In addition, FTX's proposal would result in limiting the recourse available to retail customers if FTX were to engage in fraudulent or abusive business conduct practices with its customers or mishandle customers' funds. The National Futures Association's ("NFA") arbitration and mediation would be unavailable for resolving customer disputes because FTX would not be an FCM member of NFA, nor could customers file a complaint against FTX using NFA's customer complaint process, for the same reason.

Conclusion

Although the CEA does feature innovation as a statutory goal, the Act does not promote innovation for the sake of innovation alone. This means any purported "innovation" which is found to increase risk unacceptably or fails to protect customers, would be in contravention of the purpose of the law.

The FTX Request does not meet this test. FTX proposes to implement a "risk management light" clearing regime. In fact, the purported "innovations" of FTX's proposal are best understood as simple cost-cutting measures. And these cost cutting measures would come at the expense of risk management best practices, market integrity, customer safety, and ultimately, financial stability. It should not be allowed to go forward as proposed. The CFTC should either reject the FTX proposal or commence a formal rulemaking to allow a broader public discussion of appropriate risk management standards.

Thank you. I look forward to answering your questions.

The CHAIRMAN. Thank you. Mr. Bankman-Fried, please begin when you are ready.

STATEMENT OF SAMUEL "SAM" BANKMAN-FRIED, CO-FOUNDER AND CHIEF EXECUTIVE OFFICER, LEDGERX LLC D/B/A FTX US DERIVATIVES, CHICAGO, IL

Mr. BANKMAN-FRIED. Chairman Scott, Ranking Member Thompson, Members of the Committee, thank you so much for having me here today. A bit about myself, I went to MIT, majored in physics. I worked on Wall Street at Jane Street Capital with the goal of donating what I made. And I got involved in the digital asset ecosystem in 2017. In 2019, I founded FTX, a global cryptocurrency derivatives exchange. In 2020, we launched our U.S. arm, FTX US. And in 2021, we acquired LedgerX, now FTX US Derivatives, a CFTC-licensed clearinghouse and marketplace.

Last year, we submitted an amendment to our clearing order, which would allow us to operate as almost every other clearinghouse does, with margin. We have spent tens of thousands of hours talking with the Commission about this proposal and thousands of pages of documents. We really, really deeply respect the thorough process that the CFTC has undergone, the amount of time that they have spent digging into the details of our proposal, challenging it where appropriate and the seriousness with which they are treating this proposal. We respect the CFTC and their process and whatever conclusions they ultimately come to.

I will note that while our proposal does combine things together in a way that I think might bring powerful innovation to this space, each of the elements already exists in CFTC-licensed derivatives exchanges, including ICE NGX, LedgerX, and others.

I believe that the amendment that we put forward would help promote healthy markets. I think it that would promote fair and equitable access to platforms. In particular traditional exchanges charge for market data such that only the largest traders are able to get full knowledge of the markets that they are supposed to be trading on. With FTX, all of our market data is 100 percent free, transparent, and public. All users, regulators, and other observers have full access to our market data.

Traditional exchanges have separate models for the largest traders and for other users such that only the largest traders have direct access with lower latency fees and more options. We would have equitable access to our platform where all users can choose the method of access that they most prefer and have access to the most powerful tools.

We also have strong customer protections under our model. It is a safe and conservative risk model which would have helped to alleviate some of the instances that we have seen with recent futures exchanges like the LME nickel fiasco earlier this year by having the collateral pre-funded at the clearinghouse rather than relying on credit, and having a real-time risk engine.

We also have enhanced customer protections. We have all of the customer protections that exist on traditional features exchanges and on FCMs because we understand deeply that we have a responsibility to ensure that if there is direct access to the platform, that users are still afforded the same level of protection. On top of that, we have further customer protections, suitability, and transparency than what you find on most other platforms.

Finally, we believe that this would bring competition and innovation. It would bring liquidity to the U.S. marketplace and options to U.S. consumers. It would bring competition in the futures markets where almost all of the volume is traded by just two exchanges. And it would bring competitiveness to the United States with respect to the rest of the world. Today, 95 percent of digital asset volume trades overseas.

And that brings me to some of the broader context here. Digital asset marketplaces need Federal oversight. They need that oversight to protect consumers, to protect against systemic risk, to bring liquidity back onshore, to ensure U.S. competitiveness globally. This is good for the U.S. economy, for Americans, for wealth creation, and good for our consumers. The CFTC is an appropriate regulator to provide this for digital asset futures contracts. They have been doing so on CME and other platforms for a number of years, a very thorough regulator who understands the space very deeply.

Thank you to the Committee for having me today, and thank you for all of the work that you have put in to providing oversight and guidance on the this ecosystem. And I look forward to your questions.

[The prepared statement of Mr. Bankman-Fried follows:]

PREPARED STATEMENT OF SAMUEL "SAM" BANKMAN-FRIED, CO-FOUNDER AND CHIEF EXECUTIVE OFFICER, LEDGERX LLC D/B/A FTX US DERIVATIVES, CHICAGO, IL

Introduction

Chairman Scott, Ranking Member Thompson, Members of the Committee, and distinguished guests, thank you for inviting me to testify before this Committee today. It is an honor and a privilege to be before you to share information and insights into our license application before the U.S. Commodity Futures Trading Commission (CFTC), as well as some of the key topics stemming from that effort. Along with my colleagues and teammates at FTX, I am pleased to provide you with as much information as you need in order to ensure a fully informed and robust conversation around whether and how this Committee could address some of these key topics.

Background on FTX and FTX US Derivatives

The FTX group of companies (FTX Group or FTX) was established by three Americans, Samuel Bankman-Fried, Gary Wang and Nishad Singh, with international operations commencing in May 2019 and the U.S. exchange starting in 2020. The business was established in order to build a digital-asset trading platform and exchange with a better user experience, customer protection, equitable access, and innovative products, and to provide a trading platform robust enough for professional trading firms and intuitive enough for first-time users. In the U.S., the company operates a federally regulated spot exchange that is registered with the Department of Treasury (via FinCEN, as a money services business) and also holds a series of state money transmission licenses. Our U.S. derivatives business is licensed by the CFTC as an exchange and clearinghouse, the subject of our application discussed today. FTX US also holds a FINRA broker-dealer license. FTX's international exchange, which is not available to U.S. users, holds a series of marketplace licenses and registrations in many non-U.S. jurisdictions including Japan and the European Union.

The core founding team had unique experience to develop an exchange given their experiences in scaling large engineering systems at premier technology companies, combined with trading experience on Wall Street. This brought to the effort an understanding of how to build the best platform from scratch, as well as what that platform should look like, unencumbered by legacy technology or market structure. ***FTX has aimed to combine the best practices of the traditional financial system with the best from the digital-asset ecosystem.***

Early International Success. The international *FTX.com* exchange has been successful since its launch. This year around $15 billion of assets are traded daily on the platform, which now represents approximately 10% of global volume for crypto trading. The FTX team has grown to over 200 globally, the majority of whom are responsible for compliance and customer support. The FTX Group's primary international headquarters and base of operations is in the Bahamas, where the company is registered as a digital-asset business under The Bahamas' Digital Assets and Registered Exchanges Act, 2020 (DARE).

