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"Examining Digital Assets - Risks, Regulation, and Innovation."
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Introduction

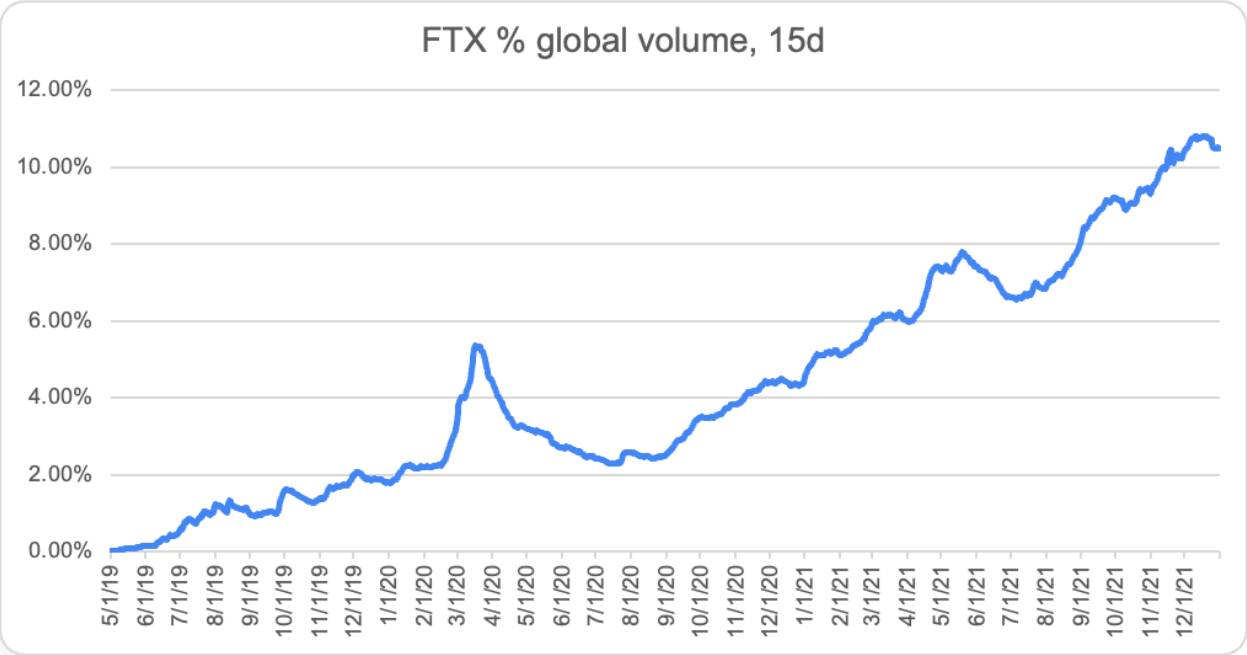
Chair Stabenow, Ranking Member Boozman, members of the committee and distinguished guests, thank you for inviting me to testify before this committee today. It is an honor and a privilege to be before you to share some information and insights into the digital-asset industry as this committee, this chamber and the Congress as a whole deliberate on a variety of key topics stemming from this exciting space. 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

The FTX group of companies (FTX Group or FTX) was established by three American citizens, Samuel Bankman-Fried, Gary (Zixiao) 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, 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 U.S. Commodity Futures Trading Commission (CFTC) as an exchange and clearinghouse. 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.

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 extremely 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).



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 web site 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, without any other intermediaries.

The FTX Group has operations in and licenses from dozens of jurisdictions around the world, including here in the U.S and in Europe. 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.

U.S. Operations. FTX services U.S. customers through the FTX US businesses, which includes the spot exchange, FTX US Derivatives, 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.

The U.S.-derivatives-market product is provided by FTX US Derivatives, which 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. FTX US Derivatives operates with three primary licenses from the U.S. Commodity Futures Trading Commission (CFTC): a Designated Contract Market (DCM) license, a Swap Execution Facility (SEF) license, and a Designated 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 and not just digital assets.

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 Mitigating Climate Impacts. FTX is very serious about minimizing our impact on the global environment where we live and work, and as a company we have taken several important steps to ensure this. Here, I would like to share several key points to explain why FTX's environmental impact is *de minimis*, but nonetheless explain the additional steps the company has taken to reduce even further this impact. *First*, FTX has no factories or physical products and therefore does not leverage global shipment networks, a substantial source of energy consumption. FTX has a small workforce with a small physical-office footprint, renting only a few small offices spread out around the world, and operates online. FTX corporate operations, therefore, do not have direct impacts on climate change at a globally relevant scale.

Second, while digital asset deposits to and withdrawals from FTX platforms unavoidably require some energy consumption as public blockchains facilitate and record those transactions, on FTX over 80 percent of deposits and withdrawals use low-cost, carbon-efficient Proof of Stake (PoS) blockchains. These PoS networks contrast with Proof of Work (PoW) blockchains such as the Bitcoin (BTC) blockchain, which consume significant amounts of energy to maintain the network. By using PoS blockchains for the vast majority of FTX deposits and withdrawals, FTX massively reduces the overall climate impact of blockchains. To facilitate the

remaining approximately 20 percent of deposits and withdrawals, energy consumption is relatively small, but FTX subsidizes the blockchain network fees to share in paying the costs of that energy consumption. Separate from deposits and withdrawals, transactions and transfers on the FTX exchanges themselves (which is the overwhelming majority of our user activity - 100% of our $15 billion in average daily trading volume occurs on the exchange itself) do not require public blockchain activity and require only the amount of energy needed to run a cloud-based trading venue.

Third, FTX also 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. Estimating the costs of energy consumption and carbon output associated with blockchain mining is difficult because mining is decentralized, and discerning how much energy is coming from which source is elusive. Nonetheless, FTX estimates that it costs $1 million per year to take ownership of those costs, and has purchased a total of 100,000 tons of carbon offsets through two providers for $1,016,000. Additionally, FTX through its affiliated arm, FTX Climate, created a comprehensive program to focus on the most impactful solutions to climate change possible. In addition to achieving carbon neutrality, our initial program funds research that we believe can have an outsized impact, as well as supports other special projects and carbon-removal solutions. FTX plans to spend at least $1 million per year through FTX Climate. Those interested in learning more about these initiatives can find more information at https://www.ftx-climate.com.

