

May 11, 2022

Via Electronic Delivery

Mr. Christopher J. Kirkpatrick
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

Re: LedgerX LLC d/b/a FTX US Derivatives (“FTX”) Request to Amend DCO Order of Registration (IF 22-001)

Dear Mr. Kirkpatrick:

We are law professors with internationally recognized expertise in financial regulation as it pertains to digital assets and we appreciate the opportunity to provide written comments to the Commodity Futures Trading Commission (“CFTC” or the “Commission”) in connection with the filing by FTX to amend its order of registration as a Derivatives Clearing Organization (“DCO”), in which it proposes to revise its existing non-intermediated model to allow for clearing of margined, as well as fully collateralized, trades.

We agree with Chairman Behnam’s assessment that FTX’s proposal (“the proposal”) presents novel issues and unknown risks, and we are submitting this letter to express our concerns that if the proposal is granted – if FTX is permitted to substitute automation for intermediation in the context of margined trades for retail investors – the CFTC’s mission will be undermined, and market integrity will be significantly weakened.¹

The CFTC describes its mission as “to foster open, competitive, and financially sound markets and to protect users and the public from fraud, manipulation, abusive practices and systemic risk.” FTX’s proposal involves a number of practices that could harm retail participants directly, constitute manipulation or abusive practices from the perspective of the user, and generate systemic risks that could harm the public more broadly.² In this Letter, we respond

¹ Commissioner Behnam testimony to House Agriculture Committee (March 31, 2022): [“State of the CFTC” | Committee Repository | U.S. House of Representatives](#)

² The CFTC should also be alert to systemic risks in order to satisfy its obligations as a member of the Financial Stability Oversight Council (“FSOC”). Section 112(b) of the Dodd-Frank Act requires each voting member of the FSOC (of whom the CFTC Chair is one) to submit an annual statement to Congress outlining what they see as threats to financial stability – this serves as an implicit direction to the CFTC to monitor the financial system for such threats. Section 113 of Dodd-Frank implicitly directs the CFTC to consider whether the financial institutions within its purview are systemically significant enough to warrant designation as requiring heightened supervision by the Federal Reserve. Finally, Section 120 of Dodd-Frank implicitly directs the CFTC “to monitor potentially problematic financial activities or practices, to enable [it] to determine whether the FSOC should make a recommendation to apply new or heightened standards or safeguards to such activities or practices.”

principally to the CFTC’s Request for Comment Question 12. For the reasons we set out here, we urge the CFTC to deny FTX’s request to revise its existing non-intermediated model to allow for clearing of margined trades.

Manipulation and Abusive Practices

Question 12(a) asks whether “liquidating positions without requesting additional funds from the participant present risks or concerns in a regulated market?” From the user’s perspective, the most obvious concern is that FTX’s proposal requires investors to monitor their portfolios every minute of the day. According to the proposal, “[a] participant’s margin level is recalculated every 30 seconds as positions are marked to market, and if the collateral on deposit falls below the maintenance margin level, FTX’s automated system will begin to liquidate the portfolio. Also, FTX will “set a ‘full liquidation’ threshold based on a set percentage of the notional value of the positions.” And “[i]f the margin on deposit falls below that threshold, FTX will liquidate the remainder of the portfolio.” It is unrealistic to expect non-intermediated retail investors to monitor their positions on a “24-7” basis, as these investors inevitably need to sleep and attend to other parts of their lives. Under the proposal, FTX has broad discretion in setting margin requirements and therefore how much leverage individual retail investors will be permitted to incur.³ The higher the amount of leverage, the more quickly an investor’s position can be liquidated.

