

## Restructuring Futures Markets

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### I. Introduction

Before the run on FTX<sup>1</sup>, its subsequent bankruptcy<sup>2</sup>, and the resignation of its founder Sam Bankman-Fried<sup>3</sup>, an FTX affiliate (*i.e.*, “LedgerX” or “FTX U.S. Derivatives”) filed a proposal with the Commodity Futures Trading Commission that had the potential to fundamentally change central clearing in U.S. futures markets. The proposal is part of a growing trend in U.S. financial markets to eliminate intermediaries and to make markets more accessible to individual investors.<sup>4</sup> FTX recently withdrew the proposal, but not before CME Group adopted a related proposal in response to competitive pressures<sup>5</sup>, and CFTC chair Rostin Benham announced that “this is potentially – and I emphasize the ‘potential’ – another phase in the evolution of market structure, innovation and disruption.”<sup>6</sup> Even though the proposal is no longer before the commission, it still raises interesting issues concerning the proper role of clearing organizations, the future of intermediaries and retail participation. The recent failure of FTX makes these issues all the more complicated and difficult (though note that LedgerX was excluded from FTX’s bankruptcy filing<sup>7</sup>). This article discusses the FTX proposal in light of recent developments, along with some legal and policy issues.

### II. Clearing in Futures Markets

To understand the proposal, we will need some background on central counterparties (CCPs) generally and derivatives clearing organizations (DCOs) in particular. All else equal, when two parties enter into a futures contract or swap, each party is subject to the credit risk of their counterparty. In markets without a CCP (*i.e.*, uncleared swaps markets), to manage counterparty

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<sup>1</sup> David Yaffe-Bellany, *Collapsed Crypto Exchange FTX Could Owe More Than 1 Million Creditors*, N. Y. TIMES (Nov. 15, 2022), <https://www.nytimes.com/2022/11/15/technology/crypto-ftx-bankruptcy-creditors.html>.

<sup>2</sup> Caitlin Ostroff, *FTX Files for Bankruptcy, CEO Sam Bankman-Fried Resigns*, WALL ST. J (Nov. 11, 2022), <https://www.wsj.com/articles/ftx-files-for-chapter-11-bankruptcy-11668176869>

<sup>3</sup> *Id.*

<sup>4</sup> Consider, for example, zero-commission brokerage, Robinhood’s “IPO Access” program, SPACs and direct listings.

<sup>5</sup> Alexander Ospovich, *Futures Giant CME Considers Brokerage, Taking Cue From Crypto Rival FTX*, WALL ST. J (Sept. 30, 2022), <https://www.wsj.com/articles/futures-giant-cme-considers-brokerage-taking-cue-from-crypto-rival-ftx-11664592510>

<sup>6</sup> Psaros Center for Financial Markets and Policy, *Financial Markets Quality Conference 2022*, Georgetown University (Nov. 22, 2022), <https://finpolicy.georgetown.edu/>; Jesse Hamilton, *CFTC’s Benham Calls FTX Idea a Potential ‘Evolution’ in Market Structure*, CoinDesk (Oct. 14, 2022), <https://www.coindesk.com/policy/2022/10/14/cftcs-behnam-calls-ftx-idea-a-potential-evolution-in-market-structure/>.

<sup>7</sup> Yoon-Young Lee, et al., *FTX Bankruptcy—What Could Be Next for the Industry?*, WilmerHale (Nov. 30, 2022), <https://www.wilmerhale.com/en/insights/client-alerts/20221130-ftx-bankruptcy>.

