May 9, 2022

Mr. Christopher J. Kirkpatrick
Secretary, Commodity Futures Trading Commission
Three Lafayette Centre 1155 21st St., N.W.
Washington, DC 20581

Re: CFTC Request for Comment on FTX Request for Amended Derivatives Clearing Organization (DCO) Registration Order

Dear Mr. Kirkpatrick,

Cboe Global Markets ("Cboe") appreciates the opportunity to respond to the Commodity Futures Trading Commission ("CFTC" or "Commission") Request for Comment on the FTX Request for Amended DCO Registration Order (the "proposal" or "petition"). Cboe is a leading provider of regulated market infrastructure and tradable products. We have long supported thoughtful innovation and have championed transparency and investor protection as we seek to deliver cutting-edge trading, clearing and investment solutions to investors around the world. We support initiatives that improve markets and the investor experience – but only when appropriate investor safeguards are in place and operational implications are fully understood.

ErisX, recently acquired by Cboe and soon to be known as Cboe Digital, is a leading digital asset platform designed and built with regulatory compliance and operational integrity at the fore. ErisX operates a trusted and transparent cash market that operates in 51 U.S. jurisdictions, has licenses in 43 states, and voluntarily complies with the CFTC's core principles. ErisX also operates a CFTC regulated Designated Contract Market ("DCM") and Derivatives Clearing Organization ("DCO"). Cboe has long been committed to investor protection, transparency, and fair and orderly markets. ErisX and its continuous focus on proper regulation and safeguards is an extension of these values.

Introduction

The FTX proposal has garnered considerable attention as it presents a dramatic paradigm shift with potentially concerning implications for market participants. That is not a reason to reject the proposal. It is a reason, however, to comprehensively unpack every aspect of the proposal to make sure that impacts to investors and markets are fully understood. The stakes are too high to not undertake a deliberate review with appropriate caution and care.

It is important to note that the proposal is not substantively about technological innovation. The technology underpinning the proposed clearing model has existed for years. Disintermediation, and even margined disintermediation, are not new. The Commission acknowledges this in citing the four DCOs that currently operate under the non-intermediated/fully collateralized model, as well as NGX, which operates the sole currently existing margined, non-intermediated DCO. FTX does break new ground, however, in proposing to extend non-intermediated, margined clearing to all futures customers (without threshold eligibility requirements) and to all futures markets (without limitation on the range of eligible contracts). This represents a massive expansion of what has been to date a market niche, to include the entire futures ecosystem.

The existing FCM-intermediated clearing model is a structure that has been stress-tested through the trial and error of multiple financial crises across the decades, and for all that, has served investors and the market well. Is the futures market prepared, on the record before it, to proceed with a DCO in effect jettisoning that model, and replacing FCMs with a proposed risk management framework that may (or may not – the current record is not sufficient to support a conclusion) offer adequate financial and customer asset safeguards?

Given the potential implications, we trust that the Commission will address not only the legal aspects of the application but the overarching policy considerations. What are the first, second and third order implications of approving the proposal? Would approval have unintended consequences for customers, FCMs, other DCOs, and the market more generally?

Naturally, prior to reaching any conclusions, relevant processes and potential risks must be, at the very least, adequately explained and supported by fulsome analysis. This is a vital prerequisite – the burden of which falls to the applicant. We do not believe the burden has been met. Fundamental questions remain about how the risk management framework will function in practice and what the downstream impacts might be. The petition is simply not supported by information, data and analysis sufficient for the Commission or market participants to come to a reasoned judgment on the substantial questions it presents. **It is critical that all of the questions raised herein and in the appendix receive satisfactory responses supported by adequate data and analysis**.[1]

Indeed, Cboe suggests that the Commission consider whether a paradigm shift of this magnitude would benefit from a rigorous rulemaking process. Substantial policy concerns exist, and the public interest may be best served through a rulemaking that allows a more fulsome discussion of the issues, provides a cost-benefit analysis, and creates a ruleset generally applicable to all DCOs.

Below is a non-exhaustive list of policy concerns and inconsistencies in the petition that are important for the Commission to consider when reviewing this proposal.

