come from exchanges. If the average exchange price can be changed by 5% in 7 minutes by coordinated actors, then the arbitrary "overall market fair price" of the market is changed by 2.5%. This uses a poor VWAP assumption and that the OTC market does not respond to such an attack but should be sufficient to illustrate market manipulation by adversarial actors. Evidence that large changes in exchange prices by manipulators would be and is reflected by contemporary OTC market prices. The Sponsor should provide sufficient data to (dis)prove this point.
5. The OTC derivatives market is actively manipulated by traders who prey on exchange rules. The lack of regulatory oversight creates abusive trading practices, as illustrated above, in which sophisticated attackers abuse the lack of rules seen in traditional financial markets. Furthermore, there are many, albeit mostly unsubstantiated, allegations of wash trading on many of the highest volume exchanges.^{13 14 15 16} Many exchanges operate without sufficient regulatory oversight even if they follow the letter of the law in their jurisdictions.
7. The MVBTCO relies on OTC data which is influenced by exchange prices. OTC prices are not independent and, if the prices were truly independent, it would be a significant source of arbitrage opportunity for funds. It is doubtful that sophisticated OTC desks would allow massive arbitrage opportunities.
11. The bitcoin market is liquid enough to support an ETP, but the bitcoin market is not transparent. I believe that the bitcoin market is susceptible to and actively manipulated in short-run situations. At this time, bitcoin is not suitable as an underlying asset for an ETP as defined by the SEC.
14. Using an arbitrary time point, as of 9/21/18 3:00 PM Pacific time, the Gemini exchange is listed as having \$46M USD volume and the 39th largest exchange by volume as determined by CoinMarketCap¹⁷. This represents 0.3% of the market. Binance, the largest exchange, and Bitfinex, the second largest exchange, have a combined 24-hour volume of approximately \$4B

¹² <https://www.bitmex.com/>

¹³ <https://www.investinblockchain.com/cryptocurrency-wash-trading/>

¹⁴ <https://cryptoslate.com/crypto-exchange-bithumb-accused-of-allowing-wash-trading-of-over-250-million-in-fake-volume/>

¹⁵ <https://medium.com/@bitfinexed/wash-trading-bitcoin-how-bitfinex-benefits-from-fraudulent-trading-8bd66be73215>

¹⁶ <https://medium.com/@sylvainartplayribes/chasing-fake-volume-a-crypto-plague-ea1a3c1e0b5e>

¹⁷ <https://coinmarketcap.com/rankings/exchanges/>

on all trading pairs. Even using an unsubstantiated high-end wash trading accusation of 95% of market volume for every exchange with higher volume for Gemini (e.g. all the exchanges ranked by volume from 1 to 39 by CoinMarketCap), no wash trading volume penalty for Gemini, and no other exchange volume (e.g. Kryptono with a volume of \$45.9M and all other exchanges ranked below Gemini are excluded from the universe of exchanges), Gemini would only be 6% of the digital asset exchange market volume (and 3% assuming that 50% of volume is traded OTC). There is little need for a manipulator to participate on Gemini to influence the exchange price when, by the Sponsor's estimation methodology, greater than 99% of all market volume exists elsewhere.

At this time, I believe it is prudent for the SEC to disapprove the rule change to allow any digital asset ETP/ETF.

Sincerely,

Ryan Sagul
Chief Executive Officer
Lavalier Capital Management