Fourth, FTX believes energy consumption by PoW blockchains and its impacts should be assessed within the appropriate context, which we believe should include consideration of their benefits, an understanding of their differences with PoS networks and how each type of network is being leveraged and growing, as well as a comparison to other energy-consuming activities or even industries. For example, BTC has delivered benefits to many as measured by access to financial products, asset transmission, and wealth creation, which should be weighed against the network's energy costs.[1]

Additionally, while PoW networks attract attention for their energy consumption, transactional activity on PoS networks is growing substantially due to their ability to process a greater number of transactions in a shorter period of time at a lower cost. FTX believes these PoS networks will become increasingly important over time, which will continue to minimize the overall climate impact of blockchains. And finally, the energy consumption by PoW blockchains is relatively small when compared to other industries to which the BTC network in particular is often compared.[2] Of assets whose futures trade on CFTC-regulated venues, BTC actually ranks fairly low in terms of environmental impact, relative to traditional, physically mined commodities, oil, livestock, and other environmentally impactful assets.

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, which was founded with the goal of donating to the world's most effective

[1] See "Everything We Want Costs Energy, Including Bitcoin," by Benjamin Powers, *Coindesk*, Apr. 22, 2021; https://www.coindesk.com/tech/2021/04/22/everything-we-want-costs-energy-including-bitcoin/; see also "The Bitcoin Mining Network: Trends, Average Creation Costs, Electricity Consumption & Sources," *CoinShares Research*, June 2019 Update, https://coinshares.com/assets/resources/Research/bitcoin-mining-network-june-2019-fidelity-foreword.pdf

[2] See "On Bitcoin's Energy Consumption: A Quantitative Approach to a Subjective Question," *Galaxy Digital Mining*, May 2021, Rachel Rybarcyzk, Drew Armstrong, Amanda Fabiano. https://docsend.com/view/adwmdeeyfvqwecj2.

charities. FTX has pledged to donate one percent of net revenue from fees to the foundation, and its founders have pledged to donate the majority of what they make. FTX, its affiliates, and its employees so far have donated over $50 million to help save lives, prevent suffering, and ensure a brighter future.

Discussion

At the committee's request, in this discussion I will address the following topics: (1) an overview of the products offered by FTX; (2) the current U.S. regulatory landscape and existing regulatory gaps; and (3) a vision for the CFTC as a digital-assets market regulator for the U.S. Throughout this discussion I distinguish our non-U.S. and U.S. businesses by referring to FTX International and FTX US, respectively, where relevant. Furthermore, I will use 'digital assets' generally to refer to digital asset tokens that are generally considered to be a commodity rather than a security.

1. FTX Products and Their Role in the Digital-Asset Economy

Core Product: Digital Asset Exchange. As briefly explained above, FTX's core products are its digital asset exchanges, FTX.com, FTX.us and FTX US Derivatives (https://derivs.ftx.us/) – FTX.us and FTX US Derivatives are being integrated into one user-experience platform and web site. While FTX.com offers both spot market and derivatives trading, those two categories are separated in the United States, with spot market trading on FTX.us and derivatives trading offered through FTX US Derivatives.

On FTX.com and FTX.us, users can trade digital assets with other users for cash, stablecoins and other digital assets. On the spot markets, users can set a variety of different order types on a central limit order book (CLOB). Users are able to offer orders at a specific price (limit order) or trade on the book at the best price shown. A robust price and time priority matching engine sits in between these orders to connect buyers and sellers and display the best available prices.

Futures and volatility contracts related to digital assets also are listed on the platforms as well, with or without leverage. On FTX.com, leverage is limited to a maximum of 20x (i.e., minimum margin of 5%), and much less in most cases; as of now leveraged trading is not available to users of FTX.us (although there is facilitation of other forms of credit to Eligible Contract Participants -- see below). The FTX.com platforms have listed quarterly-settled (as well as perpetual) futures contracts that are cash settled. Additionally, MOVE volatility contracts are offered on FTX.com and are similar to futures except, instead of expiring to the price of a digital asset, they expire to the USD amount that the price of BTC has moved in a day, week or quarter. FTX.com also offers BTC options for trading. Finally, FTX US Derivatives offers to U.S. users both BTC and Ethereum (ETH) derivatives.

To cover initial and maintenance margins, derivatives and leveraged-product users can post collateral in the form of cash, stablecoins or other digital assets held in their account. The exchanges also have integrated risk-management and back-office systems to perform clearing and settlement of trades, which includes updating records of ownership of the digital asset or digital asset futures and options contracts traded (clearing), and transferring value between users' accounts (settlement), using either delivery versus payment or delivery versus delivery. Importantly, FTX's risk model avoids the systemic warehousing of such risks over a weekend or other

period of market closure, and instead addresses at-risk positions and accounts immediately, in real time, 24/7/365.

Off-exchange Portal for Arranging and Matching User Orders. FTX also offers an off-exchange portal that enables users to connect with other, large users, enabling them to request quotes for spot digital assets and trade directly. This facility forwards requests for quotes to large users, returning prices offered and enabling users to then place an order. The portal is similar to other facilities found in traditional markets where a central limit order book is not used to match trades.

Third-Party Lending. FTX platform users can lend their digital assets to those who seek them for spot trading. Users (including eligible users on FTX.us) wishing to trade digital assets they do not have may borrow them from users willing to lend them by posting collateral in the form of cash, stablecoins or other digital assets held in their account. The FTX platform maintains a borrow/lending book and matches users wanting to borrow with those willing to lend.

NFT Marketplace. FTX operates a marketplace for users to mint, buy and sell non-fungible tokens (NFTs). NFTs are tokens that are not fungible with any other tokens. They can take a number of forms and, for example, can be redeemed for a physical object, or an experience (such as a movie or phone call), or can be linked to a digital image, etc. FTX's NFT marketplace is conducted through an auction system. Alternatively, users can purchase directly at the prevailing selling price set by the seller. Users can choose to display their NFT collection on the FTX NFT marketplace portal, and/or to continue to buy or sell on the NFT marketplace.