[1] It is important for the Commission to consider broader policy implications and to take steps to reduce unhealthy regulatory arbitrage that has driven the global digital asset market. Non-U.S. platforms with opaque operations or unknown headquarters, have grown to considerable scale without transparency or oversight related to important practices, such as money laundering, anti-fraud and anti-manipulation, and conflicts of interest – to name a few. Some are now seeking to enter the U.S. market. It is important that future regulatory changes support transparent practices and avoid exacerbating unhealthy regulatory arbitrage that may introduce reputational and/or systemic risks into the U.S. related to offshore operations of such platforms.

Public Policy Considerations

***Benefits of the Intermediated Model**:* In order to focus our attention on relevant aspects of this proposal it is important that we first recognize the continued utility of the FCM clearing model currently in operation. FCMs are the backbone of this model and serve a critical risk-mediation role. FCMs are often in a better position to manage the risks of their customers vis-à-vis a DCO because the FCM has visibility into a customer's positions in multiple asset-classes at multiple DCOs. In contrast, the direct model proposed by FTX would structurally fragment customer risk visibility where customers trade directly on FTX and via an FCM on other venues. In addition, FCMs are obligated to maintain important risk management functions, such as establishing risk-based limits, screening orders, monitoring orders, conducting stress tests, etc. These protections embedded in the FCM clearing model have indeed served financial markets well.

The intermediated market structure is not a "creation of regulatory artifact" but rather a value-add, service-oriented construct that often provides customers with greater access to markets and diversified assets while creating efficient portfolio management, cost efficiencies made possible by intermediaries at scale, and pressure on venues to maintain competitive pricing. The margined, non-intermediated model has proven its value and resilience as a market structure serving institutional participants in specific sectors. But it is far from clear that it can be universalized to work in every case where today the market relies on the suite of services offered by intermediaries, including capital and operational efficiencies, research, customer support and education. Ratifying the FTX proposal in its current form without addressing critical questions risks ignoring the tremendous benefits the intermediated FCM clearing model has offered over the decades.

Some have suggested that the current reliance on intermediaries creates market concentration risk and increases systemic risk concerns. This belies the fact that FCMs and other intermediaries have in recent years been central to reducing systemic risks through their compliance with new rules and regulations (e.g., Basel III capital requirements and the CFTC's enhanced customer protection regulations enacted in the wake of the MF Global bankruptcy). While these changes have arguably reduced systemic risks they have also impacted the ability of FCMs to compete and offer important services, such as providing clearing capacity. Ultimately, FCMs are in the best position to analyze the merits of the FCM-model vs. the proposal; however, we believe these broader issues deserve a holistic review. This proposal cannot be analyzed in a vacuum.

Competition: FTX seeks to allow its DCO to replace FCMs in the clearing process. Some characterize this as beneficial disintermediation, but this does not appear to be true disintermediation at all. This proposal would allow a DCO to intermediate itself into an existing process without itself being subject to regulatory requirements to which FCMs must adhere. Although FTX attempts to mollify concerns by also proposing to allow customers to access the DCO via FCMs if they so choose, the effect is the same – a DCO and FCMs in direct competition for customers and a derivatives marketplace operator that would, for the first time, control all aspects of the futures value chain (customers, trading and clearing). FCMs will continue to bear the costs of compliance but will also be subject to FTX's trading and clearing fees. Any markup over the fees FTX charges to its direct members will make FCM pricing less competitive. Thus, a fundamental question is whether the proposal would create an insurmountable competitive advantage for a DCO unencumbered by FCM obligations that results in an imbalance that further reduces the number FCMs and the risk-mitigation value FCMs provide to markets.

The FTX DCM also seeks to perform FCM functions typically associated with trading on an exchange, such as those related to disclosures, record keeping, trading authorization requirements, conflicts of interests, and trading standards. While other venues may also seek to perform certain of these functions, FTX's affiliation with trading firm Alameda Research makes this proposal unique. FTX would, in effect, control material aspects of the entire market ecosystem – DCM, DCO (with FCM functions), and a principal trading firm. Also, as a self-regulatory organization, FTX would be both a regulator of FCMs and a competitor to its FCM members.[2] It is important that the market fully understands the extent of these relationships, how these relationships will be managed, and how conflicts are to be mitigated. Beyond the merits of direct retail clearing the instant proposal may be inconsistent with CFTC Core Principles prohibiting the imposition of material anticompetitive burdens.[3]

