

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: Comments of the International Center for Law & Economics to the Commodity
Futures Trading Commission on FTX Request for Amended DCO Registration Order
(IF 22-001)**

Dear Mr. Kirkpatrick:

The International Center for Law & Economics (ICLE) is grateful for the opportunity to submit these comments in support of FTX's application to amend its DCO registration to allow it to clear margined products directly for retail participants.

The vast majority (some 96%¹) of global crypto derivatives trading takes place outside the U.S., much of it on platforms operating non-intermediated retail models similar to that proposed in FTX's application—but with one crucial difference: these offshore exchanges are largely unregulated. The reason for the disparity in domestic vs. foreign trading volumes is clear: regulatory constraints and costs in the U.S. make the operation of such platforms impossible or unviable. FTX's proposal would pave the way to bring the technology and business models currently employed to facilitate virtually the entirety of the world's crypto derivatives trading into the regulated structure of U.S. derivatives markets. The only thing standing in the way is the possible inflexibility of that regulatory structure in the face of disruptive competition.

The obvious market benefits of FTX's proposal are that:

1. It would free capital that would otherwise be pledged as collateral, which could greatly expand liquidity in crypto markets or could be deployed elsewhere in the financial system;
2. It would introduce a competitive alternative to the current exchanges, thus providing investors savings on what they would otherwise pay in commissions, account origination fees, etc.; and

¹ See, e.g., Philip Stafford, *Crypto industry makes push into regulated derivatives markets*, FINANCIAL TIMES (Feb. 21, 2022), <https://www.ft.com/content/364dee59-fb51-400b-acd2-808d4ec41ab3>.

3. It would offer clear product differentiation: e.g., by introducing a new mechanism for counterparty risk mitigation and by offering direct access to retail investors (with inherently lower costs of participation, more and cheaper information, and technological enhancements like a direct-access mobile interface).

The latter two of these benefits (and to some extent even the first) go particularly to the enhancement of competition in U.S. derivatives markets.

Concerns that markets lack sufficient competition are at the forefront of current policy debates. Legislators are currently working on draft bills that seek to promote competition in digital markets, and President Biden recently issued an executive order advocating for a “whole of government” approach to competition.²

Unfortunately, the renewed focus on how governments may boost competition has a significant blindside when it comes to government-created *barriers* to competition. Rather than offering a solution, government regulations are all too often the cause of reduced competition. This is notably the case when regulation artificially narrows a market by preventing new and innovative firms from disrupting entrenched incumbents.

In other words, if the “whole-of-government” approach to promoting competition means anything, it means that regulatory agencies should work to remove state-created, artificial barriers to market entry that are not absolutely required to accomplish core regulatory functions. The CFTC has precisely that opportunity with FTX’s application.

The market for crypto (and many other) derivatives is currently a lucrative duopoly, dominated by the Chicago Mercantile Exchange (CME) and the Intercontinental Exchange (ICE). Both firms have long been shielded from robust competition by a protective, if well-intentioned, moat of government regulation. The CFTC now has a unique opportunity to open this duopoly to disruptive competition.

FTX’s application would bring both technological and business-model innovation to the derivatives market, carrying with them the promise of increased competition, reduced risk, more efficient pricing, and lower costs for investors. There is always reluctance to embrace the new, particularly in areas that deal so intrinsically with risk. But a sensible measure of caution must not be allowed to morph into costly intransigence.

FTX’s application, while ambitious in its aims, is, in fact, quite modest in its mechanisms. It is respectful of the existing, overarching regulatory paradigm implemented to protect consumers, investors, and the financial system as a whole; it contemplates significant protections and backstops to shore up any increased risk it might introduce; and it ensures that ongoing oversight by the CFTC is readily facilitated.

² Executive Order 14036 on Promoting Competition in the American Economy, § 2(g) (Jul. 9, 2021) <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy> (“This order recognizes that a whole-of-government approach is necessary to address overconcentration, monopolization, and unfair competition in the American economy.”).