FTX Pay. FTX Pay is a service offered to merchants to accept payments in digital assets or fiat. Users have the option to top up their FTX accounts with ACH or credit cards, which are then used to make payments to enrolled merchants. For digital asset payments, the relevant user's FTX account would be debited by an amount in the chosen digital asset that is equivalent to the amount that is payable to the merchant. FTX facilitates the payments to the merchant by providing the payment infrastructure. This allows merchants to accept digital asset payments, without having to assume any volatility risk for the assets.

Staking. FTX.com offers the ability for users to "stake" certain supported digital assets on the platform. By staking such digital assets, users can earn staking rewards; in addition, for some tokens, users can receive and unlock certain benefits on FTX, such as reduced trading fees, withdrawal fees, as well as other rewards. Generally, users can "unstake" their digital assets at any time, subject to an unstaking or unbonding period.

Types of Digital Assets on FTX Platforms. FTX has developed listing standards and a framework for determining which digital assets to list on the platforms. Part of that framework entails evaluating the assets to assess factors such as security, compliance risk, legal risk, technological risk and other factors. ***On FTX.com***, which again is unavailable to U.S. users, FTX has listed approximately 100 stablecoins and other digital assets on its spot exchange. Digital assets include tokens such as Bitcoin (BTC), Ether (ETH), Uniswap Protocol Token (UNI), Chain Link token (LINK), Solana (SOL), and Aave (AAVE).

On FTX.us, the company has taken what we believe to be a conservative approach to listing digital assets for trading. Consequently, there are far fewer tokens listed for trading on FTX.us due to much stricter listing standards for this platform. Care has been taken to avoid listing assets with features viewed to be similar

to securities in the U.S. The assets and tokens listed more closely resemble BTC and ETH, two tokens expressly addressed by the CFTC to be commodities subject to its jurisdiction.

On FTX US Derivatives, 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. All of these contracts are fully collateralized. FTX is in discussions with the CFTC about expanding our derivatives offerings to U.S. customers.

In sum, the products available now in the digital-asset economy and on the FTX platforms are very similar to ones found in the traditional finance space. A key differentiator from traditional finance is that investors can get access to all of them without going through multiple intermediaries. FTX believes the market structure for digital-asset platforms is risk reducing compared to others because it facilitates more effective risk management and eliminates unnecessary points of failure. In addition, all market data is made public and free -- all users are given full knowledge of the orderbook and trades. Easy access to financial products and solutions on one, easy-to-use platform is a powerful feature that empowers investors, consumers and entrepreneurs. By simplifying access to these tools, users of the products can focus more on the core of their everyday financial goals and needs while making more informed decisions -- ultimately this is what FTX believes will promote financial inclusion and economic security for more people.

2. Current Regulatory Landscape for Digital Assets and the Role of the CFTC

The current U.S. landscape for the regulation of the trading of digital assets is a patchwork of federal market regulations and state-level money-transmission laws. As explained above, FTX US offers "cash" or "spot" markets as well as derivatives markets through FTX US Derivatives,[3] but the regulatory treatment of each type of market is different. ***For cash markets*** in the U.S., if a digital asset is a security as defined by the Securities Act of 1933, then the digital asset is subject to the jurisdiction of the SEC, and the asset as well as any platform that lists it for trading generally must be registered with the SEC. A digital asset that does not meet the definition of a security under U.S. law would generally still meet the definition of a "commodity" under the Commodity Exchange Act (CEA).[4] Historically, the CFTC generally has not exercised jurisdiction over the operation of spot markets for commodities (with few exceptions), but FTX believes the CFTC could assert jurisdiction over digital-asset spot markets under certain circumstances,[5] even where the agency has not done so to date – more on this below.

In any case, there are no U.S. platform operators of only ***cash markets*** for digital assets supervised by the SEC or the CFTC at the moment. Many states have taken the view that their money-transmission laws

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[3] Cash or spot markets are markets where the asset being purchased is delivered immediately. Derivatives markets are ones where contracts or agreements between two parties are traded, and the contract's value is based upon an agreed-upon referenced asset or set of assets, like an index.

[4] "The term 'commodity' means . . . all . . . goods and articles, except onions (as provided by section 13–1 of this title) and motion picture box office receipts (or any index, measure, value, or data related to such receipts), and all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in." See CEA section 1a(9).

[5] *See Retail Commodity Transactions Involving Certain Digital Assets ("Actual Delivery Guidance")*, 85 Fed. Reg. 37734 (June 24, 2020), https://www.cftc.gov/sites/default/files/2020/06/2020-11827a.pdf .

apply to digital-asset platforms that have customers in their states, which requires state licensure, but these laws do not possess the hallmarks of federal market regulation and their market-integrity and investor-protection principles.[6] At the time of this writing, FTX US and the other largest U.S. digital-asset platforms offering cash markets have many state money-transmission licenses and continue to pursue others. A money-transmission business also implicates the U.S. Bank Secrecy Act and by doing so must register with the U.S. Department of Treasury via FinCEN, unless otherwise exempted; FTX US is so registered.

For derivatives markets in the U.S., if the digital asset referenced in the contract is a commodity and not a security, the trading of derivatives on that digital asset is subject to the jurisdiction of the CFTC. The CFTC today oversees the trading of BTC and ETH derivatives on multiple U.S. trading platforms, including FTX US Derivatives, which as mentioned lists futures, swaps and options on these digital assets. FTX believes that there are many other digital assets that are not securities, and so derivatives on those digital assets would fall under the CFTC's jurisdictions as well and could be listed by appropriately registered platforms such as FTX US Derivatives.

This patchwork of regulations increases the operational complexity of digital-asset platform operators, decreases capital efficiencies for customers, and hampers the ability of platform operators to optimize their risk-management programs. It also reveals gaps in ***federal market oversight*** due to the interplay of the CFTC and SEC regimes:

- First, the scope of the CFTC's jurisdiction does not indisputably apply to all ***cash markets*** for (non-security) digital assets, and consequently U.S. customers of the operators of these markets do not have the benefit of legally enforceable, market-integrity and investor-protection requirements of those markets enforced by a federal market regulator; and
- Second, not all digital assets indisputably meet the definition of a security under U.S. law, and consequently there are not clear, consistent and enforceable disclosure standards to inform investors about key information to assess risk relating to those digital assets.