Given the extreme volatility of crypto-assets, automatic liquidations of retail positions may occur quickly and without warning. Retail investors may find their positions liquidated before they have a chance to close them out or post more margin. The reported experience of a Canadian user engaged in margin trading on the Binance exchange is illuminating in this respect:

Over the past year, also using leverage, Ahmed had ridden the crypto wave up, turning an initial stake of 1,250 Ethereum tokens into 3,300 that were eventually worth more than \$13 million. (He said he started trading in 2017 with about \$25,000.) Ahmed was betting that the crypto market would continue its overall rise, though he said he planned to cash out if the price of Ethereum reached \$4,100...Ahmed expected some volatility along the way, but it was only on May 19, when Ethereum plunged dramatically alongside bitcoin and other currencies, that Ahmed realized the gravity of his situation. He needed to close his position, and fast. For an hour he frantically tried to get out, but just as for Kim, the app wouldn’t work. “I saw my position get liquidated,” said Ahmed, referring to a margin call that happened while the app was unresponsive. “It was right in front of my eyes.” Just like that, Ahmed’s eight-figure crypto fortune was gone. He described it as “one of the worst days of my life.”⁴

Ahmed, and many others like him, were unable to close their positions because of Binance technology “outages,” but the outcome would be the same (even had the app been working) if they had simply been asleep for a few hours. Technological outages on the FTX exchange are also a possibility: If this were to occur, liquidation might happen too quickly under the FTX proposal for

³ See Chapter 7.1(C) and (D).

⁴ Ben McKenzie & Jacob Silverman, *Why users are pushing back against the world’s largest crypto exchange*, The Washington Post (April 1, 2022), <https://www.washingtonpost.com/outlook/2022/04/01/binance-may-19-lawsuit-cryptocurrency/>.

any human intervention (by traders, or by FTX itself), even when users were experiencing technological access problems. Investors could be harmed in the same way that Binance’s users were.

The CFTC’s Question 12(b) asks: “Given the real-time liquidation, are participant protections necessary beyond disclosures regarding the rules and liquidation process employed by FTX? If so, what other protections should be required?” If FTX were to implement its proposal, disclosures would be entirely inadequate to protect retail investors.⁵ Binance nominally has some recourse mechanisms available to traders who were locked into positions during technological outages, but these have proved very challenging for affected traders to access – to such an extent that a class action suit is now being brought against Binance.⁶ FTX does not appear to have any policies or procedures that directly address user harm during technological outages (there is a general arbitration provision, but that may be challenging for users to pursue). In any event, an investor would have no recourse if they were simply sleeping while the liquidation occurred.

Question 12(d) asks whether there are “concerns about an automated system’s ability to liquidate a portfolio fairly and effectively.” In this regard, it is important to ask: Who will benefit from FTX’s liquidation procedure? Returning to the example of margin trading on Binance, it has been noted that Binance trades on its own exchange, which creates conflicts of interest that may encourage Binance to allow unusually high margin levels because it can benefit from subsequent liquidations.⁷ We are told that “FTX intends to enter into agreements with backstop liquidity providers who agree ahead of time to accept a set amount of positions if a portfolio needs to be completely liquidated, and who will receive the remaining margin for the position once the full liquidation threshold is hit.” If these backstop liquidity providers are affiliates of FTX (for example, Alameda Research or offshore exchange FTX.com), or if FTX has kickback arrangements with a backstop liquidity provider, it may benefit from automated liquidations in some circumstances. These conflicts can be mitigated by providing a reasonable period of time for