Indeed, approval of FTX's application would not entail the abandonment of the CFTC's core principles, but merely a recognition that the specific implementation of those principles may not be optimal for certain novel business models and technology. As Chairman Behnam recently remarked:

[T]he digital asset market would benefit from uniform imposition of requirements focused on ensuring certain core principles, including market integrity, customer protection, and market stability. At the CFTC, we have seen that a regulatory regime focused on core principles can be successful in overseeing a wide variety of markets, and have no reason to think those same principles cannot be applied to digital asset markets.³

In short, the CFTC should jump at this opportunity to introduce some well-regulated experimentation into the derivatives market: the likely social benefits of this effort significantly outweigh the potential harms.

I. First, do no harm

Economists have long agreed that dynamic competition—where firms compete to deliver new and improved products and services to consumers—is far more important for economic growth than static competition—where firms merely compete on price. As Joseph Schumpeter once wrote:

[I]t is not [price] competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization.... This kind of competition is as much more effective than the other as a bombardment is in comparison with forcing a door, and so much more important that it becomes a matter of comparative indifference whether competition in the ordinary sense functions more or less promptly; the powerful lever that in the long run expands output and brings down prices is in any case made of other stuff.⁴

Technological advances generate enormous welfare gains for consumers, and there is a robust body of literature establishing the contributions of technological innovation to economic growth and social welfare.⁵ Indeed, one of the persistent lessons from the economic literature on innovation has been that even apparently small innovations can generate large consumer benefits.⁶ And, importantly, there is strong evidence that technological progress gives rise to tremendous spillovers that are not fully captured by innovators.⁷ Less obviously, but of at least equal importance, it is also

³ CFTC Chairman Rostin Behnam, *Letter to the U.S. Senate Committee on Agriculture, Nutrition, and Forestry and House Committee on Agriculture* (Feb. 8, 2022) at 4, available at <https://www.agriculture.senate.gov/imo/media/doc/2022%2002%2008%20Ag%20committees%20digital%20asset%20response%20letter.pdf>.

⁴ JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 74 (1976).

⁵ See, e.g., Jerry Hausman, *Valuation of New Goods Under Perfect and Imperfect Competition*, in *THE ECONOMICS OF NEW GOODS* 209-67 (Bresnahan & Gordon eds., 1997).

⁶ *Id.* at 67.

⁷ William D. Nordhaus, *Schumpeterian Profits in the American Economy: Theory and Measurement*, NBER Working Paper No. 10433 (Apr. 2004) at 1, available at <http://www.nber.org/papers/w10433> ("We conclude that only a minuscule fraction of the social returns from technological advances over the 1948-2001 period was captured by producers, indicating that most of the benefits of technological change are passed on to consumers rather than captured by producers.").

the case that *business model* innovations—innovations in organization, production, marketing, or distribution—can have similar, far-reaching consequences.⁸

Given this, the question then becomes one of identifying the policies that are most likely to boost innovation. Given the highly uncertain nature of innovation, this is obviously much easier said than done—and there are likely as many suggestions to achieve this goal as there are economists.

This is not to say that policymakers are completely in the dark, however. In particular, there is mounting consensus concerning the policies that governments should *avoid*. In other words, while it may not always be clear what policymakers can actively do to *boost* innovation, it is becoming clear that some policies will almost invariably *harm* technological progress (Nassim Taleb refers to this policy approach as “*via negativa*”—the notion that policymakers should first *do no harm*.⁹). As Adam Thierer has argued, “if public policy is guided at every turn by the fear of hypothetical worst-case scenarios and the precautionary mindset, then innovation becomes less likely.”¹⁰

According to this widely shared vision of competition and innovation, policymakers should beware not to *unnecessarily* narrow the realm of technological solutions that vie for consumer adoption. Crucial to encouraging investment and innovation is not only the encouragement of technological progress, but the promotion of policies that enable innovators to implement and commercialize their technology. Arguably, the reason the overwhelming majority of crypto derivative trading takes place overseas is that current U.S. policies unnecessarily impede the ability of firms, like FTX, with technological know-how to implement that technology in a productive fashion.