credit risk, parties will exchange collateral and negotiate contractual protections.<sup>8</sup> In markets *with* a CCP (*i.e.*, futures markets and cleared swaps markets), the credit of the CCP is substituted for the credit of the counterparty. As the CFTC explained in its Dodd-Frank clearing regulations, “the [CCP] becomes the buyer to every seller and the seller to every buyer.”<sup>9</sup> Central clearing reduces both counterparty credit risk and systemic risk since (i) the CCP is adequately capitalized and thus less likely to default on its obligations to members, and (ii) the CCP transforms gross exposure to a given counterparty into net exposure by netting offsetting positions. The CCP remains adequately capitalized by demanding collateral (*i.e.*, margin) from its members and by maintaining a “default fund.” Because the CCP is responsible for a large portion of trades executed by each of its members, the CCP has a more complete understanding of each member’s exposure to risks and may take appropriate measures to manage those risks (*e.g.*, by demanding more collateral).<sup>10</sup>

Under the Commodity Exchange Act, “derivatives clearing organizations” (DCOs) act as central counterparties in derivatives markets.<sup>11</sup> Most DCOs share three important features. First, clearing is *intermediated*. The actual members of the DCO are usually financial institutions registered with the CFTC as futures commission merchants (FCMs). When two parties enter into a derivatives transaction, they each rely on an FCM (*i.e.*, a member of the DCO) to clear their side of the transaction. Thus, each party faces an FCM, and the FCM faces a DCO. For there to be a *systemic* problem – that is, for there to be a potential solvency crisis at the DCO – there would have to be a “double default”. A customer would need to default on its obligations to an FCM, and the customer’s default would need to cause the FCM to default on its obligations to the DCO.

Second, risk is *mutualized* among members. When there is a default at the DCO, losses are covered according to a default waterfall. To mutualize risk among members, the DCO makes non-defaulting members responsible for some portion of the default waterfall. In most cases,

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<sup>8</sup> ISDA, *ISDA Master Agreement and Credit Support Annex: Negotiation Strategies*, ISDA (Nov. 22, 2022), <https://www.isda.org/ondemand/isda-master-agreement-and-credit-support-annex-negotiation-strategies/>.

<sup>9</sup> Derivatives Clearing Organization General Provisions and Core Principles, 76 Fed. Reg. 69333-60480 (Nov. 8, 2011).

<sup>10</sup> *Id.* (“Additionally, unlike bilateral derivatives transactions where parties do not know the exposures their counterparties have to other market participants, as a result of the multilateral nature of centralized clearing, DCOs have a real-time, more complete picture of each clearing member’s risk exposure to multiple parties. Thus the DCO can more effectively and quickly identify developing risk exposures for individual clearing members and better manage these risks if clearing members become distressed.”); for a concrete example of a CCP managing risk, *see* U.S. Securities and Exchange Commission, *Staff Report on Equity and Options Market Structure Conditions in Early 2021*, SEC.gov (October 14, 2021), <https://www.sec.gov/files/staff-report-equity-options-market-structure-conditions-early-2021.pdf>.

<sup>11</sup> 17 CFR § 39.27(b) (“A derivatives clearing organization shall operate pursuant to a well-founded, transparent, and enforceable legal framework that addresses each aspect of the activities of the derivatives clearing organization. As applicable, the framework shall provide for ... the derivatives clearing organization to act as a counterparty, including novation ...”).

non-defaulting members will contribute to a guaranty fund, which will cover losses caused by a default.<sup>12</sup> Risk mutualization incentivizes members to monitor risk management at the DCO.<sup>13</sup>

Finally, clearing is *margin*ed. Clearing members are required to post collateral (*i.e.*, margin) equal to only a portion of their total potential exposure. The alternative is a *fully collateralized* clearing system, in which the DCO holds funds equal to each clearing member's total potential exposure.<sup>14</sup>

### III. The Proposal

The FTX model would be a *non-intermediated, non-mutualized, and margin*ed clearing model. Parties to derivatives transactions would clear transactions at the DCO without an intermediary, and if a party defaulted, other parties would not be expected to cover losses. Non-intermediated models are not completely unprecedented. FTX itself already operated a non-intermediated, fully collateralized model that targeted retail investors before it filed its proposal with the CFTC. The difference is that its proposed clearing model would be *margin*ed.