FTX % global volume, 15d

In addition to offering competitive products, the FTX platforms have built a reputation as being highly performant and reliable exchanges. Even during bouts of high volatility in the overall digital-asset markets, the *FTX.com* exchange has experienced negligible downtime and technological performance issues when compared to its main competitors. We believe the dual-track focus on customers and reliability, plus compliance and regulation, are key reasons why FTX has also experienced the fastest relative volume growth of all exchanges since January 2020.

The core product consists of the *FTX.com* website that provides access to a market place for digital assets and tokens, and derivatives on those assets. Platform users also can access the market through a mobile device with an FTX app. The core product also consists of a vertically integrated, singular technology stack that supports a matching engine for orders, an application programming interface or API, a custody service and wallet for users, and a settlement, clearing and risk-engine system. In a typical transaction, the only players involved are the buyers, sellers, and the exchange/clearinghouse.

The FTX Group has operations in and licenses from dozens of jurisdictions around the world, including here in the U.S., Europe, and Japan. At the time of this writing the FTX platforms have millions of registered users, and the FTX US platform has around one million users. For *FTX.com*, roughly 45 percent of users and customers come from Asia, 25 percent from the European Union (EU), with the remainder coming from other regions (but not the U.S. or sanctioned countries, which are blocked). In comparison to the international exchange, nearly all users of *FTX.us* are from the U.S.

Commitment to a Diverse Workforce. We are proud of our workforce at FTX and believe that one of our key strengths is a culture of mutual respect and cooperation. This type of culture is borne from the diversity of our team, which necessitates a spirit of empathy, understanding and humility. These traits in our workforce are good for business and are much of the reason we have been successful at understanding our customers and their needs, and executing on products that meet their needs. FTX has employees from all over the world with diverse ethnic backgrounds, and 60 percent of women in our workforce are in senior management positions. The majority of our global leadership comes from diverse backgrounds.

Commitment to Giving Back. FTX is committed to improving the lives not just of our customers through superior products, but also the lives of those in the broader global community. Toward this end, FTX created the FTX Foundation, founded with the goal of donating to the world's most effective charities. At minimum, one percent of net fees from FTX transactions are donated to the foundation; additionally, FTX's founders have pledged to donate the majority of what they make. Mr. Bankman-[F]ried has personally committed to donating 99% of his wealth. In 2022 alone, FTX, its affiliates, and its employees so far have donated over $100 million to alleviate global poverty, provide ventilators to countries ravaged by [COVID], provide financial services to the un- and under-banked, and combat climate change by ensuring FTX is carbon-neutral, and help the world achieve a brighter future.

FTX has launched additional philanthropic initiatives including the FTX Future Fund which invests in ambitious projects aiming to improve humanity's long-term prospects. FTX Community's philanthropic efforts are focused on global poverty, animal welfare, and community outreach. In 2021, FTX Community organized the *FTX Charity Hackathon* * and awarded $1 million to a local student group with the best idea to improve mental and physical health.

Commitment to Carbon Neutrality. FTX Climate is a comprehensive initiative to make FTX carbon-neutral, support important environmental projects, and fund transformational research on the most impactful solutions to climate change. FTX plans to spend at least $1 million annually through FTX Climate. FTX has endeavored to take ownership of our portion of the environmental costs of mining associated with public blockchains and has purchased carbon offsets to neutralize those costs, in addition to funding research. Those interested in learning more about these initiatives can find more information at *https://www.ftx-climate.com*.

Banking the Un- and Under-Banked. FTX is dedicated to harnessing the power of crypto to tangibly improve lives. We are working with nonprofit organizations, cities and counties to make the financial system more inclusive. According to Federal Reserve estimates, 70 million Americans are either unbanked or underbanked. They lack a safe place to store money and pay exorbitant fees to cash checks. Millions more are banked but face high fees when their balance falls below a minimum. Members of these communities often do not have insured checking accounts, for a variety of reasons, including credit histories. The legacy bank settlement system makes it hard to see realtime balances, and leads to overdrafts, which leads to higher fees. Our bank the unbanked program offers those cut out of the financial system a free bank account and debit card linked to a crypto wallet. There are no fees, and no minimum balances. Transferring funds is virtually free and instantaneous and can be accessed on a phone. They can use it to receive money, make payments and build savings. There are no fees and no minimum balance. Transferring funds through the crypto wallet is virtually free and instantaneous. We began our program in South Florida in partnership with OIC of South Florida and Broward County Government, and have recently announced a new million dollar program with the City of Chicago, and look forward to expanding to many other cities and communities across the country.

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* *https://ftxcharityhackathon.com/*.

Humanitarian Aid in Ukraine. Ukraine is deploying digital assets to defend against Russia's invasion and support the population. In collaboration with the Government of Ukraine, FTX is converting millions of dollars in wartime crypto donations to fiat for the National Bank of Ukraine. This marks the first-ever instance of a cryptocurrency exchange directly cooperating with a public financial entity to provide a conduit for crypto donations. Facilitated by FTX, the Ukrainian Government has purchased crucial defense and humanitarian equipment including medicine, ballistic plates for bulletproof vests, walkie-talkies, lunches for soldiers, thermal imagers and helmets. Ukraine's Deputy Minister of Digital Transformation has noted, "each and every helmet and vest bought via crypto donations is currently saving Ukrainian soldiers' lives." Additionally, when the war broke out in Ukraine, FTX gave $25 to every Ukrainian user of our platform.

U.S. Operations and FTX US Derivatives. FTX services U.S. customers through the FTX US businesses, which includes the spot exchange, FTX US Derivatives (*https://derivs.ftx.us/*), the NFT marketplace, and a soon-to-go-live FINRA broker dealer (FTX Capital Markets). FTX US is housed under a separate corporate entity from FTX international and is headquartered in Chicago, IL. It has a similar governance and capital structure to the overall corporate family, and also has its own web site, *FTX.us,* and mobile app. As with *FTX.com,* the core product is an exchange for both a spot market for digital assets as well as a market for derivatives on digital assets. Like other crypto-platforms in the U.S., the spot market is primarily regulated through state money-transmitter laws. FTX.us and FTX US Derivatives (FUSD) are being integrated into one user-experience platform and web site, but for now these two categories are separated in the United States, with spot market trading on *FTX.us* and derivatives trading offered through FUSD.

FUSD was formed through the acquisition and re-branding of LedgerX and is being integrated with the overall FTX US platform. The product offers futures and options contracts on digital assets (or commodities) to both U.S. and non-U.S. persons. FUSD operates with three primary licenses from the CFTC: a Designated Contract Market (DCM) license, a Swap Execution Facility (SEF) license, and a Derivatives Clearing Organization (DCO) license. Prior to its acquisition, this business was the first crypto-native platform issued a DCO license by the CFTC in 2017, which was a milestone for the agency and the digital-asset industry. That license was later amended in 2019 to permit the clearing of futures contracts on all commodity classes.