Bankruptcy: Part 190 of CFTC Regulations assigns preference to customer property in the event of a bankruptcy. This has served as a core customer asset protection feature of the FCM intermediated model and has been tested a number of times in bankruptcy. The legal precedent now provides an important level of legal certainty in the event of a bankruptcy. The proposal, on the other hand, seeks to recharacterize "customers" as "clearing members" or "participants", which naturally raises concerns as to whether customers – particularly retail customers – will be subject to a customer asset protection framework as robust as the one currently in place for intermediated futures. At present the proposal lacks sufficient analysis to support a determination that customers would be as protected under the proposed model. For example, the proposal would allow traditional FCMs holding omnibus accounts for customers to participate alongside the new non-intermediated model. In the event of the bankruptcy of a margined, non-intermediated DCO that included both FCM members and direct participants, the DCO estate would consist in part of "member property" (assets of direct participants) and customer property held by FCMs on behalf of their customers. Such a case, with all of its complications, would present issues of first impression under the US bankruptcy regime for DCOs, foremost among which would be how the priority of FCM customer claims over those of "members" should apply where most of the "members" are retail participants.

It is especially important that the Commission fully consider and resolve the potential implications of a DCO bankruptcy under the proposed model considering FTX's opaque ties to a trading firm, and other offshore exchange and trading businesses, which may introduce the DCO to substantial risk – yet unaccounted for.

Transparency and Conflicts of Interest: Broader policy considerations and CFTC Core Principles[4] demand we encourage a framework that is transparent and absent harmful conflicts of interest. In order to fully understand the potential implications of the proposal it is important that FTX's operations, including its international operations, are sufficiently transparent and that FTX's relevant relationships are fully exposed and understood. FTX has regularly touted as a differentiator for its business the close relationship

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[2] We note the Securities and Exchange Commission effectively restricts this construct as it relates to exchanges and broker-dealers.
[3] *See* 7 USC §7a-1(c)(2)(N) (prohibiting DCOs from adopting any rule or taking any action that results in any unreasonable restraint of trade or imposing any material anticompetitive burden).
[4] *See* USC §7a-1(c)(2)(P) (requiring DCOs to enforce rules to minimize conflicts of interest in the decision-making of the DCO).

it has with trading firm Alameda Research, including common staff, Alameda's heavy use of FTX's products, and Alameda's substantial market share of international trading volumes.[5] It is therefore reasonable that we fully assess that relationship and how it may impact investors and the proposed risk management framework. What are the financial and operational connections between FTX and Alameda Research, between FTX.com and FTX.US? What protections are in place to ensure the trading affiliate, or offshore FTX businesses, do not negatively impact the operations of the DCO and DCM? Are there shared staff across these organizations? How is their time allocated? What information barriers exist? Are there policies and procedures related to segregation of duties? Restrictions on employee trading? Will there be sufficient Commission access to offshore infrastructure and operations to ensure proper systems integrity and compliance? What oversight assures customers and indeed competitors are being treated in a fair and balanced manner? These questions are fundamental to assessing the instant proposal.

***AML/KYC/BSA*:** The current U.S. AML/KYC framework establishes FCMs as the primary gatekeepers for these important obligations; however, multiple, individual DCO Orders require the DCOs to adhere to AML/KYC obligations as if the DCOs were FCMs. It is worth considering whether it is time to pursue a coordinated rulemaking process in cooperation with the Financial Crimes Enforcement Network and U.S. Department of the Treasury in order to directly govern AML/KYC obligations of DCOs.

Other: Given this proposal has such significant policy implications for the future of the derivatives landscape, we encourage the Commission to consider the impact an approval will have on less obvious aspects of the system, such as aforementioned risk management, customer protection, competition, and conflicts of interest, as well as data reporting, cyber security, trade settlement, etc. We proffer that these too need to be better understood and explained by applicants before considering the merits and broader policy implications of the proposal.