Instead of intermediation, mutualization of risk, financial resources requirements or full collateralization, FTX would manage risk through the following procedure:

- To clear a futures contract, a clearing member would be required to post an initial margin equal to 20% of the total contract value.<sup>15</sup> Once the clearing member established their position, they would be required at all times to hold margin in their account at least equal to the “maintenance margin level” – 15% of the contract value. So, suppose that a clearing member posted \$30,000 of collateral. Suppose further that the clearing member submitted a limit order for a long futures position on 2 BTC at a limit price of \$60,000.<sup>16</sup> Because the total contract value would be \$120,000, \$24,000 of the \$30,000 in collateral would be locked as initial margin. Therefore, the clearing member would have \$6,000 of “free collateral”. If the limit order executed at \$60,000 and then the BTC futures price declined to \$55,000, the required maintenance margin would be \$16,500 (15% of \$55,000\*2). *But*, because the futures price of BTC had declined by \$5,000, \$10,000 of

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<sup>12</sup> CME Group, *CME Clearing Financial Safeguards Waterfalls*, CME Group (Jul. 16, 2022), <https://www.cmegroup.com/education/articles-and-reports/cme-clearing-financial-safeguards-waterfalls.html>.

<sup>13</sup> John W. McPartland, Rebecca Lewis, *The Goldilocks Problem: How to Get Incentives and Default Waterfalls “Just Right”*, 41 *Economic Perspectives* 1 (2017).

<sup>14</sup> CFTC regulations define “fully collateralized position” as “a contract cleared by a derivatives clearing organization that requires the derivatives clearing organization to hold, at all times, funds in the form of the required payment sufficient to cover the maximum possible loss that a party or counterparty could incur upon liquidation or expiration of the contract.” 17 C.F.R. 39.2.

<sup>15</sup> FTX, *Revised FINAL - Form DCO Exhibit G Default Rules and Procedures 2022-02-08.pdf*, Commodity Futures Trading Commission (Feb. 2, 2018), <https://sirt.cftc.gov/sirt/sirt.aspx?Topic=CommissionOrdersandOtherActionsAD&Key=47841>.

<sup>16</sup> The hypothetical trade I describe here is based on the hypothetical trade described in FTX's CFTC filings.

the original collateral<sup>17</sup> would no longer be free collateral. Thus, the clearing member would have a buffer of only \$3,500 [\$30,000 of posted margin - \$16,500 of maintenance margin - (\$5,000 decline in the BTC futures price multiplied by 2)]. If the BTC futures price dropped below \$52,940, the clearing member would default (unless the clearing member posted more margin).<sup>18</sup>

- Upon default (*i.e.*, if the clearing member failed to deposit margin equal to at least 15% of the total contract value):
  - (1) FTX’s liquidation engine would periodically send limit orders on behalf of the clearing member. In other words, FTX would automatically close (at least partially) any position with insufficient margin. According to FTX filings with the CFTC, “approximately every Liquidation Delay Period ... (currently 6 seconds), the liquidation engine sends the Liquidation Percentage (currently 10 percent) of the position size as an order on the market.”<sup>19</sup> That is, FTX would sell 10% of the contract every 6 seconds until the account had adequate margin. Within approximately one minute, the position would be fully closed. Of course, a natural question is whether there would be adequate liquidity in the futures market to unwind the position. To add liquidity, FTX planned to engage “backstop liquidity providers” (BLPs) (as it had for its other markets<sup>20</sup>). If the amount of margin in an account divided by the total position notional reached a certain specified fraction (“Auto-Close Margin Fraction”), defaulting positions would be closed at the price necessary to set the value of the account at zero and transferred to a BLP.<sup>21</sup> Any open interest not assigned to a BLP would be assigned to participants with large positions on the other side of the market, in proportion to their position sizes.<sup>22</sup>
  - (2) If the value of the account were still negative, then a guaranty fund financed by FTX would pay out to bring the account balance back to zero.
  - (3) If at this point the account were bankrupt and the guaranty fund were empty, the remaining losses would be “taken from positions with positive unrealized Profit and Loss (proportionally to Profit and Loss).”<sup>23</sup>
  - (4) Finally, if there were still an unpaid balance, the DCO would be bankrupt.