As such, there is *no* clear market oversight for spot trading of (non-security) digital commodities.

Additionally, along with the unclear application of the "securities" definition as it applies to some digital assets, these gaps to date have discouraged participation by many in the U.S. digital-asset markets, including entrepreneurs, institutional market participants and other investors. In part due to these points, the vast majority of trading volumes in digital-assets markets (which FTX estimates to be roughly 95% of global volume) takes place on non-U.S. trading platforms, even though much of the human and intellectual capital driving the industry comes from U.S. persons – many of whom have left the U.S. to build and grow their businesses.[7] FTX believes this current state is harmful to U.S. competitiveness and is denying our country many of the benefits from the growing digital-asset industry, including attracting to the U.S. more capital formation, the best of the global workforce, intellectual property and tax revenue. In addition, hundreds of billions of

[6] FinCen defines money transmission as "the acceptance of currency, funds, or other value that substitutes for currency from one person and the transmission of currency, funds, or other value that substitutes for currency to another location or person by any means." See 31 C.F.R. § 1010.100(ff)(5)(i)(A).

[7] See https://ftx.com/volume-monitor for data on trading volume on offshore versus US platforms.

dollars of digital asset stablecoins are currently backed by the USD dollar, a state that clear and consistent regulatory guidelines could help maintain

U.S. Retail Commodity Transactions and the CFTC's Actual Delivery Guidance. Another piece of the U.S. regulatory patchwork for digital assets is the CFTC's treatment of retail commodity transactions. The CEA provides that a commodity transaction (including one involving a digital asset) must be listed on a CFTC-registered market, and is subject to CFTC's anti-fraud authority, if (1) it involves a retail participant, and (2) leverage, financing or margin is offered or used, *unless* the sale "results in actual delivery within 28 days".[8] The CFTC provided guidance to the public about how to interpret "actual delivery" under the statute – thus, there are circumstances when a retail, digital-asset transaction ***would*** fall under the CFTC's jurisdiction, and others when it would not.[9] I discuss below FTX's views about how bringing all retail commodity transactions involving (non-security) digital assets under CFTC jurisdiction would be beneficial to the public.

The Regulation of Stablecoins. Another important part of the digital-asset ecosystem globally and in the U.S. are stablecoins, which are frequently used as a means to transfer collateral to and from digital-asset platforms, and used as collateral once on the platform. Their regulatory treatment also is part of the overall patchwork of regulations that apply to the digital-asset ecosystem. There are several stablecoins used on U.S.-based digital-asset platforms that have been issued by U.S. state-regulated trust companies, and thus have the benefit of state-level prudential supervision.[10] Other stablecoins, some widely used, are not issued by a U.S. institution licensed at the federal or state level. The ***President's Working Group on Financial Markets'*** recently released "Report on Stablecoins" ("***PWG Report***") provided a number of recommendations for the regulatory treatment of stablecoins, and FTX has shared its own recommendations for how to ensure the safety and soundness of stablecoins (included here as an exhibit), the core of which is a robust auditing and registration framework overseen by a federal agency.[11]

There are other regulatory issues affecting the digital-asset industry in the U.S., but the foregoing are the most relevant to this committee. Next I address how this committee, the Congress and the CFTC could rationalize the regulatory framework for digital assets and pursue policies that would better protect investors and increase U.S. competitiveness.

3. A Vision for the CFTC as a Digital-Asset Supervisor

The CFTC already has considerable experience and expertise in the regulation of digital assets, and FTX believes the Congress would be wise to leverage that expertise for the benefit of the public as well as the digital-asset industry. The CFTC authorized the first BTC-derivative-contract listing in 2014, nearly 8 years ago,[12] and the FTX US Derivatives business – the first crypto-native platform approved by the CFTC – has been

[8] See CEA section 2(c)(2)(D).
[9] *See id.* at n.5.
[10] Paxos Standard ("PAX"),issued by Paxos Trust Company, and the Gemini Dollar ("GUSD"), issued by Gemini Trust Company, are issued by Trust companies regulated by the New York State Department of Financial Services ("NYDFS").
[11] See Exhibit A to this testimony; FTX's recommendations also can be found at https://www.ftxpolicy.com/stablecoins.
[12] See TeraExchange, LLC's Filing under CFTC Regulation 40.2, Certification of BTC Swaption Contract, April 24, 2014; https://teraexchange.com/style/images/rnd/instr/Tera%2040.2%20Filing%20-%202014-22%20Listing%20of%20Swaption.pdf.

licensed and supervised by the CFTC for nearly 5 years.[13] The CFTC-licensed, more traditional exchanges with some of the largest global volumes of derivatives-trading activity have had digital-asset derivatives trading on their platforms for more than 4 years, all under active supervision by the exchanges themselves as self-regulatory organizations, in addition to the oversight of the CFTC.

These facts show that there has been substantial capacity building at the CFTC over years regarding digital assets. No other market regulator from a mature, major global economy can make this claim of experience from and expertise about the digital-asset ecosystem, and the Congress should actively consider how the agency can build on this to better deliver market-integrity and investor-protections goals to the public and ensure the benefits of the industry's growth can be maximized in the U.S. The following are recommendations for this committee that would achieve those goals.

Expand the CFTC's Jurisdiction over Digital-Asset Spot Transactions. FTX recommends broadening the CFTC's jurisdiction to include, at a minimum, all spot transactions in (non-security) digital assets involving retail investors, regardless of whether the transactions currently fall within CFTC's jurisdiction under CEA section 2(c)(2)(D). This recommendation is consistent with relatively recent steps the Congress has taken to expand the CFTC's jurisdiction over retail cash markets, including through the passage of the Dodd-Frank Act in 2010. This could be accomplished in several specific ways.

First, Congress should encourage the CFTC to work with industry to permit retail commodity transaction contracts related to digital assets to be listed on boards of trade registered with the CFTC, pursuant to the agency's existing authority over these transactions as established by CEA section 2(c)(2)(D) and as affirmed in the 2020 Actual Delivery Guidance. This would clearly promote the public interest and would not require further legislation, being consistent with the current authority of the CFTC.