Rulemaking: We applaud the Commission's publication of this request for comment and its willingness to engage in a dialogue on these important issues. Yet, at this stage, given the remarkable public interest and the deep and long-lasting policy implications the proposal presents, we suggest markets may benefit from a proposed rulemaking. Not only are there significant open questions as it relates to the instant proposal, any such approval of the FTX application will lead to additional applications and more expansive direct to retail offerings. In the case of broadly applicable, foundational changes to the clearing system we note that there is merit in engaging in a rulemaking that is more suitable to a broadly applicable ruleset. This would allow a more fulsome discussion of all of the relevant issues, including a cost-benefit analysis and consideration of the protection of market participants and the public, efficiencies, competitiveness, financial integrity, and risk management. Investors and the public interest would benefit from the Commission's reasoned views on these matters.

The Commission's recent engagement in rulemaking regarding fully collateralized positions demonstrates the benefits of rulemaking.[6] The CFTC considered how fully collateralized positions interact with the ruleset for DCOs (Part 39), recommended changes and exemptions based upon the anticipated regulatory

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[5] *See* FTX Whitepaper (stating that FTX is backed by Alameda, that FTX leverages Alameda staff, and that Alameda is one of the largest liquidity providers), *available at*, https://help.ftx.com/hc/en-us/articles/360027945111--FTT-Whitepaper-Summary-.

[6] *See* CFTC, Derivatives Clearing Organization General Provisions and Core Principles, 85 Fed. Reg. 4,800 (Jan. 27, 2020).

impact, and assessed the potential impact of those rules based on the cost-benefit considerations described above. After considering comments and making relevant changes based on those public comments, the Commission adopted the proposal. In the instant case, if the Commission wishes to proceed, a rulemaking would allow entities that now use a fully collateralized non-intermediated model to transition to a margined, non-intermediated model pursuant to a clear framework of CFTC rules governing such transition. It is worth considering whether the protections promoted through a rulemaking might not be appropriate here.

Deficiencies/Inconsistencies in the Petition

Automated Liquidation and Market Disruption: A central issue is the proposal's reliance on a "fully automated liquidation engine" to be utilized when an account falls below applicable maintenance margin requirements. In order to ensure the safety and soundness of the model the proposal must demonstrate that the automated liquidation engine will control the risk of cascading defaults, but there is insufficient information to make such a determination.

With the current intermediated model, intermediated margin calls act as a multi-level shock-absorber. CCPs can identify increased market risk and issue intra-day margin calls that are satisfied by well capitalized clearing member FCMs. FCMs can absorb such margin calls (ensuring, in doing so, that they never use any one customer's assets to satisfy another customer obligations) and, in turn, seek funds from relevant customers as necessary (and alternatively sourcing necessary funds from their own capital, in the form of "residual interest").

The proposal, on the other hand, seeks to replace this routine process with a "fully automated liquidation engine" that by rote rule requires the immediate, auto-liquidation of portfolios. It is reasonable to assume that this will lead to more frequent liquidations, which may in fact exacerbate the risk that normal market conditions will become stressed and contribute to a cascade of defaults. One need look no further than CFTC and CME enforcement precedent to highlight the risks "auto-liquidation" creates.[7] The instant proposal's reliance on the automated nature of the risk management framework to support approval appears to contradict the existing understanding of automated liquidations and the risks they present. At present there is insufficient information to allay concerns that the proposed automated liquidation engine may in fact exacerbate poor market conditions that led to the initial liquidation, potentially creating a frenetic cascade of defaults.[8] This would have considerable knock-on effects for the market.

Furthermore, it is likely that the non-intermediated model introduces operational risks that could impact customers and the broader market in a manner that the fully intermediated model does not (e.g., a margin miscalculation that causes the liquidation engine to instantly liquidate thousands or hundreds of

[7] In CME 15-0158-BC (March 20, 2017) CME cited Saxo Bank for disruptive practices in connection with its operation of an auto-liquidation algorithm designed to liquidate its clients' under-margined positions, which "in at least two instances, caused significant price movements in certain CME FX futures markets". *See also* In Matter of Interactive Brokers LLC (CFTC Docket No. 21-19, September 28, 2021), Interactive Brokers settled failure to supervise charges stemming in part from the failure of a system designed to auto-liquidate positions held by customers in accounts in margin deficit.
[8] The apparent lack of a committee to inject real time human judgment into the liquidation process may have considerable repercussions.

thousands of customer accounts). The proposal lacks sufficient explanation as to how these operational risks are to be mitigated.