Hence, public policy aimed at promoting innovation must focus not only on R&D, but also on complementary assets, as well as the underlying infrastructure. If government decides to stimulate innovation, it would seem important to clear away barriers which impede the development of complementary assets which tend to be specialized or cospecialized to innovation. To fail to do so will cause an unnecessary large portion of the profits from innovation to flow to imitators and other competitors. If these firms lie beyond one’s national borders, there are obvious implications for the internal distribution of income.¹¹

In the case of derivatives markets this militates strongly in favor of allowing new ways to organize the implementation of technology, especially if the new way of doing things offers qualitatively equivalent consumer protection. As explained below, we believe this if the case of FTX’s proposed model.

⁸ See generally OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES, ANALYSIS AND ANTITRUST IMPLICATIONS: A STUDY IN THE ECONOMICS OF INTERNAL ORGANIZATION* (1975).

⁹ NASSIM NICHOLAS TALEB, *ANTIFRAGILE: THINGS THAT GAIN FROM DISORDER* (2012) (“In action, [*via negativa*] is a recipe for what to avoid, what not to do.”).

¹⁰ ADAM THIERER, *PERMISSIONLESS INNOVATION: THE CONTINUING CASE FOR COMPREHENSIVE TECHNOLOGICAL FREEDOM* (2016).

¹¹ David J. Teece, *Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy*, 15 *RESEARCH POL’Y* 285, 304 (1986).

A. Uncertainty and the error-cost framework

Cautious policymakers might respond to our previous point by contending that FTX's services are inherently less safe than rivals'. As explained below, we argue they are not. There is, however, a more fundamental objection to this assertion. Government-mandated consumer protection is anything but free, and it is thus crucial that policymakers carefully weigh the benefits of increased innovation and competition against the potential risks of consumer harm.¹²

The potential pitfalls associated with the overprotection of consumers are likely nowhere clearer than in the EU's arguably misguided data-privacy regulation (the GDPR). Indeed, several recent papers have shown that, whatever privacy protection it has afforded to consumers, it has been achieved at tremendous costs to competition and innovation.¹³ These findings suggest the GDPR may have done more harm than good (or at least that it would have to achieve vast privacy gains to outweigh the significant harms to competition and innovation).

For obvious reasons, we believe it is crucial the CFTC not fall into the same trap as European policymakers, by myopically focusing on a narrow conception of consumer protection. Doing so would ultimately lead to far greater dynamic consumer harms than the nominal benefits achieved by overly aggressive attempts to protect consumers from static harms.

With this in mind, there are strong reasons to believe that derivatives markets are currently far from optimal for consumers. The market is heavily concentrated and undiversified, and this is in part a function of the regulatory framework that underpins the market.

Let us take a step back. In general, competition is facilitated by several complementary factors. Competing providers are required, of course. But competition also requires access by and demand from consumers for competitors' offerings. Conversely, competition is undermined by barriers to entry that can occur on either side of a market: new providers may be impeded from entering to compete with incumbents, and consumers may be impeded from accessing their preferred providers.

The regulatory regime can affect both of these. On the supply side, regulation can increase the costs of entry or prohibit it outright. It can also lead to homogeneity. Product differentiation is crucial to competition, but if all providers must be virtually identical to comply with regulatory requirements,

¹² We are not the first to make this point. As early as 1969, Yale Brozen argued that “[t]o make our markets more competitive, the main thrust of antitrust activity should be in the direction of removing contrived barriers to entry. We must recognize that calling things such as advertising and product differentiation barriers does not make them such. The main barriers to entry are those imposed by regulatory commissions, tariffs, quotas, licensing requirements, and some of the activities of the antitrust authorities.... The return, in terms of the restoration of meaningful competition, can be very large indeed, especially in the reinvigoration of the forces that guarantee efficiency and spur innovation.” Yale Brozen, *Do Antitrust Efforts Encourage Monopoly?* CHICAGO BOOTH REVIEW (May 1969), available at <https://www.chicagobooth.edu/review/do-antitrust-efforts-encourage-monopoly>.