FTX US Derivatives "Equitable" Market Structure. On the FUSD platform, users can trade a Bitcoin Mini Option or Ethereum Deci Option, a Next-Day Bitcoin Mini Swap or Next-Day Ethereum Deci Swap, and a Bitcoin Mini Future. For now, all of these contracts are fully collateralized. FUSD operates its trading platform with the option of direct access to the market and clearinghouse for users, which allows those who access the platform in this manner to become direct members of the FUSD clearing house. In practice, this allows any individual or institutional investor to onboard the FUSD platform by visiting the FUSD web site and completing the on-boarding process, or by connecting to the platform through the FUSD API. Importantly, FUSD is also willing for intermediaries to connect and provide their own customers access to FUSD products for trading, which is contemplated both by FUSD's existing clearing order, by FUSD's active rulebook, and confirmed publicly by the company's leadership at FIA's conference in Boca Raton, FL this year. By providing both options to investors for accessing FTX products—direct access or intermediated access—FTX maximizes choice for the investor and likes to think of this market structure as a more equitable market structure. For direct-access users, FTX also provides all of the applicable suitability controls and KYC processes that are often done by intermediaries, ensuring that the standard safeguards are in place whichever way customers access the platform.

While this market structure is not unusual among global derivatives exchanges (it is the norm for digital-asset exchanges that list derivatives products), it is not the common market structure for the U.S. derivatives market. Nonetheless, the FUSD market structure is familiar to the CFTC and permitted under the CFTC's regulations, as evidenced by the fact that FUSD has been operating and supervised by the CFTC since 2017; in addition, ICE NGX operates a CFTC-licensed, direct-member model that offers margined products (see *https://www.theice.com/ngx*); ErisX (*https://www.erisx.com/*); Nadex (*https://www.nadex.com/*).[1]

The FTX Application Before the CFTC. When the FUSD DCO was originally approved by the CFTC, the order granting the license limited the products that the DCO could clear to fully collateralized derivatives. In December 2022, FUSD submitted an application to amend its DCO license (FTX Application) to allow FUSD

[1] *https://www.cftc.gov/PressRoom/PressReleases/6833-14.*

to clear margined futures contracts.[2] The submission was made after many months of informal discussions with the CFTC staff, and after voluminous materials were created in support of the application and made part of the submission. Those discussions led to various adjustments and edits to the materials during the process.

On March 10, 2022, the CFTC released a request for comment on the FTX Application and posed a number of questions to the public for consideration. The period for comment originally was 30 days but the CFTC extended it for another 30 days, which ended May 11, 2022.[3] The CFTC May 11, 2022 also has noticed a staff roundtable for May 25, 2022, where the agency will oversee a discussion on issues related to intermediation in the U.S. derivatives market place.[4] To be sure, the CFTC has responded to and addressed the FTX Application in a very deliberate and transparent manner, allowing considerable opportunity for the public and the industry to comment on this narrow licensing matter. Under the CFTC's regulations, the process for applying for a DCO license is not required to be the subject of public comment and normally is not subjected to the same level of public scrutiny. This is in addition to a large amount of time that the staff has spent evaluating the FTX Application.

Discussion

In this discussion I will address the following key points related to the FTX Application: (1) the sound and conservative approach to risk-management taken by the FUSD platform; (2) how FTX promotes equitable access while ensuring adequate customer protections to users of the FUSD platform; (3) how the innovations of the FTX Application address many pain points experienced by the U.S. derivatives market place; and (4) the importance of promoting responsible innovation and competition in the U.S. derivatives market place. While discussing these points this testimony references relevant CFTC regulations as needed, as well as international considerations related to equivalency determinations made by other jurisdictions.

1. The FTX Risk-Management System is Tested, Safe and Conservative

The FTX Application before the CFTC proposes a risk-management system that is safer and more conservative than what is normally seen in the U.S. derivatives markets for a number of reasons. The proposed risk-management system, moreover, is consistent with CFTC regulations, including those related to DCO risk management. The Commodity Exchange Act (CEA), which authorized the CFTC and its regulatory authorities, is purposefully principles-based and flexible in allowing each DCO to implement a particular risk-management program for the market that it clears, so long as the core requirements of the CEA are met.[5] Pursuant to Congressional intent, the CFTC's regulations give discretion to the DCO in the exact design of the risk-management system, and give the CFTC the authority to determine whether that design is consistent with the CEA.[6] With this legal basis in mind, FTX has designed a system that has several key features that reflect a more conservative approach to risk management.

Real-Time Risk Assessment. First, the FTX risk-management system assesses risk on a nearly real-time basis, assessing customers' trading positions and account balances every few seconds to determine whether a customer has adequate resources or collateral in their account. This risk-exposure time period is substantially shorter than what is typically seen on other derivatives exchanges in traditional finance, ensuring on a more frequent basis that adequate collateral is on hand, rather than waiting longer for risk in the portfolio to potentially increase. This contrasts with most traditional markets, where risk typically is monitored on a less frequent basis.

Prefunded Collateral Deposits Instead of Credit Extensions. Second, the system also requires that customers transfer the required collateral to support their trading to the FTX platform before they can begin trading. The amount of collateral required is based on a proven risk methodology that would cover at least 99 percent of the one-day portfolio returns using appropriate weightings for base VaR and stress VaR. To account for stress scenarios for a particular asset, the model looks at both historical as well as hypothetical scenarios to appropriately calibrate necessary resources. Notwithstanding the shorter risk-exposure time period the FTX system relies on, for its CFTC risk model FTX relies on a time period of 24 hours to calculate collateral requirements based on regulatory requirements, building in an additional buffer to the original 99% margin calculation. On traditional deriva-

[2] FUSD currently only offers futures, options, and swaps on digital asset commodities.
[3] *https://www.cftc.gov/PressRoom/PressReleases/8499-22.*
[4] *https://www.cftc.gov/PressRoom/PressReleases/8499-22.*
[5] *Derivatives Clearing Organization General Provisions and Core Principles* ("DCO Final Rule"), 76 FED. REG. 69334, 69335 (Nov. 8, 2011).
[6] *Id.* at 69365–76.

tives exchanges collateral is instead generally based on credit, exposing all market participants if that credit decision turns out to be unwarranted.

Market-Responsive Liquidations Rather Than Risk Buildup. Third, the risk system has a real-time liquidation feature to prevent a build up of risk in a customer portfolio. If a customer begins to suffer trading losses and their collateral balance declines toward minimum margin requirements, an automatic liquidation process uses rate-limited, marketable limit orders to reduce risk as the customer account value falls below the maintenance margin level. As a result, customers are incentivized to manage their account collateral and proactively add collateral or reduce risk positions prior to partial auto-liquidation. ***Users of the platform receive ample and repeated notice that a liquidation of a position could ensue—the FUSD platform provides a series of warnings that a customer account is reaching levels that could trigger the risk system's liquidation feature.***

Notably, unlike traditional platforms, the FTX risk system does not extend calls for additional margin or extend credit to the customer hoping that such a call can be met—the system is based on a presumption that FTX will not have recourse against any customer for credit losses. On traditional exchanges it can take days to begin attempting to liquidate a large position, by which time it can be substantially more underwater than it was initially. This also means that FTX's risk system is non-recourse, and so customers cannot lose more than they proactively deposited to the clearinghouse prior to trading, unlike traditional platforms that may attempt to seize a customer's other assets.

Auto liquidations on the platform are not expected to be the norm or common as some have feared, particularly because of the conservative initial-margin methodology FUSD has used. With initial margin required by FUSD based on a 24 hour period of risk, but with the period of risk assessed measured in seconds, the amount of initial margin collected by FUSD will be substantially higher than the risk model actually requires. This means that the risk of auto liquidations of positions goes down, minimizing the number of instances this feature is deployed. Indeed, on the FTX international platform, the notional value of liquidated positions is well less than one percent of all notional activity on the platform historically. Intermediated users also will have opportunities to avoid auto liquidation through their FCM's extension of credit, if such a product is offered.