Participant Risk of Loss: The proposal states "there is no need to establish minimum capital requirements for each participant," on the basis that positions in deficit are subject to auto-liquidation.[9] This appears to contradict multiple FTX Rules indicating that a customer's financial and operational obligations are not limited to ensuring adequate IM on deposit prior to entering an order.[10] Ultimately, depending on the circumstances of the closeout, consistent with FTX rules, financial obligations could exceed margin on deposit at origination of the position. Irrespective of the risk disclosures to the contrary, retail participants could be under the mistaken belief that they are unable to lose more than their margin deposit. It is important that these inconsistencies are remedied to enable customers to comprehend the full extent of their potential liabilities.

In addition, as noted in the Appendix, the broad rights of use and rehypothecation reserved to the DCO under the LedgerX revised rules create risk to participant property that is not adequately disclosed in the materials FTX has submitted in support of the proposal. Rule 7.1(G)(5) of LedgerX's revised rules permits the DCO to "use Participant's assets" to meet LedgerX's "temporary liquidity needs." But the rules include no constraint on such use, and there is no transparency around the "policies" that would govern such activity.

Cover-1 Proxies: For purposes of our analysis we must assume that when there is a significant market move a large number of positions and customers will require liquidation at the same time. FCMs typically are in a position to help manage these risks as FCMs operate omnibus customer accounts. The question here is how such an event would affect a DCO operating a non-intermediated clearing model, as proposed, and whether the financial resources proposed to be maintained by the DCO are sufficient to withstand such events. We believe more robust analysis is required to determine more definitively how Cover-1, Cover-2 or even Cover-3 should apply to the non-intermediated model.

To illustrate, FTX proposes to meet its financial obligations by adopting Cover 1 proxies whereby it will maintain financial resources to meet its financial obligations to members and participants notwithstanding the default of: (a) the single largest clearing member (i.e., the Cover-1 amount); or (b) if Cover-1 is less than 10% of total initial margin ("IM") at the clearinghouse, then the two largest clearing members (i.e., the Cover-2 amount); or (c) if Cover-2 is less than 10% of IM, then the three largest clearing members (i.e., the Cover-3 amount).

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[9] FTX Letter re Permissibility to Clark Hutchison, February 8, 2022

[10] FTX Rule 14.4 states that participants holding an account in default are liable for "all amounts due . . . for all losses, liabilities and expenses (including without limitation legal fees and disbursements and costs and expenses incurred by the Company in liquidity, borrowing or other necessary actions) incurred by the Company in connection with" the liquidation of such account. *See also* Rule 14.2(B) (making participants liable for "any costs or expenses, including losses, sustained by the Company in connection with transactions effected for its account" in connection with action taken to hedge exposures in defaulted accounts where liquidation cannot be accomplished "in a prompt and orderly fashion"); and Section VI(Q) of the Participant Agreement (Participant acknowledges and agrees that "it will be responsible to LedgerX for payment of any deficiency remaining in Participant's Account should an Account be liquidated or terminated"), as well as the broad indemnity from Participant in favor of LedgerX in Section VIII of the Agreement.

FTX justifies the 10% threshold by comparing the percentage of margin held in house margin accounts at major DCOs vs. the total margin held at these DCOs, stating that "covering 10% of IM is a conservative proxy for what could be considered a large clearing member at a traditional DCO" and that "it is not likely that the largest single participant" at CME, ICE Clear US, ICE Clear EU or OCC holds 10% of total IM.[11] We do not believe these assumptions are adequate support for the proposed framework.

First, with intermediated clearing the house margin accounts can be topped up by an FCM as necessary. Thus, if we were to assume a large FCM today represents approximately 10% of IM at traditional DCOs, house margin held at a DCO is not an accurate representation of the financial resources available to support a margin call. Second, comparing FCM held margin at traditional DCOs does not explain or justify why 10% is an adequate threshold for a DCO primarily clearing digital asset derivatives, which have proven to be highly volatile. Lastly, although the proposal appears to be premised on a "proprietary real time margin system" that imposes an IM requirement of 20% on BTC futures,[12] there is no analysis in the proposal demonstrating that DCO financial resources will be adequate under stressed conditions when applying particular margin levels under that proprietary system.