¹³ See Rebecca Janßen, Reinhold Kesler, Michael E. Kummer & Joel Waldfogel, *GDPR and the Lost Generation of Innovative Apps*, NBER Working Paper No. 30028 (May 2022), available at <https://www.nber.org/papers/w30028> (“Comparing long-run equilibria with and without GDPR, we find that GDPR reduces consumer surplus and aggregate app usage by about a third. Whatever the privacy benefits of GDPR, they come at substantial costs in foregone innovation.”); Jian Jia, Ginger Zhe Jin, & Liad Wagman, *The Short-Run Effects of the General Data Protection Regulation on Technology Venture Investment*, 41 *MARKETING SCIENCE* 661 (2021) (“Our findings indicate negative post-GDPR effects after its 2018 rollout on European ventures relative to their counterparts in the United States and the rest of the world.... The negative effects manifest in the number of and amounts raised in financing deals, and are particularly pronounced for newer, data-related, and business-to-consumer ventures.”).

differentiation is impossible. On the demand side, regulation can exclude some would-be consumers with particular characteristics from a market and it can raise the price of participation to effectively exclude large swaths of potential customers.

Of course, optimal regulation is virtually never found at the extreme (including the extreme of the *absence* of regulation), and well-designed regulations can facilitate entry, as well—particularly on the demand side. Among other things, consumer-protection regulation can efficiently lend reliability to markets and reduce customers' costs by reducing the costs of search and the need to engage in self-help and/or costly enforcement of contractual terms.

In essence, the CFTC's core functions are ultimately aimed at consumer protection—at ensuring the reliability of derivatives markets for the benefit of participants and their customers. “The mission of the Commodity Futures Trading Commission is to promote the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation.”¹⁴

There can, however, be an inherent conflict between regulatory rules adopted to protect consumers in the short run and the facilitation of market competition: Rules that impose costs on providers in the name of consumer protection may impede their entry, thus reducing the value of the system to consumers. Unfortunately, the information necessary to evaluate this tradeoff is rarely available, and regulators must make decisions based on the exercise of their judgment under conditions of profound uncertainty. The error-cost framework, borrowed from statistical decision theory, provides an approach to this constrained regulatory decision-making.

Under the error-cost framework, welfare is maximized by minimizing the cost of (inevitable) errors.¹⁵ In simple terms, the objective of the error-cost framework is to ensure that regulatory rules minimize the expected cost of (1) erroneous deterrence of beneficial conduct (“false positives,” or “Type I errors”); (2) erroneous under-deterrence of harmful conduct (“false negatives,” or “Type II errors”); and (3) the costs of administering the system (including the cost of making and enforcing rules, the costs of obtaining and evaluating information and evidence relevant to decision-making, and the costs of compliance).

One of the most important implications of the error-cost framework concerns erroneous decisions that are difficult to reverse versus others that can be readily and cheaply corrected by regulators or by market participants. For obvious reasons, the former tend to impose greater costs than the latter. In the decision at hand, for example, denial of FTX's application would mean that derivatives-market participants cannot experiment with FTX's model and use the information gleaned to make investment decisions accordingly. Similarly, the CFTC would have no opportunity to learn about the actual consequences of FTX's model and the efficacy of a modified regulatory regime governing derivatives-market activity. If the decision to prohibit FTX's proposed model is erroneous it will be difficult to correct it because it will be difficult to obtain the information necessary to do so.

On the other hand, if FTX's model is approved and the experiment turns out to identify risky or unanticipated situations reflecting the inappropriateness of its model and the regulatory obligations

¹⁴ CFTC, *CFTC Mission Statement* (last visited May 7, 2022), available at <https://www.cftc.gov/About/AboutTheCommission>.