Second, Congress could eliminate the 28-day "actual delivery" period in the CEA as it relates to digital-asset transactions, on the basis that doing so would clearly bring to more of these retail transactions the full panoply of protections from the CEA, which FTX believes also would clearly promote the public interest.[14]

Third, Congress could more broadly amend the CEA so that the CFTC has jurisdiction over all (non-security) digital-asset spot trading activity, not just retail commodity transactions under CEA section 2(c)(2)(D), and derivatives involving (non-security) digital assets. Such a step also should involve a consideration of the appropriate disclosure regime for digital assets that ensures investors are adequately informed of their risks.[15]

In the meanwhile, the Congress in general should actively encourage the CFTC to appropriately broaden its interpretation of its authority over digital-asset spot transactions in order to better rationalize and condense the patchwork of regulations governing U.S. digital-asset activity, facilitating the offering of both market types on one platform. In my prior congressional testimony and in ***FTX's Key Principles for the***

[13] See CFTC Orders Granting DCO, SEF and DCM licenses to LedgerX.

[14] This approach would encompass those crypto transactions that, per the 2020 Actual Delivery Guidance, are not offset in any way, and whose proceeds are fully withdrawn to external, customer-controlled wallets within 28 days.

[15] See 'Token Issuances' at https://www.ftxpolicy.com/areas-for-crypto-regulation for a sketch of a possible disclosure regime for digital asset issuances.

Market Regulation of Crypto-Trading Platforms (Market Regulation Key Principles), FTX explained the benefits to offering these two market types under one unified system, with one rule book and one technology platform to manage risks related to all trading activity in customer accounts.[16] This approach facilitates one collateral and risk-margin program for customer accounts holding both cash and derivatives positions, allowing the platform to better manage market risk, and reducing operational risk owing to a single technology stack for the front end (the user interface) to the back end (settling and risk managing positions). Public policy should permit this one-rule-book model due to its risk-reducing and customer-protection attributes.

Fourth, as recommended in ***FTX's Market Regulation Key Principles***, Congress, the CFTC and the SEC should pursue a scheme where a digital-asset platform operator could opt into a program of joint supervision by the CFTC and SEC when there is joint jurisdiction over digital assets listed on the platform (e.g., when listings include non-security digital assets as well as digital assets that are securities). Under these circumstances, FTX recommends that one of the market regulators serve as the primary regulator, and the other as the secondary regulator, for market oversight. This type of paradigm is familiar to market regulators globally and also could include the accommodation of one rule book, one matching engine and risk engine supported by one technology stack. FTX believes this approach could largely be created under existing CFTC and SEC authorities, but Congress should encourage the agencies to leverage their authorities today with these goals in mind, and consider legislating such an approach when feasible.

Embrace the Direct-Membership Market Structure of Digital-Asset Platforms. The CFTC should continue to permit and embrace a market structure that allows investors to become direct members of the CFTC-licensed exchanges and clearinghouses that offer digital assets, without the need for intermediation. FTX's CFTC-regulated business has been operating with this type of market structure for nearly 5 years, without any loss of customer funds or significant platform outages, and has demonstrated that such a business model can comply with the CEA and continue to deliver on important investor protections embodied by the CEA. U.S. policy should remain market-structure neutral and allow non-intermediated markets for digital-asset products, so long as key investor protections can be adequately ensured. Every major incumbent U.S. derivatives trading venue offers a direct member clearing solution, and certain incumbent platforms have the majority of their users as direct members–this is not a new concept for the CFTC and its surveillance and risk teams.

FTX released this week ***FTX's Key Principles for Ensuring Investor Protections on Digital-Asset Platforms ("Investor Protection Key Principles")***, where we identified the most important components of an investor-protection regime (which the CEA and CFTC rules also reflect), and how FTX offers those protections today with the direct-membership model.[17] These components include:

- maintaining adequate liquid resources to ensure the platform can return the customer's assets upon request;
- ensuring the environment where customer assets are custodied, including digital wallets, are kept secure;
- ensuring appropriate bookkeeping or ledgering of assets and disclosures to protect against misuse or misallocation of customer assets;

[16] See Exhibit B to this testimony, and https://www.ftxpolicy.com/.

[17] See Exhibit C to this testimony, and https://www.ftxpolicy.com/investor-protections.

- ensuring appropriate management of risks including market, credit/counterparty, and operational risks; and
- avoiding or managing conflicts of interest.

While the CFTC's rules reflect these important principles today, they often contemplate an intermediary such as a "futures commission merchant" bearing the responsibility of those protections to the investor. The CFTC wisely has allowed the more-modern market structure so long as those investor protections are ensured and enforced.

The ***Investor Protection Key Principles*** touch on two key points that I reiterate here and the CFTC has recognized. *First*, technology advances have enabled a non-intermediated market structure that, combined with effective platform operations, can provide the above-identified protections more effectively, ultimately leading to an overall risk-reducing market structure, for the benefit of investors. *Second*, to the extent that legacy regulations or policies would assume or require an intermediary to provide these protections, that approach often imposes unnecessary burdens and costs (including fees and both capital and operational inefficiency) on investors and markets and obscures market-data without corresponding benefit. The CFTC and Congress should address and update any such rules through continued, appropriate interpretations in the case of the CFTC, and refinements to corresponding legislation in the case of Congress, to ensure equitable access to financial markets.

Ensure the Safety and Soundness of Stablecoins. Stablecoins have become a critical component of the digital-asset ecosystem, and policy makers have raised concerns about their growing market size and whether the lack of uniform federal oversight presents systemic concerns. While the ***PWG Report*** investigated bank-like supervision for ***all*** stablecoin issuers, such an approach might not be necessary so long as the core requirements of stablecoin oversight are met. These include:

- Daily attestations of what assets (cash, bonds, etc.) are backing a stablecoin;
- Periodic audits to confirm the asset backing is as claimed;
- Federal oversight and ability to inspect the assets;
- Haircuts for assets with moderate risk; and
- An open line for law enforcement to blacklist addresses and persons associated with financial crimes.

The CFTC could play an important role in creating a workable framework with these requirements.