Conclusion

Cboe supports innovation and initiatives that serve investors – even if disruptive – but not at the expense of important investor safeguards and not without full transparency. At present this proposal lacks information, data and analysis sufficient for the Commission or market participants to draw informed conclusions. We encourage the Commission to properly stress test the proposal, and if this risk management framework exists outside the U.S. as claimed, data and analysis from existing operations should be made available and substantiated via public scrutiny. We thank the Commission for its thoughtful attention to these important matters and welcome the opportunity to discuss these comments (including the material questions we raise in the attached appendix) further.

Sincerely,

Edward T. Tilly
Chairman, President & CEO
Cboe Global Markets, Inc.

[11] Letter re Financial Resources dated February 8, 2022, to Clark Hutchison.
[12] DCO Exhibit G, at section (b)(3).

Appendix

Open Questions

Fundamental questions remain about how the risk management framework, as proposed, would function. It is vitally important that below questions are adequately addressed with supporting data and analysis before market participants and the Commission can fully assess the policy considerations.

Default Management Committee

The proposal does not include a Default Management Committee.

- Is it appropriate to not have a Default Management Committee? Fully automated processes can go wrong, and the Risk Management Committee may benefit from independent third-party expertise and perspective in an unexpected set of circumstances.
- Is there a detailed Default Management Procedure that includes contingencies?

Leverage/Margin

- What is the leverage FTX proposes to offer? Does FTX intend to offer 5x leverage as depicted in the micro contract example?
- Is the margin rate subject to change?
  - If so, would a change in the rate potentially cause an account to fall below maintenance margin?
    - When and how are margin rate changes communicated to direct members?
    - How much forewarning do direct members have to respond?
  - How does the margin change impact the size of the Guaranty Fund?
- Will direct members be permitted to withdraw free collateral while positions remain open?
  - If so, are there additional risks that may need to be considered, e.g. whether this increases the likelihood of maintenance margin triggers?

Liquidation

The liquidation engine will liquidate, "in a manner that does not cause meaningful price disruption".

- How has this been determined?
- Will liquidating orders be aggressive spread-crossing orders?
- Could relatively large liquidations drive the market down?
  - 10% of a $1000 portfolio is different from 10% of a $10M portfolio
- How is pro-cyclicality potential avoided, i.e. cascading liquidations?
  - Does FTX plan to have price bands, velocity logic, or limit up / limit down in their market to arrest pro-cyclicality?
  - How will trading restart after such a disruption and how will liquidations be handled during halts or when trading resumes?
    - Is there a pre-trading auction?
  - How are the implications of large pro-cyclical price moves on other related markets such as CME, ErisX, spot markets, etc. potentially transferring flash crash/ panic to other markets, factored in or considered?

- Are there liquidity tests? Volume to liquidate vs. volume in the order book and/or historical volume metrics?
- If the liquidation methodology is prescribed, e.g. orders approximately every 6 seconds, targeting a prescribed 10%, what is the potential for manipulation?
    - Will liquidating orders create an identifiable pattern in the T&S?
    - Can market participants determine what the likely market move is/will be for a typical individual liquidation, or schooling of liquidations?
    - If the pattern is recognizable can the size of the liquidation be reverse engineered creating the potential to predict how much and how long for the remainder of the liquidation?
    - To what degree could a momentum ignition strategy cause market dislocation that triggers a group of liquidations?
- To what degree is there a human-in-the-loop for the automated systems used for liquidations?
    - What happens if an input is bad or otherwise inaccurate or corrupted?
    - What stops runaway losses from a systems malfunction?
    - What controls and monitoring are in place for the reference prices and other inputs, and what happens if there is a problem with the system or its data?
    - Is there a backup to the automated system? If the automated systems is unavailable or not functioning, will the market be halted?
- Will the DCO have different criteria and expectations as compared to FCMs? For example, under Regulation 39.13(g)(8)(ii), DCO clearing members (FCMs) must analyze the risk profile of each of their customers to determine if they present a heightened risk profile)

Liquidity Providers

Liquidity providers play a central role in the proposed waterfall.