Observers have asked whether the auto-liquidation feature could promote "pro-cyclicality" in a market, exacerbating or accelerating declines in asset prices. The risk of pro-cyclicality comes from the interplay between margin calls and market moves. In particular, if markets start moving down[up], that could cause selling[buying] margin calls, which could move markets further down[up], creating a cycle. The core parameters that control this are:

1. Market liquidity
2. Margin call concentration
3. Original market move

If (1) is much greater than (2), the risk of strongly pro-cyclicality is low. If (2) is comparable to (1), there is larger risk. In order for there to be a large risk of a pro-cyclic event, you also have to have a large enough initial market move to trigger the cascade.

Over the past few years, the risk of pro-cyclic behavior has dropped substantially on the FTX international platform. Market liquidity has increased substantially, from roughly $10 billion of daily digital asset volume in 2019, to ~$150 billion today. Here is some information from the two largest moves in cryptocurrency markets:

Day	BTC move	ETH move	FTX volume	FTX OI	Liquidations	Insurance fund
2020–03–12	−39%	−44%	4,441,696,624	228,317,363	44,946,399	−410,638
2021–05–19	−14%	−26%	53,068,090,693	3,718,475,962	1,679,839,594	−4,686,029

Both March 12, 2020, and May 19, 2021, represented elevated risk days for procyclical behavior, with market moves of roughly 40% and 20%, respectively. The scale of the marketplace grew substantially over that year, with volume and open interest climbing by more than 10x, and liquidation volume growing by more than 30x. Notwithstanding the higher number of liquidations, the growth in the liquidity of cryptocurrency markets helped to buffer the moves, creating less total price movement on the day.

In any case, FTX has addressed risks related to pro-cyclicality in a comprehensive manner. First, the FUSD risk model follows various CFTC regulatory requirements related to the margin model that are designed to address pro-cyclicality. Second, the FTX trading platform sets slowly moving price bands for certain contracts, where the exchange will not accept trades or orders that are set outside the minimum and the maximum of the price range for that particular contract. These price bands have the effect of mitigating the impact of erroneous orders, momentary illiquidity, or large concentrated buying or selling of contracts that could momentarily exhaust the orderbook. They also act as a temporary circuit breaker, preventing markets from being able to quickly decline or increase more than a certain amount while creating time for algorithms to be inspected and liquidity to refresh.

Additionally, FUSD limits the rate at which it closes customer positions to be within a small fraction of global volume. While this will not entirely eliminate the price impact of liquidations, it will ensure that the liquidations are much slower than the rate at which liquidity can be transported to the orderbook by sophisticated market participants, mitigating the risk of inefficient short-term price impact. Together these market and risk controls work to stem pro-cyclical trends in the FTX order book, including trends influenced by the auto-liquidation feature of the FTX risk engine. With appropriate calibration of each of these controls, the FTX risk-management system promotes risk-reducing platform operations that also limit systemic risks throughout the market ecosystem.

It is important to note that the absence of the auto-liquidation feature would have a pro-cyclical impact on markets but that would manifest in a different manner. Without auto-liquidation, there would be a call for additional collateral from a customer whose position suffered enough losses to require it. During a period of market stress and declining asset prices, market participants operating under this model would be under pressure to find liquid resources to make a margin call at a time when liquidity becomes more scarce. There are trade-offs to any risk-management system and in times of market stress, pro-cyclicality always will be a risk to address and manage; FTX believes its risk system does so most effectively and appropriately.

One way to view the decisions made by the risk engine is through the lense of a particular account. If a particular user's collateral is decreasing and nearing empty, the combination of real-time assessment and collateral prefunded directly at the clearinghouse allows FTX's risk model to ascertain exactly what the account's risk level is. This means that the risk engine can delay liquidating until the account is nearly out of collateral, while still successfully closing down the account's position in time to avoid a default. In a traditional, slower model, the risk engine would have had to choose between margin calling the account much sooner—building in days of delivery time—or risking the account defaulting and risk spreading to the system, as happened recently on another commodity exchange.

Backstop Liquidity Providers to Address Defaulting Positions. Fourth, the FTX risk-management system relies on backstop liquidity providers (BLPs) to take on the portfolio of a participant in default. To wit, if a customer's account value continues to decline further to a determined margin threshold, then the system declares a default and the risk position is moved automatically to the contractually bound BLPs. Firms volunteer to be BLPs—no one is forced to—but when a firm does become a BLP, they are automatically passed liquidating positions in real time and are unable to reject it, legally bound to provide liquidity when it is most important.

Over-Capitalized and Conservative Guaranty Fund to Absorb Default Losses. Finally, after BLPs assume and manage the risk positions of participants in default, and if there remain accounts with negative value, the FTX guaranty fund will absorb those remaining negative values. The sizing of the guaranty fund has been undertaken very conservatively, based on a multiple of a conservative and reasonable estimate of ten percent of total outstanding initial margin posted on the FUSD platform, which resulted in a calculation of $250 million cash now deposited unencumbered in a bank account held at Bank of America. Historically, on *FTX.com* less than one percent of this amount has been drawn from the *FTX.com* guaranty fund.

Nonetheless, FTX is committed to growing the guaranty fund's minimum size as activity on the platform grows: Instead of fixing the fund's size to sustain the failure of the largest clearing FCMs ("Cover-1" or "Cover-2"), we have instead voluntarily committed to cover 10% of total outstanding initial margin, up to a "Cover-3" standard if required. This is substantially more conservative than is required by regulation. (I have included as an exhibit to this testimony a fuller explanation of how FTX sized the guaranty fund for the FTX Application.[7])

Some observers have assumed that if the FUSD risk model relies only on its own capital (and not guaranty-fund contributions by member FCMs), and the guaranty fund is sized based on the CFTC's "Cover-1" standard with only non-institutional participants, then the guaranty fund must be too small to sufficiently absorb losses.

[7] See also *https://www.ftxpolicy.com/ftx-guaranty-fund*.

Instead, FTX has gone above and beyond the regulatory requirements, and well above what has been necessary or required based on our experience over the past years of operation internationally.

All other things remaining equal, this type of system is a more conservative approach to managing risk. So long as the collateral required by the system's risk model is adequate, and so long as the platform deploying the risk system is otherwise operated in a resilient manner, this type of system will better prevent massive losses by a customer that could have implications for the broader market by requiring collateral to be posted to the clearinghouse, and by acting promptly in the case of large market moves. And perhaps most importantly, the FUSD risk-management system also aligns with the CFTC's regulations.