⁵ A large body of academic research suggests that disclosures alone do not protect investors or prevent illinformed consumer and investment decision-making. See Herbert Simon, *Models of Bounded Rationality* (1982); Donald C. Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 *Nw. U. L. Rev.* 135 (2002); Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 *J. Econ. Behav. & Org.* 39 (1980); James D. Cox & John W. Payne, *Mutual Fund Expense Disclosures: A Behavioral Perspective*, 83 *Wash. U.L.Q.* 907, 910 (2005); Edwin J. Elton et al., *Are Investors Rational? Choices Among Index Funds*, 59 *J. Fin.* 261, 285-86 (2004); Barbara Black, *Behavioral Economics and Investor Protection: Reasonable Investors, Efficient Markets*, 44 *Loy. U. Chi. L.J.* 1493 (2013); Stephen J. Choi & A.C. Pritchard, *Behavioral Economics and the SEC*, 56 *Stan. L. Rev.* 1 (2003); Kent Daniel et al., *Investor Psychology and Security Under-and Overreactions*, 53 *J. Fin.* 1839, 1844-45 (1998); Ronald J. Gilson & Reinier Kraakman, *The Mechanisms of Market Efficiency Twenty Years Later: The Hindsight Bias*, 28 *J. Corp. L.* 715, 723 (2003); David Hirshleifer, *Behavior Finance*, 7 *Ann. Rev. Fin. Econ.* 133 (2015); David Hirshleifer, *Investor Psychology and Asset Pricing*, 56 *J. Fin.* 1533, 1545-46 (2001); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 *Stan. L. Rev.* 1471 (1998); David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 *Q.J. Econ.* 443 (1997); Terrance Odean, *Are Investors Reluctant to Realize Their Losses?* 53 *J. Fin.* 1775, 1781-95 (1998); Terrance Odean, *Do Investors Trade Too Much?* 89 *Am. Econ. Rev.* 1279, 1280-92 (1999); Richard A. Posner, *Behavioral Finance Before Kahneman*, 44 *Loy. U. Chi. L.J.* 1341, 1341-42 (2013); Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 *Stan. L. Rev.* 1551, 1551-52 (1998); Robert J. Shiller, *From Efficient Markets Theory to Behavioral Finance*, 17 *J. Econ. Perspectives* 83 (2003); Herbert A. Simon, *Rational Choice and the Structure of the Environment*, 63 *Psych. Rev.* 129, 129 (1956); Paul Slovic, *Psychology Study of Human Judgment: Implications for Investment Decision Making*, 27 *J. Fin.* 779 (1972).

⁶ McKenzie & Silverman, *supra* note 4.

⁷ *Id.*

retail traders to cover margin requirements, or through other mechanisms traditionally utilized in an intermediated clearing model.

In addition to potential conflicts of interest between FTX and its backstop liquidity providers, FTX’s automated liquidation system may actually incentivize liquidity providers – who most likely will be high-frequency trading firms – to manipulate crypto markets and proactively take advantage of retail trader margin breaches, with the retail clients being taken out of their position quickly, at low prices, and without notice. As one commenter noted, “[p]rofessional traders like to read the fine print, and the liquidation rules are just that.”⁸ Professor Craig Pirrong equates FTX’s automated liquidation model to “seeding the market with huge numbers of stop orders,” where “[a]nyone who can get some idea of where the stops are can ‘gun the stops’ and trigger big price moves.”⁹

Furthermore, FTX’s submissions to the CFTC provide little detail on who the liquidity providers will be, what the specific requirements are, or how FTX will assess the level of liquidity risk that an individual backstop liquidity provider can take on. The submitted rulebook dedicates just two, out of 190, pages to liquidity providers.¹⁰ It notes that “liquidity providers may receive reduced trading fees or other incentives” for fulfilling their obligations and that FTX retains ultimate discretion to suspend, terminate or restrict liquidity providers.¹¹

Systemic Risk

Questions 12(c), (d), (e), and (f) are all concerned with situations where many traders are being liquidated at the same time. This is the kind of situation that can generate systemic risk and accelerate price movements during period of market stress, particularly if the backstop liquidity providers are unable to meet demand at appropriate prices and yet the sales go ahead anyway because the liquidation process is automated.

It is very hard to gauge in advance how much liquidity would be needed when portfolios are being liquidated *en masse*. It is reasonable to expect that backstop liquidity providers will only be able to purchase assets at rock-bottom prices during such an event, which will impact market pricing.

Automated liquidation mechanisms create a “set and forget” mentality that discourages human intervention, but if human intervention were to occur, the likely outcome would be backstop liquidity providers withdrawing from their role during such an event. This is the approach taken by many high frequency trading firms – during times of significant market volatility, they simply withdraw from the market, causing liquidity to evaporate when it is needed most. If backstop liquidity providers were to withdraw from the market, that would cause significant harm to FTX as it would be unable to recover on its margin loans. It may also eat into a substantial part,

⁸ <https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=67012&SearchText=>.

⁹ Craig Pirrong, *Direct Clearing at FTX: A Corner Solution, and Likely a Dead End With Destabilizing Potential*, Streetwise Professor (March 11, 2022), <https://streetwiseprofessor.com/direct-clearing-at-ftx-a-corner-solution-and-likely-a-dead-end-with-destabilizing-potential/>.