#### IV. Policy and Legal Issues

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<sup>17</sup> \$5,000\*2.

<sup>18</sup> \$30,000 of posted margin - \$15,882 of maintenance margin (15% of \$52,940\*2) - (2\*\$7,060 futures price decline) = -\$2.

<sup>19</sup> [FTX, supra note 15.](#)

<sup>20</sup> FTX Crypto Derivatives Exchange, *Liquidations* (Dec. 1, 2022), <https://help.ftx.com/hc/en-us/articles/360027668712-Liquidations>.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

Much of the policy debate has focused on the fairness and efficiency of an automatic liquidation process. Under the FCM model, when a DCO demands margin from an FCM, the FCM generally posts margin before it collects margin from its customer. That can be risky in a 24-hour market (like the crypto market):

*That time lag between DCO margin collection and FCM margin collection can create more risk within a 24-hour market. It is possible that an FCM clearing member would have to contribute additional margin to the DCO at a time when its own customers may be under financial stress and unable to meet the FCM's margin calls. Meantime, the market continues to operate, customers continue to trade, and risk continues to grow.*<sup>24</sup>

Opponents respond that, with FTX's automatic liquidation process, a customer position may be liquidated almost immediately (within approximately one minute of default) without a reasonable opportunity for the customer to post more collateral.<sup>25</sup>

Even assuming automatic liquidation would be a positive development in U.S. futures markets, there is actually a prior question: is the proposal even consistent with the CEA and CFTC regulations? A Jones Day comment letter makes a strong argument that the CEA does not require intermediation or mutualization of risk.<sup>26</sup> But the inquiry does not end there. Under 17 CFR 39.12(a), a DCO must “have appropriate admission and continuing participation requirements for clearing members of the derivatives clearing organization that are objective, publicly disclosed, and risk-based.” Specifically, “[t]he participation requirements shall 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*.”<sup>27</sup> The regulation clarifies that “‘capital’ means adjusted net capital ... for futures commission merchants, and net capital ... for broker-dealers, or any similar risk adjusted capital calculation for all other clearing members.”<sup>28</sup> In addition, “[c]apital requirements shall be scalable to the risks posed by clearing members,”<sup>29</sup> and a DCO must have “procedures to verify, on an ongoing basis, the compliance of each clearing member with each participation requirement of the [DCO.]”<sup>30</sup> Under the FTX model, FTX would not impose *any* capital requirements.

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<sup>24</sup> Jones Day, *Comments Responding to Commissioner Publication of FTX's Request for Amended DCO Registration Order*, Commodity Futures Trading Commission (Mar. 17, 2022), <https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=66965&SearchText=>.

<sup>25</sup> See, e.g., Hilary Allen and Lee Reiners, *Non-Intermediate Clearing of Crypto Derivatives on Margin is a Bad Idea*, The FinReg Blog (Duke Financial Economics Center) (May 12, 2022), <https://sites.duke.edu/finregblog/2022/05/12/non-intermediate-clearing-of-crypto-derivatives-on-margin-is-a-bad-idea/>.

<sup>26</sup> Jones Day, *supra* note 24.

<sup>27</sup> 17 C.F.R. § 39.12(a)(2)(i) (emphasis added).

<sup>28</sup> *Id.*

<sup>29</sup> 17 C.F.R. § 39.12(a)(2)(ii).

<sup>30</sup> 17 C.F.R. § 39.12(a)(4).