- What are the qualifications, criteria, and commitments governing the Backstop Liquidity Providers?
    - Contractual obligations?
    - What is the recourse if a BLP fails to meet its contractual obligations?
    - Regulatory obligations of BLPs?
    - Balance sheet requirements?
- Will Alameda Research be a BLP?
    - If so, how will potential conflicts of interest be managed?
        - Fairness vs. other BLPs
        - Incentive to trigger a BLP event
    - What role has Alameda played in the liquidation model that has been in operation offshore?
        - What percentage of liquidation trades involved Alameda?
        - Was Alameda itself ever liquidated?
        - Was Alameda ever the initiator of a market/price move that caused liquidations?

        - How often?
        - What percentage of the time was Alameda an aggressor vs passive, and was there any relationship to liquidations in determining this?
      - What percentage of the volume on FTX.com reference markets was Alameda?
        - How often was a price move on a reference venue that caused liquidations on FTX.com the result of Alameda's trading?
- How does the Auto-Close Margin Fraction specifically apply for Secondary BLPs?
- How and to whom are the "any remaining open interest not assigned to a takeover counterparty assigned to participants with large opposing positions?
  - Is this "all participants"?
  - What happens to profitable trades (that may have offsetting trades on other venues, including hedges) if a participant is assigned?
- FTX provides that primary BLPs will "should ordinarily be able to absorb all assignment of open interest from defaulting positions", without resorting to Secondary BLPs."
  - How much open interest are BLPs committing to absorb?
  - What is the basis of the conclusion that the BLP "should ordinarily be able to absorb all assignment of open interest"?
    - What is the supporting data?

Guaranty Fund

- Is the Guaranty Fund the same as Default Financial Resources in this model?
  - If, at a future date, FTX chose to have FCMs contribute to a Guarantee Fund, would it be the same pool as the FTX corporate contributions?
- If the Guaranty Fund is empty and losses are taken from the positions with positive P&L, how frequently is this anticipated to happen?
  - Without the assessments from intermediaries are not available, how often might the P&L profit reduction be invoked?
- Is the "sophisticated review and internal assessment and monitoring process" for each customer quantitative, qualitative, both?
  - At scale, how would millions, or tens of millions of direct retail participants be reviewed and assessed?
  - What are the specific criteria?
- How is the adequacy of the $250M determined, and monitored?
  - If the default financial resources requirements exceed $250M, will FTX continue to contribute corporate capital to meet the growing requirements?
  - If FTX cannot or will not at some point continue to contribute, will constraints be placed on the growth of the business and/or business reduced to ensure that the DCO remains in compliance with its obligation to maintain adequate financial resources?
  - What are the procedures for making this determination, alerting (how and to whom) and taking appropriate action (topping up DFR, limiting new business, reducing business)?

- FTX provides that "At the end of the waterfall, in the unlikely event the Guaranty Fund is exhausted, traditional DCO default management tools will be available."
    - With no mutualization among clearing participants, no assessment powers and no undertaking by FTX that its skin-in-the-game would be replenished – what is the risk that such "traditional" default management tools (including partial tear-ups, default auctions, VM haircutting, as detailed in the LedgerX rulebook) would actually be required upon a cascading default event?

Other

- To what degree is the CFTC comfortable with FTX proposing new products within the context of its proposed margin model including
    - Products it has referred to in its application such as cross-margining programs
    - Products it offers on its international platform
- With regard to customer priority, FTX notes that it does not currently deal with clearing members who carry customer accounts.
    - Will FTX add FCMs/members who carry customer accounts?
    - How will these be handled?
- Rule 7.1(G)(5) of LedgerX's revised rules permits the DCO to "use Participant's assets constituting Initial Margin or Variation Margin in its account from time to time to meet temporary liquidity needs of the Company (whether or not such Participant is in default), in a manner consistent with the Company's liquidity policies and applicable law, including by way of assignment, transfer, pledge, repledge or creation of a lien on or security interest in such Initial Margin or Variation Margin in connection with borrowing, repurchase transactions or other liquidity arrangements to support payment obligations of the Company in respect of Company Contracts."
    - What precisely is the DCO intending to do under the broad mandate created by this provision? Establish a liquidity facility collateralized by participant property? Invest participant property outside of the constraints of CFTC Rule 1.25? Establish a stock loan facility using customer collateral? More transparency and detail is needed concerning LedgerX's "liquidity policies" in connection with the use of participant property.
- How will direct members be considered from a "cover 1" standpoint?
    - Should the entire group, or a segment(s) be considered a single member for cover 1 purposes?