First, the Congress could give the CFTC authority to license stablecoin issuers and subject them to these core requirements, perhaps by creating and authorizing a new registration scheme for stablecoin issuers or by otherwise allowing them to seek an existing CFTC license with new commiserate authorities, such as a DCO license. Indeed, a DCO is well accustomed to taking custody of assets, providing relevant reports to ensure their safekeeping, undergoing related audits (see ***FTX's Investor Protection Key Principles***), and managing risks

through appropriate collateral management and marking to market. The appropriate duties and responsibilities of a stablecoin issuer are much the same.

Second, the CFTC without any new legislation could require DCOs providing settlement and clearing services for digital-asset platforms to condition the acceptance of stablecoins as collateral by the DCO on the stablecoin issuer meeting these same core requirements, and the stablecoin issuer providing the needed attestations and audits to verify they are being met. The CFTC could require this through review and enforcement of DCO policies and procedures related to the DCO's approved risk-management program. To be sure, considerable public policy could be made through creative use of the CFTC's existing authorities as suggested, leading to standardized practices for stablecoin issuers that would protect the safety and soundness of the broader financial system.

We believe there is some urgency to create a practical regulatory solution that promotes disclosure and transparency, but that does not inhibit the value that stablecoins provide to markets and market participants. All aspects of digital asset regulation will be iterative and done in phases. For stablecoins, getting a general principles-based disclosure and transparency requirement in place now (perhaps via CFTC guidance, as a follow-on to certain CFTC stablecoin enforcement initiatives), while deferring a decision on the approach to some of the broader questions (such as whether "registration" is required and which agency should oversee that registration), would deliver a substantial amount of regulatory value.

Adequately Fund the CFTC to Ensure Resources to Protect Digital-Asset Investors. Finally, the successful implementation of most of the foregoing recommendations would depend on the CFTC having adequate resources to do so. FTX supports reasonable steps to provide those resources, including by contributing its own fair share of funds for use by the CFTC to expand its purview over digital assets. A program for generating and conveying such resources to the CFTC could be designed in a variety of different ways, and FTX stands ready to engage with this committee and the Congress more broadly to assist in designing and contributing to such a program.

Conclusion

FTX is grateful to this committee for the opportunity to share information about the digital-asset industry, our business, as well as the recommendations for how the CFTC in particular can contribute to the industry's growth. FTX believes the CFTC and this committee could play an even more prominent role in the digital-asset ecosystem and bring greater investor protections by closing some of the regulatory gaps identified in this testimony. FTX believes that such efforts would combine the best aspects of traditional finance and digital-asset innovations, one of our primary goals, and further empower investors and consumers by consolidating access to the tools they seek for economic security, all in one place, and from a singular, risk-reducing platform.

Exhibit A

Stablecoin Regulation

Note: As global regulators continue to consider whether and how to regulate various components of the digital asset ecosystem, we think it is important to share our perspective on how a practical, responsible, and thoughtful approach to regulation might look. This post is not a comment on the current regulations surrounding stablecoins, a legal interpretation of them, or advice on the suitability of transacting in or owning a given stablecoin. This post is an exploration of what a hypothetical new regulatory framework for stablecoins could look like, engineered towards solving for key regulatory priorities and preserving critical usability features.

Context on stablecoin regulation

As the cryptocurrency industry matures, it's vital that a robust regulatory regime grows alongside it which takes seriously its duty to protect consumers, ensure transparency, and prevent illicit activity, while still allowing for innovation and growth.

Stablecoins play a crucial role in the cryptocurrency ecosystem; the majority of all transactions in crypto are settled via stablecoins, and they are one of the most promising payment tools for the broader financial sector. It is also, as of now, unclear exactly what regulatory regime stablecoins will end up being placed in.

What is a stablecoin?

Let's start with the core question: what exactly is a stablecoin?

There are a wide variety of stablecoin designs that have been utilized in the cryptocurrency ecosystem. For illustrative purposes, in this article we will assume a stablecoin on the US Dollar, although parallel assets do exist on EUR, GBP, and other currencies. We will also imagine that it is 1:1; that is, 1 token represents 1 US Dollar. We will imagine that the token's ticker to be STBC.

In this construct, this imaginary stablecoin, STBC, is a blockchain-based asset that can be exchanged for a US Dollar. That would typically be accomplished through the following mechanics and arrangements:

Reserves: typically a stablecoin is backed by one or more USD accounts or other similar assets, generally held at a bank, in an account under the name of the stablecoin sponsor, issuer, or other similar body. The USD value of the assets should be at least the supply of the stablecoin.

Token: a blockchain-based token, STBC, where one token represents $1 (as supported by the creation / redemption process, described below). These could be issued by a private company, a central bank, or a decentralized protocol.

Creation/Redemption: In order to create 1 STBC token, an eligible user must send $1 to the reserve account. In return, the protocol mints 1 new STBC token and sends it to the user.

Similarly, an eligible user may send 1 STBC token back to the protocol to redeem it for $1. The protocol destroys the token and sends $1 back to the user.

What are the benefits of stablecoins?

We believe that stablecoins are one of the most important innovations of the cryptocurrency industry.

Let's say you want to send $20 to a friend. What are your options?

a) You could hope that both you and your friend use the same peer-to-peer transfer app (e.g. Venmo), and then separately each of you figure out how to send money to/from that app.

b) You could send a $20 wire transfer to your friend. This would likely take a day and cost $5+ in fees; and if it's international, it might take a week and cost substantially more in fees.

c) You could send $20 via ACH, if both you and your friend use US-based USD bank accounts. Then, the transfer would not fully settle for months, exposing both parties to "chargeback risk".

d) You could go to an ATM, withdraw $23 paying a $3 fee, and hand $20 to your friend, who would then have to find a way to use the physical dollar bills.

e) You could send 20 STBC to your friend's cryptocurrency wallet; if you use an efficient blockchain (or both use the same exchange), it will arrive in less than a minute, costing a tiny fraction of a penny in fees.

Option (e), the stablecoin, has a compelling case here as an efficient means of transfer.

Taking our real world use case a step further, consider that a user wants to build a blockchain based application. How should the application's users contribute and withdraw assets?

Here, the users face the same potential options and cost structures as before; once again, stablecoins are the cheapest, safest, fastest way for a user to engage with that application.

What are the risks of stablecoins?