¹⁰ https://www.cftc.gov/media/6986/ledgerx_dba_ftx_rulebook_margin_revisions_draft_12-6-21/download/.

¹¹ *Id.* at 56.

or all, of FTX’s own guaranty fund contribution of \$250 million, which “pales in comparison to the amount of prefunded member contributions at the majority of large DCOs.”¹² Given the complex risk profile and volatility of FTX’s cleared derivative products, the lack of full credit risk assessments for individual retail participants, and FTX’s elevated credit risk profile if backstop liquidity providers withdraw during periods of heightened volatility, this guarantee fund contribution is inadequate to cover exposures in extreme but plausible market conditions.

Returning to the pricing issue, for some context on how automated liquidations might cause systemic pricing problems, we can look to how automated trades have created “flash crashes” over the past decade. Automated trading was implicated in the Flash Crash of 2010, for example, which caused the Dow Jones Industrial Average to plunge 5 to 6% in a matter of minutes. Since then, there have been a number of other flash crashes, including regular “mini flash crashes” where the stock prices of individual companies (such as Walmart and Google) fluctuate wildly before settling back down, and flash crashes in markets for other assets like bonds and Ether. In a flash crash, automated trades impact the price of an asset in an unexpected way, and if other market participants (both humans and algorithms) react to the new asset price with further trades, idiosyncratic sales could snowball into trading behavior that causes wild fluctuations in the value of relevant assets.

Such an outcome is close to a near certainty with FTX’s automated liquidation model. While the proposal does not mention the products FTX will offer and clear, their website currently lists swaps and options on Bitcoin and Ethereum, as well as Bitcoin futures (their website says Ethereum futures are coming soon).¹³ Presumably, FTX will seek to offer derivatives with other cryptocurrencies as the underlying in the future. Cryptocurrencies are notoriously volatile, and large price moves will lead to “margin shortfalls in real time that trigger real time trades that accentuate the price movement.”¹⁴ This instability will be exacerbated by high correlations across cryptocurrencies. A recent article from a senior economist at the Federal Reserve Bank of Chicago noted that “the cryptocurrency market is extremely interconnected” and that most of the observed volatility in the cryptocurrency market “is the result of the linkages that amplify and reverberate any price movements in the market.”¹⁵

FTX’s proposed model creates the conditions for destabilizing feedback loops and accelerated price movements during periods of heightened volatility. As customer portfolios at FTX continue to be liquidated at rock-bottom prices, other market participants with exposure to the assets being sold and other cryptocurrencies (particularly those who are highly leveraged and would have to meet margin calls otherwise) would then rush to close out their positions. If there is insufficient liquidity to absorb those sales, then prices will drop even more precipitously. As these prices drop, leveraged market participants may need to sell other classes of assets in order to meet their liquidity needs, putting downward pressure on the price of whatever they sell, extrapolating the problem to other financial markets. In this way, FTX’s proposed automated liquidation procedure could have spillover effects for broader financial markets.

¹² See Amir Khwaja, *FTX’s Direct Clearing Model Application to the CFTC*, Clarus Financial Technology (March 30, 2022), <https://www.clarusft.com/ftxs-direct-clearing-model-application-to-the-cftc/>.

¹³ <https://derivs.ftx.us/>.

¹⁴ Pirrong, *supra* note 9.

¹⁵ Filippo Ferroni, *How Interconnected Are Cryptocurrencies and What Does This Mean for Risk Measurement?* Chicago Fed Letter, No 466 (March 2022), <https://www.chicagofed.org/publications/chicago-fed-letter/2022/466>.