2. FTX US Derivatives Promotes Equitable Access While Ensuring Customer Protections

FTX is focused on compliance, transparency, education, and assessing users' knowledge and understanding of our products to create responsible equitable access. FTX believes that all users (provided they pass our KYC/AML program and are not otherwise barred by law or past improper conduct) should have full access to FTX, so long as they are sufficiently informed and can demonstrate that they understand what they are trading; we also believe that it is our duty to ensure that those safeguards are in place. This approach is fully aligned with the Congressional mandate to provide for fair and open access to CFTC markets in a manner that is consistent with prudent risk management.[8]

Hallmarks of Equitable Access. FTX's real-time monitoring of participant positions enables it to determine, at all times, whether a participant's account has sufficient cash and collateral to meet its margin obligations to the DCO. Because FTX monitors participant accounts 24/7 and addresses risk in real time, there is no need to establish minimum capital requirements for each participant, as is the common approach to U.S. investors for credit and risk purposes (FTX does collect financial information from all users during the on-boarding process). Instead, FTX's risk-management framework enables it to ensure at all times that each participant has sufficient financial resources to meet its current obligations arising from participation in the DCO. Any "means" testing that constrains access to FUSD therefore stems from available resources that the user has posted as collateral on the platform, not otherwise on personal wealth.

Notwithstanding the above, the vast majority of FTX users on all of its platforms are highly sophisticated traders. On the FTX international platform, for example, more than 90 percent of the trading volume comes from users trading more than $100,000 in volume per day. FTX anticipates that the user base for FUSD would be similar if the FTX Application is approved.

Another hallmark of equitable access is free and open access to all market data on FTX platforms including FUSD. Users, regulators, and other market participants can access all public market data via the FTX website, mobile app, or API in real time. Additionally, there are no platform-access or connection fees—all users large and small have the same options for connecting to the matching engine and clearing house. Users have access to their entire account, balance, funding, and trading history displayed via website, mobile app, and API. All fees charged are displayed transparently in a user's market data.

Customer Protections—Protection of Customer Funds. In the case of a FUSD user who also is a customer of an FCM, the full panoply of FCM requirements would apply, including those that relate to the safekeeping of customer assets. Similarly, a direct-access user of FUSD also enjoys comparable protections under the relevant rules applicable to all DCOs. These rules include those related to commingling of DCO and clearing member customer positions, as well as rules on money, securities, or property received to margin, guarantee, or secure such positions.[9] Pursuant to its current CFTC clearing order and rulebook, FUSD separately accounts for and segregates from FTX proprietary funds all participant funds used to purchase, margin, guarantee, secure, or settle positions. Finally, restrictions on investing customer collateral apply equally to the FUSD DCO.[10]

Customer Protections—Robust Systems Safeguards. The FUSD platform, like all DCMs and DCOs, is subject to the CFTC's system-safeguards regulations,[11] which require a program designed to identify and minimize operational risk and protec-

[8] See CEA section 5b(c)(2)(C), 7 U.S.C. § 7a–1(c)(2)(C); see also CEA section 5(d)(2), 7 U.S.C. § 7(d)(2).

[9] CFTC Regulation 39.15.

[10] CFTC Regulation 1.25.

[11] CFTC Regulation 38.1050–51 and Regulation 39.18.

tions from cyber-related threats. FTX has implemented best-in-class controls relating to information security, including controls related to: (1) access to systems and data; (2) user and device identification and authentication; (3) vulnerability management; penetration testing; (4) business continuity and disaster recovery processes; and (5) security incident response and management, among others.

Customer Protections—Related to Trading. In its capacity as a DCM, the FUSD platform provides the same types of customer protections and transparency ***related to trading*** on the platform when a user accesses the platform directly as the user would experience through an FCM. In the absence of an intermediary standing between the FUSD platform and the user, FTX would provide the following types of protections or reports normally provided by an FCM:

- Disclosures related to the risks of trading; [12]
- Order and transaction recordkeeping obligations; [13]
- Minimum trading standards; [14]
- Trading authorization requirements; [15]
- Requirements to produce monthly statements and confirmations; [16]
- Conflict of interest and trading standards.[17]

Again, FUSD has been operating under CFTC supervision for years and providing these protections as required, and would continue to do so if the FTX Application is approved. Over years of operation, FUSD has demonstrated how its market structure and customer-protection regime can provide the same or superior level of protections even for those users who access the platform directly.

3. The FTX Application Addresses Long-Standing Industry Pain Points

FTX is eager to help contribute ideas and solutions to some of the challenges the global derivatives industry has faced, and we believe that approval of the FTX Application could promote this in some measure. There is a trend toward more derivatives trading taking place on exchanges or otherwise being cleared by clearinghouses, meeting a policy goal reflected in the Dodd-Frank Act and similar policy efforts globally.[18] But this trend has witnessed the coincident rise in regulatory-related costs for intermediaries (including regulatory-capital requirements), and the low interest-rate environment over recent years since the 2008 financial crisis (although the interest-rate environment is changing).

These factors have led to some market concentration in the derivatives market, which could increase systemic risk, and limit access to markets and products in a way that ultimately could hamper risk-management efforts (for which derivatives markets are formed). For example, there were 176 FCMs registered with the Commodity CFTC in early 2008, while today there are only 61, with only 51 holding client margin for futures, and 18 for cleared swaps.[19] Meanwhile, the amount of margin held by U.S. FCMs is at all-time historical highs, meaning risk is increasingly concentrated in fewer intermediaries, which in turn leads to higher capital requirements for these firms.[20] (In Section 4 of this testimony below, I discuss market concentration in exchange trading among the small number of U.S. derivatives exchanges.) Additionally, efficient movement of collateral between market participants can be encumbered by legacy technology systems used by those participants.

Approving the FTX Application could help address concerns related to market concentration, consequent systemic risk, rising costs, and collateral movements, albeit in measured ways. First, the FTX Application envisions the "equitable access" market structure earlier described that would allow investors to access the FUSD mar-

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[12] FUSD is subject to exchange trading related public disclosure requirements as set forth in DCM Core Principle 7, and CFTC regulations 38.1400 and 38.1401, which are comparable to the duties of an FCM.

[13] FUSD is subject to exchange trading related recordkeeping requirements as set forth in DCM Core Principle 18, and CFTC regulations 38.950 and 38.951.

[14] FUSD is subject to exchange trading related requirements to protect its markets and market participants as set forth in DCM Core Principle 12, and CFTC regulations 38.650 and 38.651.

[15] CFTC Regulation 166.2.

[16] FTX provides IRS Form 1099s to customers, trade history is available to each customer.

[17] FUS is subject to exchange-trading, conflicts-of-interest requirements as set forth in DCM Core Principle 16, and CFTC regulations 38.850 and 38.851.

[18] *https://www.greenwich.com/fixed-income/derivatives-market-structure-2022-identifying-opportunities-growth.*

[19] *https://www.cftc.gov/MarketReports/financialfcmdata/index.htm.*

[20] *https://batonsystems.com/the-broken-fcm-model-could-distributed-ledger-technology-be-its-saviour/.*

ket directly if they choose, or through an intermediary. Importantly, this market structure not only promotes market access but also relieves cost pressures on those intermediary FCMs that choose to connect to the platform. This is so because the FUSD risk model does not require guaranty-fund contributions from the FCM, thus reducing the FCM's costs—including regulatory costs—related to connecting and offering the FUSD products to its customers.

Second, the FTX real-time risk model promotes more efficient risk management that requires relatively less margin from investors compared to other models. This is due to the shortened period of risk that the risk system measures and relies on for collecting adequate margin from investors. Broader adoption of this type of model could eventually lead to less margin costs for a broader segment of the market, freeing up precious capital for other investments and uses.[21] Reducing margin held by an increasingly smaller number of intermediaries also would lower systemic risk in the markets overall.