There are three major intertwined risks associated with stablecoins.

Reserve volatility risk

If the stablecoin is backed by something other than US Dollars in a bank account, the asset might depreciate against USD. If, for instance, you were to back a stablecoin with 1,000,000 tokens issued with $1,000,000 of the SPY (S&P500) ETF, and stock markets decreased 5% in price, you would be left with only $950,000 backing 1,000,000 stablecoins–meaning that the "stable" token had in fact fallen in value, at least in regards to the reserves it is purported to be redeemable for!

Unlike investment products where customers gain from appreciation in the assets backing the product, there is generally no way for a stablecoin to be worth more than $1, as customers can always create more for $1 each. This means that the core philosophy behind the assets backing a stablecoin should be to focus on assets with low volatility which are very similar to USD. US Treasury bonds may be an appropriate asset for a stablecoin's reserves; if Bitcoin is used, it has to be overcollateralized to an extent that there is very little risk of loss to the stablecoin holders. Backing 100 stablecoins with $101 of BTC is untenably risky: a mere 2% decrease in bitcoin markets would cause the stablecoin to be under-backed and no longer fully redeemable for $1. Backing 100 stablecoins with $400 of BTC, on the other hand, is substantially more defensible, as there is very little risk of a 75% move before the reserves would have a chance to de-risk. Any stablecoin issuer or designer must have a transparent, robust risk model to mitigate the volatility of its reserves, including determining which assets are appropriate for its reserves.

Redemption risk

A related worry is that a user might own 1,000 STBC, go to the issuer to redeem their STBC, and be denied.

This might happen if the reserves had in fact run out of dollars and so there was nothing left to redeem STBC for; this would likely imply the reserves had not been in USD, and had fallen in value.

Alternatively, this could happen if the issuer arbitrarily decides to block your redemption, possibly to try to keep more impressive metrics for STBC.

Either way, the lack of ability to redeem (or a lack of transparency related to redemption process and requirements) presents a risk to the user.

Financial crimes

One final risk of stablecoins is that they could be used for financial crimes, or to finance illicit activities.

Any stablecoin issuer or designer must include creation, redemption, and use mechanics that, in harmonization with regulation, address and avoid this use case.

What is a sensible stablecoin regulatory framework?

As noted above, we believe that stablecoins have presented a significant positive use case to the world, and they continue to hold the potential to revolutionize the payments and remittances industry. Stablecoins could in the future revolutionize the payments industry, drastically reducing friction and transaction costs, delivering to many around the world the benefits that come with having access to reliable and usable value transmission. As such, we think it is important to ensure that the ongoing regulatory discussions around the approach to a framework for stablecoins be based on a practical structure that solves equally for usability, reliability, transparency, consumer protection, and the identification and prevention of financial crimes.

We look forward to engaging with regulators on examples of what such a framework might look like. There are many different approaches and we remain open and excited for feedback and engagement from regulators and from other participants in the cryptocurrency industry.

As outlined above, there are real risks associated with stablecoins, and any framework should work to mitigate those.

As such, while we look forward to continuing dialogue on the details, we would be in favor of a proposal for a transparency-based reporting and registration regime for stablecoins.

A proposed framework might look like the following:

a) All stablecoins issued to US users must be registered on an official list of "regulated stablecoins" under the oversight of one or more US regulatory department(s).

b) The registration itself would be focused on transparency and reporting, on a notice filing basis, coupled with clear obligations on recordkeeping, reporting, and regular examination. The regulatory departments authorizing the program would have the ability to decertify registered stablecoins.

c) The registration would involve publishing a daily Reserves List which details what the total net value of the stablecoin's reserves are, and breaks that down into exact quantities of specific categories (e.g. "100 USD in Bank XYZ; $95 of short-term US treasury bills; $50 of Tier-1 commercial paper of US companies; $30 of Tier-1+ commercial paper of European companies; $10 of [other suitable assets as permitted by the regulation and by that stablecoin's registration document]")

d) The registration would require that the issuer maintain "sufficient" reserves. This could be defined by a set of haircuts on various types of reserves. E.g., perhaps a 0.10% haircut on USD in an FDIC insured bank account; a 1% haircut on short-term US treasury bills; a 10% haircut on Tier-1+ commercial paper; a 15% discount on Tier-1 commercial paper; a 20% haircut on EUR, GBP, JPY, CHF, CAD, AUD, SGD, HKD, etc.; and a 50% haircut on bitcoin.

e) The registration would require semi-annual audits by an accounting firm to confirm that the reserves are as represented.

f) The registration would require stablecoins to have clear and transparent redemption requirements (e.g. based on Know Your Customer documentation) and a clear customer complaint process if a redemption is denied.

g) To address financial crimes, all registered stablecoins would have to be on a public ledger, and the creation and redemption process must be sufficiently structured in order to ensure that stablecoins associated with illegal activity (as observed via on-chain surveillance and analytics tools, via a suite of standard blockchain surveillance software) cannot be redeemed.

As noted above, this is a basic strawman framework for how the key components of a potential stablecoin registration program might look. Each of these points are designed to preserve the usability of stablecoins while solving for regulatory considerations that need addressing. If designed in the right way, this framework could enhance the ultimate usability of stablecoins. We very much look forward to engaging with policymakers, regulators, and market participants on these concepts.

Exhibit B

FTX's Key Principles for Market Regulation of Crypto-Trading Platforms

In this piece we identify a series of ten principles (and in some instances, proposals) that should guide policy makers and regulators as they build the regulatory framework for spot and derivatives crypto markets. FTX does not propose specific legislation here but rather principles and proposals that could be reflected in policy making, whether in the form of legislation, rulemaking or other regulatory action. Many of these principles are familiar to traditional securities and derivatives markets, but some of the principles reflect market-structure choices made by FTX and other crypto-platform operators that we believe lead to superior outcomes for investors and, indeed, the public. FTX therefore believes public policy should not only permit these choices but promote those that lead to such outcomes. Some of the discussion here focuses on the U.S. marketplace but the principles and proposals are applicable in any jurisdiction globally. FTX appreciates being able to engage in this dialogue with policy makers and regulators, and we are always happy to pursue follow-up discussions with interested parties. See our prior policy blog posts at https://www.ftxpolicy.com. .