¹⁵ See C. Frederick Beckner III & Steven C. Salop, *Decision Theory and Antitrust Rules*, 67 ANTITRUST L.J. 41, 45 (1999) (“The decision theory approach can be reformulated in terms of minimizing the cost of error.... Whether framed in terms of error analysis or expected net benefit, the answer is the same. This answer represents the first key insight of the economic approach to decision making. Rational decision making is based on weighing the benefits and costs of alternative actions.”).

under which it operates, the approval can be rescinded, or regulatory obligations tweaked in light of new information. And because regulatory oversight, reporting, and transparency are maintained, it is relatively unlikely that failure would entail significant or systemic costs before remedial measures can be taken. Obviously, no such informed mitigation is possible at all if FTX is not allowed to compete with its proposed model in the first place.

“Wisdom is born of experience, including experiences that involve risk and the possibility of occasional mistakes and failures.”¹⁶ There is a strong argument that, absent compelling evidence of unavoidable and substantial consumer harm (which indeed does not exist), FTX’s application should be approved precisely so that the CFTC may gain the insight necessary to enable it to make informed decisions regarding the proper regulation of technologically advanced derivatives markets.

B. The cost of impeded competition in derivatives markets

The CFTC’s bipartisan 2020-24 Strategic Plan includes “encouraging innovation” as one of its five strategic goals.¹⁷ Indeed, the Commodity Exchange Act identifies one of its core purposes as the “promot[ion of] responsible innovation and fair competition among boards of trade, other markets and market participants.”¹⁸ As the Strategic Plan recognizes, crucial to achieving this objective is the implementation of dynamic, flexible regulation that does not mire derivatives markets in archaic technology.

Financial markets quickly adopt emerging technologies, and our derivatives markets have experienced an amazing digital transformation that presents opportunities as well as risks. Market regulation needs to keep pace and even lead, as our mandate to encourage responsible innovation is important to the Nation. The CFTC must promote responsible innovation, avoiding rules and approaches reflective of business practices long gone.¹⁹

Not only is the promotion of innovation enormously valuable in its own right, but the enhanced competition and diversification innovative entrants can bring is crucial to maintaining the efficacy and safety of financial markets. “Society cannot evolve and respond to change without generating variety in its adaptive capabilities....”²⁰

In the case of derivatives markets in particular, the concentration of market activity in a very small number of DCOs and FCMs (in part a function of regulatory barriers to entry, however well-intentioned) has had the unintended consequence of creating new sources of consumer and systemic

¹⁶ Thierer, *supra* note 10.

¹⁷ CFTC, STRATEGIC PLAN 2020-2024 (Jul. 8, 2020), *available at* https://www.cftc.gov/media/3871/CFTC202024_2024StrategicPlan/download.

¹⁸ Commodity Exchange Act, 7 U.S.C. § 5(b).

¹⁹ STRATEGIC PLAN, *supra* note 17, at 7.

²⁰ CALESTOUS JUMA, INNOVATION AND ITS ENEMIES 5 (2016). Juma goes on to note that “society will not function without a certain degree of institutional continuity and social stability. Managing the interactions between change and continuity remains one of the most critical functions of government.” *Id.* at 6. This is, in a nutshell, the error-cost framework. Regulation should not *only* provide for innovation. But to the extent it also seeks to maintain stability, it must ensure that doing so not impede the very innovation necessary to ensure continuing resilience in the face of an ever-changing social, economic, and technological environment.

risk.²¹ Whenever clearing services are concentrated or interconnected, there is increased risk. And while traditional DCOs do mitigate counterparty risk, they also mutualize and concentrate risks and may expose non-defaulting participants to other participants' defaults.²²

The crucial problem is excessive centralization and the lack of diversity and competition among clearinghouses. Significantly, the lack of competition between traditional DCOs further concentrates counterparty risk. The failure of a DCO that clears all or nearly all of a highly traded instrument (which is the case today for most products traded on CME and ICE) could indeed spillover to other parts of the financial system, damaging other entities in the financial system with which they transact. As others have recognized, "the CFTC should enact new regulations to promote competition between platforms and encourage new platforms to enter the market."²³