Third, FTX is a digital-asset-native exchange and clearinghouse that has helped pioneer new technologies for more efficient payment and collateral transfers. Any reliable and resilient payment system that reduces the settlement times of payments and transfers reduces risk. If the FTX Application is approved and FTX can bring those innovations responsibly and through approval of the CFTC, the approval could help reduce settlement risk not only on the FUSD platform, but encourage the same on others. Broader adoption of payment technologies that reduce settlement times and risk also would benefit intermediaries in the ecosystem, whose regulatory costs would be reduced by such implementations.[22]

Approval of FTX Application Would Ensure Continued International Cooperation. Continued international cooperation among jurisdictions that host healthy derivatives markets also is important to risk reduction and other market efficiencies that benefit the public. It has been suggested that approval of the FTX Application might have an impact on international recognition of the CFTC's regulatory regime for purposes of equivalency determinations, on the basis that the FUSD DCO would not comply with the international Principles for Financial Market Infrastructures, or PFMIs.

In 2012, the Committee on Payment and Settlement Systems of the Bank for International Settlements and the Technical Committee of the International Organization of Securities Commissions published the CPSS–IOSCO Principles for Financial Market Infrastructures (PFMIs). The PFMIs set out twenty-four principles to be followed to manage market risk in financial market infrastructure. The PFMIs were issued in the wake of the financial crisis in 2008 and reflect international standards that regulatory bodies in individual countries are recommended to implement. In 2013, the CFTC promulgated rules implementing the PFMIs that apply to a certain subset of CFTC-registered DCOs that meet additional requirements under Subpart C of the CFTC's Part 39 regulations. Jurisdictions around the world, including the European Union, have made equivalence determinations based on their assessment of the CFTC's Subpart C of Part 39 regulations.[23] FUSD would not be able to receive recognition under another country's equivalence determination for the CFTC until it satisfies the Subpart C requirements.

The FUSD DCO is not registered under Subpart C of Part 39 at this time, nor has the FTX Application been filed pursuant to Subpart C of Part 39. If the FTX Application is approved, the fact that the FUSD DCO is not registered as a Subpart C DCO would have no bearing on equivalency determinations made by other countries with respect to the CFTC's regulatory regime. Those determinations are based on a review of the CFTC's regulatory regime, not on an individual DCO's operations or compliance profile. Unless the CFTC's regulations are amended in a way that departs from consistency with the PFMIs, equivalency determinations of the CFTC framework made by other countries will remain in place. The CFTC's approval of the FTX Application would not change that.

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[21] The amount of margin posted to intermediaries and clearinghouses for derivatives markets has increased in recent years. See *https://www.greenwich.com/fixed-income/derivatives-market-structure-2022-identifying-opportunities-growth*.

[22] See *https://batonsystems.com/the-broken-fcm-model-could-distributed-ledger-technology-be-its-saviour/*.

[23] *See e.g.,* Commission Implementing Decision (EU) 2016/377 of 15 March 2016 on the equivalence of the regulatory framework of the United States of America for central counterparties that are authorised and supervised by the Commodity Futures Trading Commission to the requirements of Regulation (EU) No 648/2012 of the European Parliament and of the Council (*https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016D0377&from=EN*).

4. The FTX Application Promotes Innovation and Competition

One of the early actions of President Biden and his Administration was to issue the ***Executive Order on Promoting Competition in the American Economy*** (Competition EO).[24] Section 1 of the Competition EO reaffirmed the U.S.'s pro-competition policy and observed:

> "A fair, open, and competitive marketplace has long been a cornerstone of the American economy, while excessive market concentration threatens basic economic liberties, democratic accountability, and the welfare of workers, farmers, small businesses, startups, and consumers . . . [and the] American promise of a broad and sustained prosperity depends on an open and competitive economy."

The Competition EO goes on to assign responsibilities to all agencies, including the CFTC, to:

> "Us[e] their authorities to further the policies set forth in section 1 of this order, with particular attention to . . . the influence of any of their respective regulations, ***particularly any licensing regulations,*** on concentration and competition in the industries under their jurisdiction."

The CEA also specifically refers to competition as a policy goal of the statute, to wit:

> "It is the purpose of this [Act] to serve the public interests . . . and to ***promote responsible innovation and fair competition*** among boards of trade, other markets and market participants."[25]

Congress therefore has enlisted the CFTC to ensure there is competition in the U.S. derivatives markets industry. Indeed, Congress since the beginning of the republic has repeatedly re-affirmed the importance of competition to the continued strength of the American economy and thus the strength of the U.S. globally, including through the body of antitrust law referenced in the Competition EO.

According to data provided by the Futures Industry Association, the total monthly volumes for futures trading in North America for March 2022 was 504,852,212 futures contracts traded.[26] For March 2022, the two largest U.S. derivatives exchanges reported trading volumes of 488,727,555 futures contracts traded.[27] This figure reflects **97 percent** of the total futures trading volume for March 2022.

These same two largest U.S. exchanges are the only CFTC-licensed venues offering margined futures on BTC at the moment. At the time of this writing, there were $1,126,498,100 of notional daily trading on one platform,[28] and $1,334,715 on the other.[29] FTX would be able to contribute to this data set only if the FTX Application is approved.

If the FTX Application is approved by the CFTC, FUSD plans to list cash-settled futures contracts on BTC and ETH. The FTX Application and the model designed to risk manage these futures contracts is specific to digital assets and is based on several years of experience successfully operating a similar risk model on the FTX international platform. At the time of this writing, FTX has no plans to list futures contracts on other asset classes, and in any case would need to undertake the process of CFTC reviewing its risk model and product specifications for any additional products on different asset classes.

FTX encourages the Committee to approach this hearing with this information, pertinent considerations and policy goals related to competition and innovation in mind. Indeed, this Committee should be commended for reviewing whether there is market concentration in other sectors of the economy under its purview, consistent with the goals of the Competition EO and longstanding U.S. policy related to competition.[30] FTX respectfully requests that the Committee do the same in reviewing FTX's licensing matter. FTX strongly believes that if the FTX Application is approved, the company will help address the challenges facing the U.S. derivatives

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[24] *https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/.*

[25] The Commodity Exchange Act, 7 U.S.C. section 5(b) (emphasis added).

[26] *https://www.fia.org/resources/etd-volume-march-2022.*

[27] See *https://www.cmegroup.com/daily_bulletin/monthly_volume/Web_Volume_Report_CMEG.pdf; https://www.theice.com/marketdata/reports/8.*

[28] *https://bitcoinfuturesinfo.com/market-share-and-futures-curve.*

[29] *Id.*

[30] This Committee held a hearing on April 27, 2022, titled "An Examination of Price Discrepancies, Transparency, and Alleged Unfair Practices in Cattle Markets," where among other issues concentration in the meat packing sector were reviewed and discussed. *https://agriculture.house.gov/news/documentsingle.aspx?DocumentID=2491.*

market place, reduce market concentration and unleash many of the broadly beneficial and impactful results that innovation and fresh thinking can bring to the U.S. economy. The over 1,490 public comments submitted to the CFTC in support of our application from academics, industry groups, investors and public-interest groups reflect that many Americans agree.

Conclusion

FTX is grateful to this Committee for the opportunity to share information about the digital-asset industry, our business, as well as the FTX Application.