Leveraged retail market participant selling could generate a liquidity spiral which intensifies liquidity demand across the financial system. As noted recently by the Bank of England, spillover risks from crypto derivatives “increase as cryptoassets and associated markets become more integrated with the traditional financial system.”¹⁶ In a recent assessment of threats to financial stability from crypto assets, the Financial Stability Board (“FSB”) warned that spillover risks to core markets have been heightened by growing institutional investor involvement in crypto asset derivatives.¹⁷ If retail investors participate in leveraged crypto derivative trades through FTX’s proposed auto-liquidation model, spill-over risks will increase further. Such spillover risks are exacerbated by global trading activities on crypto asset platforms which operate without transparency and outside of the regulatory perimeter (or in noncompliance with applicable frameworks).¹⁸

Customer Suitability

While the Commission’s questions do not directly address customer suitability, it is plainly obvious that offering crypto derivatives on margin to retail investors poses considerable risks with little to no benefits. In fact, given the extreme price volatility of the underlying crypto assets, levered derivatives pose “a unique threat” to retail investors while creating a corresponding benefit to the exchange platform and its backstop liquidity providers.¹⁹ This became apparent last July when both FTX’s main exchange and Binance reduced maximum leverage from 125x to 20x several months after retail traders “lost an estimated \$8.6bn through liquidations during a crypto flash crash.”²⁰ As one Binance user who had to move hundreds of thousands of dollars on Binance to prevent her derivatives position from being liquidated put it: “It was the most traumatic experience I’ve ever had in my life.”²¹ Another study found that “retail investors lost \$1.14 billion trading options from November 2019 to June 2021, assuming a 10-day holding period” and that “trading costs ate up an additional \$4.13 billion.”²²

Concerns around suitability was the motivating factor behind the UK Financial Conduct Authority’s (FCA) decision in 2020 to ban the sale of derivative and exchange traded notes that reference cryptocurrency to retail consumers.²³ In a policy statement establishing the ban, the FCA expressed concerns about the “integrity of the underlying crypto-asset market” and the inability of retail investors to “value crypto-derivatives reliably.”²⁴ Further, in a press release announcing the

¹⁶ Bank of England, *Financial Stability in Focus: Cryptoassets and decentralized finance*, (March 24, 2022), 4, <https://www.bankofengland.co.uk/financial-stability-in-focus/2022/march-2022>.

¹⁷ See Financial Stability Board, *Assessment of Risks to Financial Stability from Crypto-assets*, (February 16, 2022), <https://www.fsb.org/wp-content/uploads/P160222.pdf>.

¹⁸ *Id.*

¹⁹ See Sangita Gazi, *Reimagining a Centralized Cryptocurrency Regulation in the US: Looking through the Lens of Crypto-Derivatives*, VI(i) Cambridge Law Review 97, 118, 125 (2021).

²⁰ <https://www.ft.com/content/f7f7f110-32d5-4931-a7b7-d3cd0f63410a/>.

²¹ *Id.*

²² See Vildana Hajric, *Mom and Pop Investors Took a Billion-Dollar Bath Trading Options During the Pandemic*, Bloomberg (April 27, 2022), <https://www.bloomberg.com/news/articles/2022-04-27/mom-and-pop-took-a-billion-dollar-bath-trading-pandemic-options/>.

²³ See Financial Conduct Authority, *Prohibiting the sale to retail clients of investment products that reference cryptoassets*, Policy Statement PS20/10 (October 2020), <https://www.fca.org.uk/publication/policy/ps20-10.pdf>

²⁴ *Id.*

ban, the FCA noted such products were ill-suited for retail consumers due to “extreme volatility in cryptoasset price movements”, “inadequate understanding of cryptoassets by retail consumers”, and a “lack of legitimate investment need for retail consumers to invest in these products.”²⁵ The Monetary Authority of Singapore also considers crypto derivative products unsuitable for most retail investors.²⁶

FTX argues that its “direct-access model democratizes futures trading access,” but in reality, its non-intermediated model exposes retail investors to sophisticated market actors who will always have the upper hand (particularly if FTX sells order flow).²⁷ In an intermediated model, Futures Commission Merchants (“FCMs”) have a legal obligation to obtain individual customer’s annual income, net worth, and age, as well as a requirement to “provide disclosure of the risks of futures trading in light of that information at or before the time the customer open an account.”²⁸ These requirements do not apply in a direct clearing model. And while FCMs do not have an obligation to ensure customer suitability for specific trades or products, they have historically declined to offer certain products to their clients on exactly these grounds. In fact, upon the initial launch of cash settled bitcoin futures contracts in 2017, several FCMs, including those controlled by JPMorgan, Bank of America, and Citigroup, refused to offer their customers access to bitcoin futures due to concerns about client suitability and overall volatility in the bitcoin spot market.²⁹