But facilitating competition need not entail the enactment of additional regulations; rather, the low-hanging fruit lies in the removal or reform of *existing* regulatory barriers to entry. And to the extent that regulation creates such barriers in the name of systemic risk reduction, the justification is misplaced:

[T]he purported core value of the clearinghouse in containing counterparty risk and contagion is exaggerated, and sometimes incorrect. Superior collateral collection, enhanced mutualization, and basic setoff on average move, but do not reduce, risk. For the most part, the clearinghouse's impact on systemic risk is to transfer much, and sometimes all, of the internal systemic risk to others outside the clearinghouse. It may not make the systemic situation any worse, but on average, it's not going to be a major systemic asset, and the extensive worldwide regulatory and legal investment in building clearinghouses cannot be justified in systemic risk reduction terms, because their systemic benefits are usually offset by symmetrical costs, and in some scenarios can worsen the systemic problem. ***The regulatory balance is overweighting the benefit of reducing loss between parties, despite the fact that some, and sometimes all, of that loss is shifted to other systemically important shoulders.***²⁴

This is an important limit to the centralization of risk inherent in FCM-mediated DCOs. Large DCOs are by nature concentrated and interconnected—but they need not be artificially *further* concentrated by regulation. Assuming the benefits of centralized clearing and CFTC oversight can be maintained within a regulatory structure that permits innovative market design that helps to

²¹ See Dan Awrey & Kathryn Judge, *Why Financial Regulation Keeps Falling Short*, 61 B.C. L. REV. 2295, 2228-29 (2020). See also Ivana Ruffini, *Central Clearing: Risks and Customer Protections*, ECON. PERSPECTIVES 4Q/2015 at 90, 93 ("The centrally cleared market structure does not eliminate counterparty risk. The market structure change does not just concentrate the counterparty risk in the CCP, but it also introduces new counterparty risk exposures. The FCM intermediaries introduce some new exposures to both fellow customers and the FCM itself.").

²² See, e.g., Yuliya Guseva, *Destructive Collectivism: Dodd-Frank Coordination and Clearinghouses*, 37 CARDOZO L. REV. 1693, 1712-13 (2016).

²³ Center for American Progress, *Report: A Climate and Competition Agenda for the Commodity Futures Trading Commission* (Feb. 1, 2022), available at <https://www.americanprogress.org/article/a-climate-and-competition-agenda-for-the-commodity-futures-trading-commission/>.

²⁴ Mark J. Roe, *Clearinghouse Overconfidence*, 101 CALIF. L. REV. 1641, 1700 (2013) (emphasis added). See also Craig Pirrong, *The Economics of Clearing in Derivatives Markets: Netting, Asymmetric Information, and the Sharing of Default Risks Through a Central Counterparty*, Working Paper (Jan. 8, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1340660.

mitigate some of the current defects of current exchanges, such evolution should be welcomed as a more effective instantiation of the CFTC's oversight of systemically risky financial institutions.

II. Risk mitigation in FTX's application

Of course, concerns may persist regarding FTX's specific proposal that might cut against these arguments in favor of its approval by the Commission. In this section we address the specifics of the proposal. In addition to the beneficial effects that FTX's proposed structure would have on market competition and access to derivatives markets, it also has important implications for risk, liquidation, and spillover effects of liquidations. Our evaluation of these strongly suggests that, far from introducing heightened risk into the market, FTX's proposed business model would *mitigate* it.

The CEA doesn't require the precise risk mitigation mechanisms currently used by DCOs; it requires only *appropriate* risk management. Indeed, the CFTC holds the view "that each DCO should be afforded an appropriate level of discretion in determining how to operate its business within the legal framework established by the CEA."²⁵

Advances in technology and market design enable other mechanisms than the use of intermediaries (FCMs) to clear trades on behalf of customers, and FTX seeks to employ these in order to facilitate retail derivative trading.²⁶ Importantly, these other mechanisms provide not only adequate risk protection, but actually *improved* risk management over the mechanisms employed today. This is precisely the kind of disruption that we should encourage and which, subject to the ability to ensure minimal systemic risk and consumer protection, should be welcomed.