It's extremely important that there is regulatory clarity and oversight for digital assets in the U.S. Currently, there is a lack of customer protection, with very little oversight of the transparency and products that customers are accessing. The U.S. economy is losing out: 95% of digital asset volume is offshore, meaning a lack of revenue and income for Americans. Finally, U.S. investors are at a disadvantage relative to those from other jurisdictions, facing markets with much less liquidity. Having a clear framework applied for markets and assets in the digital asset ecosystem would protect customers, move the industry forward, advance U.S. economic interests, and protect against system risk.

The CFTC has the tools to be a model regulator for digital assets. The agency and its staff have deep knowledge of the ecosystem; the staff has already dove into the details of blockchain-asset custody and safeguarding customer assets. The principles-based framework under the CEA is a good fit for the nascent ecosystem, which, combined with the bipartisan nature of the agency, allow it to nimbly but carefully apply its core principles and protections to new asset properties. By taking the lead on enforcement actions in the ecosystem on unregistered digital asset derivatives, the agency has created a pathway for licensure. Finally, the CFTC already oversees both direct-access platforms, and digital-asset futures—there is nothing fundamentally novel to the agency about FTX's margin application. The industry, Congress, FTX, and consumers have put their faith in the CFTC to provide Federal oversight and a pathway to registration and licensure for digital-asset venues.

In addition, providing licensure for digital-asset exchanges would increase competition in the derivatives exchange industry. Promoting competition has been a focus of the agency, the Biden Administration, House Agriculture Committee Chair Scott, and our antitrust laws. Increased competition benefits U.S. consumers and the U.S. economy and ensures global competitiveness for the country.

To be clear, we are not asking for a less thorough review from the CFTC than is always applied, nor are we looking to discard core customer protections. The CFTC has spent nearly a year digging into FTX's application, and done so with a level of rigor and comprehensive analysis that should make any regulator proud. It is up to the CFTC to make the judgments it feels are in accordance with the CEA and its core principles, and we respect that process and whatever conclusions it ultimately comes to on our margin application.

In order to protect consumers, restore America's global competitiveness in digital assets, allow the industry to function, increase competition, and protect against systemic risk, it's imperative that the CFTC use its jurisdiction over digital-asset commodities to register marketplaces.

EXHIBIT A

Understanding FUSD's Guaranty Fund Sizing

Executive Summary

Many of the questions that FTX US Derivatives has received in connection with its proposal to offer leverage for U.S. crypto futures, and its $250 million guaranty fund (of unencumbered USD cash), relate to perceived uncertainty around how or whether the 24x7 risk model and the guaranty fund will work in times of stress and/or volatility. Fortunately, through FTX's experience running the *FTX.com* trading platform over the last several years, we have objective and historical data based examples that show how well the FTX risk and clearing model works.

In this post, we walk through the model and the real world experience showing that, even on days of 35% or higher movements in the price of bitcoin, *FTX.com* has never had to use more of its guaranty fund than *FTX.com* made in revenue for that day.

We then observe that while the FUSD risk model will follow the *FTX.com* model concept, there are at least two important enhancements that allow it to provide an even greater level of comfort and protection to market participants and regulators.

First, the FUSD risk model assumes that it will take 24 hours to start to close out undercollateralized positions (*versus* the reality of the risk program running in real-time)—meaning that the initial margin requirements themselves are materially more conservative than they need to be.

Second, FUSD has sized its guaranty fund at a level that is many multiples of the amount that even its conservative risk model projects as the required guaranty fund level (*i.e.,* approximately 100 times times the estimated highest daily draw on the default fund in extreme volatility scenarios).

Finally, the FUSD initial margin model uses a sophisticated filtered historical simulation to capture market risk, concentration risk, and liquidity risk, incorporating anti-pro-cyclicality controls such as stress VaR and volatility floors.

CFTC Comment Period (Open Until May 11, 2022)

As many are aware, FTX US Derivatives ("FUSD") operates a futures exchange and derivatives clearinghouse in the U.S. via licenses issued by the U.S. Commodity Futures Trading Commission ("CFTC"). Currently, FUSD is only permitted to list and clear fully collateralized derivatives products; however, FUSD has requested that the CFTC amend FUSD's derivatives clearing organization ("DCO") registration to permit FUSD to list and clear leveraged/margined futures contracts. Once approved, FUSD intends to list and clear leveraged/margined futures and options contracts on digital assets, including bitcoin and ether, among others.

The CFTC has invited the public to comment on FUSD's request, through May 11, 2022. The CFTC's six-page request for comment is a straightforward list of questions and may be viewed here: *https://www.cftc.gov/media/7031/CommentFTXAmendedOrder/download*. Any member of the public may submit a comment here, through May 11, 2022: *https://comments.cftc.gov/PublicComments/CommentForm.aspx?id=7254*.

Robustness of the FTX Clearing Model and Guaranty Fund

The FUSD clearing and risk model for leveraged futures products is patterned on the clearing and risk model that FTX has deployed and operated on its non-U.S. venue, *FTX.com*, for several years. *FTX.com* routinely handles the trading and clearing of $10 billion or more in transactions daily, measured on a notional basis (any interested observer can track daily notional volume and open interest levels for all of the major global crypto exchanges here: *https://ftx.com/volume-monitor*). Notably, the *FTX.com* risk model operates on a 24 hours a day, 7 days a week basis, and under this risk model positions that become undercollateralized are de-risked (or "liquidated") on an orderly step basis (*i.e.,* the overall position is reduced/closed out some percent at a time, subject to prevailing liquidity and market conditions) through a process that runs essentially in real time. This is in contrast to the traditional clearing and risk model deployed by most of the U.S. futures market today—where undercollateralized positions may generally be held open for a day or more (particularly if over a weekend), even if the underlying collateral has been completely exhausted, while the clearinghouse and typically its clearing members wait for the owner of the undercollateralized position to respond to a request (*i.e.,* a margin call) to deliver collateral (or margin) in an amount sufficient to bring the position back above water. Liquidation or close out of the position is then generally initiated only when the owner of the position has failed to meet this margin call after some determined period of time—which could be on a 24 hour delayed basis or, depending on the market and timing, several days delayed basis. During that gap, the position can continue to deteriorate and the level of insufficiently collateralized risk accumulates without being backstopped (other than by the assets of other market participants and the clearinghouse).

Under FTX's model, risk is not permitted to build, unchecked, on an under- or uncollateralized basis, full stop. Instead the FTX risk model, on a 24x7 basis, operates to de-risk (and liquidate) these positions in real time, down to levels where the collateral that is posted is sufficient to support the remaining position (if any). Where the posted collateral is insufficient to support any remaining position, the positions may be given over to backstop liquidity providers (each, a "BLP", which generally are sophisticated trading firms with substantial balance sheets that have pledged, via contractual agreement and actually posted collateral, to take over liquidating positions programmatically and in real time; the BLPs collectively have billions of dollars of collateral sitting in FTX's clearinghouse at all times). If the BLP program is insufficient to take over the position, FTX's guaranty fund (which is funded fully by FTX in cash and has no assessment authority over any other trading participant, clearing member or otherwise) provides a backstop pool of capital to wind-up and close-out the position.