As FTX acknowledges in one of their submissions, DCOs are required to “have appropriate admission and continuing eligibility standards (including sufficient financial resources and operational capacity) for members of and participants in the DCO.”³⁰ Given that FTX will offer a direct access model, it argues that “all of FTX’s participants will qualify as ‘clearing members.’”³¹ CFTC regulations require clearing members “to have access to sufficient financial resources to meet obligations arising from participation in the derivatives clearing organization in extreme but plausible market conditions.”³² FTX notes that their “real-time monitoring of participant positions enables it to determine, at all times, whether a participant’s account has sufficient cash and collateral to meet its margin obligations to the DCO.”³³ Therefore, FTX argues that as long as its customers are able to meet the initial margin requirement, they are free to trade on FTX.

In its request for comment, the Commission asks (question 4) whether this approach, “when considered in light of its proposed methodology for liquidating participant portfolios, adequately protects the integrity of the DCO?” Setting aside FTX’s ability to withstand a severe market shock,

²⁵ <https://www.fca.org.uk/news/press-releases/fca-bans-sale-crypto-derivatives-retail-consumers/>.

²⁶ See Monetary Authority of Singapore, *Reply to Parliamentary Question on Regulation of Crypto Derivatives on Approved Exchanges*, (January 6, 2020), 15, <https://www.mas.gov.sg/news/parliamentary-replies/2020/reply-to-parliamentary-question-on-regulation-of-crypto-derivatives-on-approved-exchanges/>.

²⁷ A recent paper noted that in the second quarter of 2021, brokerages in the U.S. received more than 284.4 million dollars of PFOF for their order flow in stocks and 581.2 million dollars for options. See, [https://www.qmul.ac.uk/sef/media/econ/images/documents/BPS\(2022-03\)_compressed.pdf/](https://www.qmul.ac.uk/sef/media/econ/images/documents/BPS(2022-03)_compressed.pdf/).

²⁸ NFA Regulatory Requirements for FCMs, IBs, CPOs, and CTAs (August 2021), <https://www.nfa.futures.org/members/member-resources/files/regulatory-requirements-guide.pdf/>.

²⁹ See Alexander Osipovich et al., *Wall Street Banks Hit Pause Button on Bitcoin*, WALL ST J. (Dec. 7, 2017), <https://www.wsj.com/articles/wall-street-banks-hit-pause-button-on-bitcoin-1512674703/>.

³⁰ https://www.cftc.gov/media/7001/ledgerx_dba_ftx_ltr_direct_clearing_model2-8-22/download/.

³¹ *Id.*

³² CFTC Regulation 39.12(a)(2)

³³ https://www.cftc.gov/media/7001/ledgerx_dba_ftx_ltr_direct_clearing_model2-8-22/download/.

backstop liquidity provider withdrawal, and numerous customer defaults, none of which is guaranteed, it is hard to see how it can maintain its “integrity” if it is providing a platform for unsophisticated retail traders to take on considerable risks and be picked off by sophisticated and highly capitalized institutional or professional traders. Question 8 asks whether “participants in a non-intermediated model be afforded the same or similar customer protections” as FCM customers? The answer is clearly yes, but this a low bar.

Chairman Behnam has repeatedly noted that the Commission has a responsibility to support responsible innovation. While the FTX proposal may rely on new technology and methods, we question whether it can be classified as “innovative” if it serves no economic purpose beyond speculation, creates unique vulnerabilities for retail investors, introduces numerous systemic risks, increases the potential for conflicts of interest and manipulation, and lacks guardrails to protect retail investors from predation. For this, and all other reasons discussed above, we encourage the Commission to reject FTX’s amended order of registration.

Sincerely,

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Lee Reiners, Executive Director, Global Financial Markets Center at Duke University School of Law

Ryan Clements, Assistant Professor, Chair in Business Law and Regulation, University of Calgary Faculty of Law