Each person using a margin account to trade derivatives is required to post collateral, but this collateral is less than the size of the position. When markets move against a participant's position, she might be subject to a margin call in which she either needs to post additional collateral or, in the event that she cannot post additional collateral, have her position closed out. This not only has an impact on the individual investor but can also affect others in the market. The reason is that liquidating positions of margin customers tends to be procyclical, reinforcing price movements that lead to margin calls on other investors.

FTX's proposed model would limit these types of events for a couple of reasons. The first is related to the frequency with which FTX will update collateral requirements. The typical derivatives exchange operates five days per week and is closed on holidays. Margin requirements at these exchanges are updated once per day and only on business days. In contrast, the proposal presented by FTX indicates that it will update margin requirements every 30 seconds, 24 hours per day, 7 days per week. This feature of FTX's model could be enormously significant.

A reasonable assumption about asset prices is that on a second-by-second basis, asset prices follow a random walk. If so, the price volatility of that asset is proportional to the square root of the elapsed time interval. It follows that the volatility of a particular asset over a 24-hour period is approximately

²⁵ CFTC, *Derivatives Clearing Organization General Provisions and Core Principles*, 76 Fed. Reg. 69334, 69,335 (Nov. 8, 2011).

²⁶ FTX, *Letter re Permissibility and Benefits of Direct Clearing Model under the Commodities Exchange Act and CFTC Regulations* (Feb. 8, 2022) at 1, available at https://www.cftc.gov/media/7001/ledgerx_dba_ftx_ltr_direct_clearing_model2-8-22/download ("With dramatic improvements in technological infrastructure over the past twenty years, companies such as FTX are now able to provide their customers with direct access to exchange and clearing services, as FTX has now done for several years.").

54 times greater than the volatility over a 30-second interval. The difference in volatility is even greater over weekends, especially those that coincide with holidays. This means that an exchange that checks the collateral once per day is subject to substantially larger swings in asset prices than would be true of FTX's proposed model, and, as a result, is more susceptible to waves of liquidations.²⁷ The continuous margin checks and automatic liquidation features FTX is proposing are virtually certain to decrease risk and transaction costs.

FTX's proposal also takes additional steps that create greater stability. First, collateral must be posted with FTX prior to trading, and it cannot be based on credit or rehypothecated. This avoids additional credit risks evident in many existing markets. Second, when positions do have to be liquidated, FTX does so through limit orders that prevent reinforcing price declines. And third, FTX takes a conservative approach to determining necessary collateral by relying on models used for 24-hour periods to compute the collateral requirements over their 30-second period. Each of these steps helps to prevent any sort of spillover risk associated with margin calls and liquidations.

At the same time, because FTX's proposal would reduce the amount of collateral required for derivatives trades, it has the potential to improve capital-market efficiency. As Mark Roe points out, because "the collateral available to one creditor, namely the clearinghouse, is value denied to other creditors," centralized clearing may not serve to reduce systemic risk.²⁸ This effect would be mitigated by reduced collateral requirements, while alternative mechanisms (such as robust onboarding requirements, real-time margin calls, and default guarantee fund) can serve to mitigate risk at less cost to the overall financial system.

FTX already clears trades without intermediaries for fully collateralized options and futures, so it has the technical capability to handle such transactions. The concern raised by this prospect is that FTX would be exposed to counterparty risk and would, should its own participant default, have to cover the margin to the party holding the other side of the cleared position. As noted above, however, relative to existing clearinghouses FTX's model should reduce risk, and its \$250 million guarantee fund should be considerably more than required to provide any foreseeable backstop liquidity.²⁹

Whether FTX can adequately manage that counterparty risk is, of course, an important question. But FTX has provided a host of risk-management measures that purport to ensure that it can. Indeed, FTX's proposed model holds out the prospect of *more* effective and efficient risk mitigation for all sorts of derivatives:

²⁷ And even when traditional, intermediated DCOs check margins on shorter timeframes substantial lag remains. When a traditional DCO makes a margin call, there will always be lags between when the call goes out, when the FCMs get more margin out of their customers, and when they have to settle up with the DCO. A whole lot can go wrong in that period, especially as spot prices continue to change.