FTX’s basic argument is that “[b]ecause FTX monitors participant accounts 24/7 and liquidates underfunded positions in real-time, there is no need to establish minimum capital requirements for each participant.”<sup>31</sup> Since clearing members would only be required to post initial margin, capital requirements would serve no risk-management purpose. That is not entirely implausible, and before the run on FTX, the CFTC seemed mostly sympathetic.<sup>32</sup> Certainly, if the DCO has no recourse to its members, then there is no reason to impose capital requirements. At the same time, there are lessons from the past couple of years that are relevant to the final analysis of a non-recourse clearing model under Part 39. For one, the volatility of “meme stocks” has demonstrated that retail trading can be *unpredictable, directional and extreme*.<sup>33</sup> Thus, a clearing model marketed to individual investors needs to be prepared for *both* unpredictable retail activity in the futures market *and* unpredictable retail activity in the underlying commodity market. The futures market, much like the options market, introduces leverage, which may amplify the effects of erratic retail activity.<sup>34</sup> Risk models like Cover-1, Cover-2 and Cover-3 that focus on the risks posed by the largest members of a clearinghouse may not be appropriate.<sup>35</sup>

Equally important – and this is a consideration for any CCP – a highly centralized clearing model can be compromised by the bad acts of just a few people. In the FCM clearing model, there typically needs to be a double default for the system to be compromised, and because FCMs are subject to capital requirements under 17 CFR 39.12(a) and the DCO has recourse to each FCM, there is a substantial buffer between a client of an FCM and the rest of the futures market.<sup>36</sup> By contrast, in the FTX model, there could be cascading defaults by retail investors with nothing but the DCO’s own capital to cover any losses. In that scenario, mismanagement (or fraud) at the DCO could be disastrous. Proponents of the FTX model are likely to argue that BLPs reduce the risk of centralization. But without more information, it is not at all clear that BLPs would be reliable, and the guaranty fund would still be responsible for any post-closing losses. Note also that, before the run on FTX, certain FTX exchanges doing business as “FTX.com” relied on an automatic liquidation protocol, but according to FTX’s bankruptcy filings, an FTX affiliate

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<sup>31</sup> FTX, *FTX Letter re Permissibility and Benefits of Direct Clearing Model 2022-02-08*, Commodity Futures Trading Commission (Feb. 8, 2022), <https://sirt.cftc.gov/sirt/sirt.aspx?Topic=CommissionOrdersandOtherActionsAD&Key=47841>.

<sup>32</sup> Commodity Futures Trading Commission, *Request for Comment on FTX Request for Amended DCO Registration Order*, Commodity Futures Trading Commission (March 10, 2022), <https://www.cftc.gov/PressRoom/PressReleases/8499-22>.

<sup>33</sup> See U.S. Securities and Exchange Commission, *Staff Report on Equity and Options Market Structure Conditions in Early 2021*, SEC.gov (October 14, 2021), <https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf>.

<sup>34</sup> Allen, *supra* note 25.

<sup>35</sup> CFTC, *supra* note 32; *see also* 17 C.F.R. § 39.11.

<sup>36</sup> *Changing Market Roles: The FTX Proposal and Trends in New Clearinghouse Models: Hearing Before the House Agriculture Comm.*, 117th Cong. 8 (2022) (testimony of Terrence A. Duffy, Chairman and CEO of CME Group, Inc.) (“FCMs, in the aggregate, maintain over \$173 billion in adjusted net capital and other resources.”).

(Alameda Research) had a “secret exemption ... from certain aspects of [the] auto-liquidation protocol.”<sup>37</sup>

Fundamentally, the FTX proposal would replace a model in which multiple well-capitalized FCMs face a well-capitalized CCP with a model in which all participants rely ultimately on (i) the CCP’s arrangements with third parties (LBPs) and (ii) the CCP’s own capital (the guaranty fund). It is possible that automatic liquidation would be more efficient than the current system, but given the volatility over the past couple of years of markets that are popular among retail investors and the failure of FTX, any considered analysis of the FTX model (and its successors) under Part 39 should address the risks of both centralization and erratic, levered retail activity.

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<sup>37</sup> Declaration of John J. Ray III in Support of Chapter 11 Petitions and First Day Pleadings at 23, In re FTX Trading Ltd., *et al.*, No. 22-11068 (Bankr. D. Del. 2022); *see also* FTX, *supra* note 20.