As noted above, many of the questions that FUSD has received in connection with its 24x7 risk model and its $250 million guaranty fund relate to perceived uncertainty about how it may work in times of stress and/or volatility. Fortunately, through FTX's experience running the *FTX.com* trading platform over the last several years, we have objective and historical data based examples to demonstrate its performance.

*Mapping the **FTX.com** Risk and Clearing Model Experience to the FUSD Proposal*

The following core facts underscore our confidence in the implementation of the *FTX.com* risk and clearing model as it has been proposed by FUSD:

While average daily volume ranges from $10 billion to $20 billion notional, per day, *FTX.com* has traded up to $50 billion/day of notional volume and has held up to $11 billion in notional open interest at one point in time.

Over the last 3 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). Generally, *FTX.com* operates on a 5% collateral threshold requirement. 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 U.S. 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 U.S.—say, 15%—the single biggest daily drawdown would have been $1.7 million.

FTX's experience running the FTX risk and clearing model provides very strong support for concluding that "it works", particularly as it is proposed to be implemented at FUSD. The FUSD default fund is super sized ($250 million *versus* a historical draw of less than 1% of that on *FTX.com*). In the U.S., the initial margin collateral requirements are meaningfully higher than the initial collateral thresholds used on *FTX.com,* meaning that we anticipate draws to be even smaller.

Nonetheless, we have already committed to growing the guaranty fund's minimum size as activity on the platform grows: Instead of fixing the fund's size to sustain the failure of the largest clearing FCMs ("Cover-1" or "Cover-2"), we have instead voluntarily committed to cover 10% of total outstanding initial margin, up to a "Cover-3" standard if required. This is substantially more conservative than is required by regulation.

Regarding the risk engine's auto-liquidation feature, two questions often come up: (1) does the risk engine promote pro-cyclicality in the market; (2) what implications does the risk engine's behavior have for systemic risk and contagion; and (3) is there a way for an investor to opt out of the auto-liquidation feature of the risk engine. First, FTX has built in risk-mitigating protections to address pro-cyclicality, including price bands, position limits and concentration charges on platform users whose positions reach a certain threshold—all of these features together restrain the extent to which market prices will move in response to the risk engine liquidating a customer position.

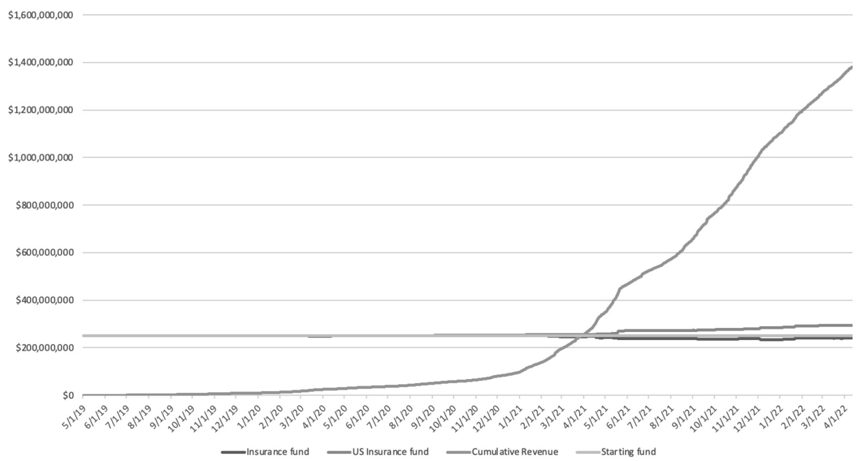
The anti-pro-cyclical nature of the *FTX.com* margin model has been proven over time: Orderly liquidation of undercollateralized positions has been refined and tested through multiple high volatility days and periods over recent years. The risk engine is also built to wind down positions in an orderly manner, limiting its activity to a small fraction of overall market volume so as to avoid undue temporary impact.

Second, by quickly unwinding the riskiest, most undercollateralized positions, the risk engine prevents build-up of credit risk that could otherwise cascade beyond the platform, resulting in contagion. Because the risk engine operates 24x7, moves in the underlying cash markets, which are also 24x7, do not result in excessive credit risk buildup in derivatives markets. This is especially true during overnight, weekend or holiday times, when traditional derivatives markets remain closed. Instead, the platform reduces systemic risk by closing down or otherwise re-collateralizing these positions in real-time (as described below).

Third, the FUSD platform offers multiple methods for connecting to the platform, including through an FCM—indeed, the *FTX.com* platform has brokers connected to the platform today. For users that connect through an FCM to FUSD, there are a variety of methods the FCM could deploy to "shield" an investor from auto-liquidation of her position, including the fee-service of re-collateralizing to the investor's account as necessary to prevent liquidation of the position.

No one is more interested in ensuring that the risk and clearing model holds up in even the most extreme of conditions than us, as we are backstopping it with the guaranty fund. *FTX.com*'s experiences have allowed the FUSD risk team to build a model that is time tested and exceptionally persistent (however measured, across any number of quantitative metrics). The chart below helps illustrate these points in a striking way: Based on historical data, the FUSD guaranty fund would have actually grown in size over time if the FTX margin model had been in operation over the past 3 years, under our anticipated minimum U.S. initial margin requirements.

Insurance Fund *vs.* Revenue



*Above, a graph over the lifetime of **FTX.com** of the performance of its risk engine. The yellow line is a $250m initial guaranty fund size; the blue line is the empirical performance of the **FTX.com** insurance fund, and the orange line is the performance the insurance fund would have had if it had required 15% margin, which is on the lower end of FUSD's anticipated range. The fluctuations are small under both the **FTX.com** and FUSD risk models, and under the FUSD model the guaranty fund actually grows over time. For reference, the gray line is **FTX.com**'s cumulative historical revenue. Net movements in the guaranty fund are less than 1% of the initial size and less than 1% of the revenue **FTX.com** collected over the period.*

	Total	*Daily*	*Max*
Volume traded	*$6,288,391,118,700*	*$5,833,386,938*	*$53,068,090,693*
Revenue	*$1,382,091,723*	*$1,282,089*	*$12,800,764*
Open Interest (approx.)	*$7,000,000,000,000*	*$7,000,000,000*	*$11,000,000,000*
Abs BTC move	*2,989.1%*	*2.8%*	*38.9%*
Abs ETH move	*3,862.6%*	*3.6%*	*43.9%*
Insurance fund net usage	*−$9,468,974*	*−$8,784*	*−$4,686,029*
Insurance fund with U.S. margin	*$45,048,377*	*$41,789*	*−$1,628,656*

The CHAIRMAN. Thank you. And now Mr. Lukken, please begin when you are ready.

STATEMENT OF HON. WALTER L. LUKKEN, J.D., PRESIDENT AND CHIEF EXECUTIVE OFFICER, FUTURES INDUSTRY ASSOCIATION, WASHINGTON, D.C.

Mr. LUKKEN. Chairman Scott, Ranking Member Thompson, and Members of the Committee, thank you for the opportunity to testify. It is indeed great to be back in this Committee room. I am President and CEO of FIA, a leading global trade organization for the futures, options, and centrally cleared derivatives markets. And today indeed is a healthy dialogue for our industry. As someone who has served as CFTC acting Chair and Commissioner, I am proud of the CFTC's mission to not only uphold strong customer protections and police the integrity of the markets but also promote responsible innovation and fair competition among market participants. In crafting this balanced mission, Congress and this Com-