²⁸ Roe, *supra* note 24.

²⁹ As FTX's experience with its international platform demonstrates: "Over the last three years we have experienced single-day bitcoin price moves of up to 38%, and the insurance fund has paid out a net total of \$9.5 million (across that entire time period)... The single biggest daily drawdown from the FTX.com insurance fund was \$4.7 million, on a week that the bitcoin price moved down 38%—notably, that drawdown was less than FTX.com's revenue for that day. Had FTX.com set margin requirements as high as we plan to for our US platform, the insurance fund would not have had a drawdown at all and instead, over time, we would have actually added to the fund. Had FTX.com set margin requirements to the low end of the range we anticipate requiring in the US—say, 15%—the single biggest daily drawdown would have been \$1.7 million." *Understanding FTX's Guaranty Fund Sizing*, FTXPOLICY (last visited May 10, 2022), <https://www.ftxpolicy.com/ftx-guaranty-fund>.

[T]he strong belief that we hold here is that this will result in a much safer system for financial markets.... [W]e can liquidate people's positions piece by piece in a continuous fashion. We can flush risk from the system, again in a continuous fashion. And this is ultimately a safer, more effective way to be able to manage risk. And this has empirically been proven by the fact that we've been able to operate this model with many billion dollars per day in the overseas derivatives market with FTX, where we've encountered large price movements with assets such as Bitcoin and Ether.

* * *

FTX US thinks that this is a healthier way of operating markets in general and not just for crypto derivative markets. I think that the 24/7 nature of crypto markets results in a much less discontinuous type of events that you see under normal circumstances where large news can come out overnight for securities or derivatives in such a way that people can't express their opinion and enable price discovery and either put on or take off risk in an efficient fashion.³⁰

Meanwhile, because the current system operates with a very small number of clearinghouses whose members mutualize risk, there is, as noted above, an important (and oft-overlooked) potential for systemic concentrations. The introduction of more liquidity and deeper capital markets could offer the opportunity to reduce that potential source of systemic risk.

As a result of these features, FTX's proposed business model not only opens up derivatives trading to a greater number of investors, but it does so at a lower cost and actively takes steps to mitigate risks associated with trading on margin.

³⁰ Brett Harrison, *quoted in Jason Brett, The FTX US Proposal That Shook Congress And The Crypto Derivatives World*, FORBES (Apr. 27, 2022), <https://www.forbes.com/sites/jasonbrett/2022/04/27/the-ftx-us-proposal-that-shook-congress-and-the-crypto-derivatives-world/?sh=7b27039e4e19>.

Conclusion

We note, finally, that none of these innovative elements of FTX's proposal is dependent on the particular—and often controversial—characteristics of cryptocurrency or blockchain; reference to concerns regarding these technologies is a red herring in the consideration of FTX's application. Instead, the primary innovations lie in the business model and the ability to use advanced computing power to facilitate real-time margin calculations. While this phase of FTX's proposal is limited to the trading of derivatives based on cryptocurrencies, there is no intrinsic reason it should be so constrained. Instead, the incremental approach taken by FTX is one that facilitates experimentation and limits the size of any potential adverse market effects. This is an appealing feature of the proposal, and it reflects FTX's commitment to the sustainable and incremental evolution of regulatory mechanisms within a commitment to the CFTC's broader regulatory mandate. But what is most exciting about the proposal is that, if successful, it could herald the introduction of truly disruptive competition to the entire derivatives trading enterprise. The cautious and respectful approach proposed here, coupled with the potential for incredible improvements in the price, risk profile, and transparency of all derivatives trading, should spur the Commission to enthusiastically approve FTX's application.

Respectfully Submitted,

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