1. Proposing One Primary Market Regulator with One Rule Book for Spot and Derivatives Listings

In the U.S. regulatory ecosystem, spot markets and derivatives markets are subject to different regulatory programs, and this can lead to inefficient and non-optimized market structures. In this post we propose as a solution an alternative regulatory approach that would provide market operators the ability to opt in to a unified regulatory regime for spot and derivatives marketplaces, through a primary regulator model.

As many know, the CFTC is the primary regulator of commodity derivatives marketplaces, while the SEC is the primary regulator of cash securities marketplaces, and the two agencies share oversight responsibility for certain aspects of security derivatives marketplaces.

In parallel, there is a further regulatory split for spot markets (sometimes called "cash markets" in the traditional commodities or securities context), where the applicable regulatory program depends on whether the product

being traded is categorized as a security (where the SEC regulates) or a commodity that is not a security (where the states largely regulate, via money transmitter or money services business licensing).

Against that backdrop, and particularly outside of the U.S., we observe that many crypto-native trading-market operators offer for trading both spot transactions on crypto assets as well as derivatives on those assets, under a unified rule book, one collateral and risk-margin program, and a single technology stack. This model is generally not found in the U.S. given the jurisdiction's historically fragmented approach to market regulation. Nonetheless, we believe that for traded crypto markets, the key principles for market regulation (customer and investor protection, market integrity, preventing financial crimes, and system safety and soundness) generally apply equally across spot and derivatives markets, and commodities and securities markets. That is, the regulatory label on a given product or market need not change the core goals of regulation, and the same rulesets should generally apply across all markets. For that reason, we strongly support offering a single unified regulatory program for crypto market operators.

Specifically, in jurisdictions where there is a primary derivatives-market regulator separate and distinct from a primary cash-markets regulator (such as in the U.S.), policy makers and regulators should seek to permit qualified crypto markets operators to run a single rule book, risk program, and technology stack, approved and overseen by a primary regulator (perhaps chosen by the marketplace on on an opt-in basis and supported thereafter by inter-regulator cooperation and information sharing, with the possibility of the primary regulator shifting if the underlying product mix evolves in a certain way), that governs the listing and trading of both spot cash transactions in crypto assets as well as derivatives on crypto assets.

Much of this can be achieved today under existing statutory authority and with creativity and cooperation by and among market regulators. With some specific issues, however, clarity might be needed from legislation. Under the current U.S. paradigm, for example, we acknowledge that it is unlikely to be absolutely clear at any given moment, absent legislation, whether all of the crypto products listed on such a venue are definitively "within" or "without" the jurisdiction of either of the markets regulators. However, between two possible regulatory solutions under this paradigm - which are (1) that regulators can prohibit the marketplace altogether (via indecision, decree, or a combination of the two), or (2) that regulators can innovate and cooperate to ensure that key regulatory and policy goals are met in a clear and robust way while also permitting the marketplace to operate - we think the second approach offers a compelling option.

Said more explicitly, in jurisdictions where there are two mature market regulators, FTX proposes the permissibility and adoption of a reasonable and rigorous framework that would allow a crypto-markets platform operator to elect one market regulator as its primary regulator for a unified spot and derivatives trading book, subject to adherence to a cooperative framework in which the other market regulator acts a secondary regulator while maintaining appropriate visibility into the platform's operations, but not day-to-day supervisory responsibilities. (Indeed, a similar approach is used today when a market regulator from one jurisdiction "recognizes" the framework of a different jurisdiction where a primary, "home" regulator resides, and then defers to that primary regulator's regulations and rulesets so long as they are sufficiently comparable.)

We propose a functional-based approach, where the regulation and the trading venue rule books that comply with that regulation should be largely modeled after existing market regulations for securities and derivatives markets, on the basis that most jurisdictions will follow this same approach. FTX believes that there is a unique

current opportunity for U.S. regulators to take a leadership position in the global crypto markets regulatory discussion, and we believe that modelling a primary regulator model on existing market regulation will foster standardization and harmonization of regulation globally, paving the way for international adoption and reciprocal jurisdictional recognition.

To underscore why we are so focused on these regulatory issues - it is because we believe that getting crypto market regulation appropriately calibrated is critical for the continued development of healthy, transparent, and well functioning global crypto markets, which we believe will deliver knock-on positive effects to the global economy as a whole. And we think our proposed approach, in addition to solving for regulatory uncertainty and fragmentation, would also reduce operational complexity by allowing matching engines for both spot and derivatives transactions to operate on the same platform with the same user interface. This in turn would reduce operational risk to the platform, and promote capital efficiency by allowing collateral in support of both order books to rest on the same platform. In the rest of this piece, we discuss in more detail various additional practical benefits of crypto market place operators being subject to unified primary regulator oversight.

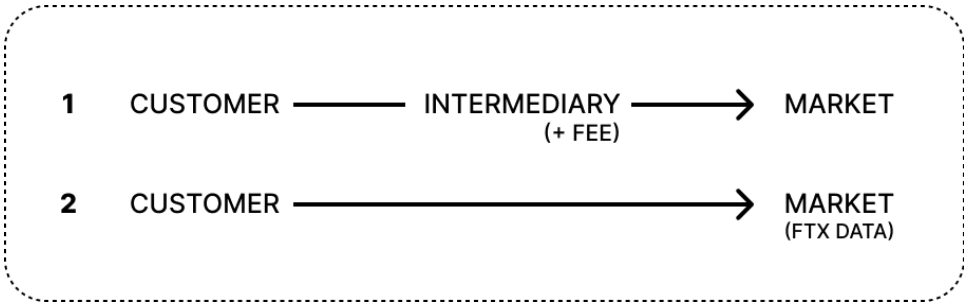
2. Full-Stack Infrastructure Providers and Maintaining Market-Structure Neutrality

Regulation should be market-structure agnostic, provided that the core regulatory issues (identified above as customer and investor protection, market integrity, preventing financial crimes, and system safety and soundness) are addressed. Technology has enabled any capable entity to perform the various functions involved with the pre-trade, execution, and post-trade phases of the lifecycle of an asset trade or transaction in a single regulatory stack - in fact, to split up those functions, from a technology perspective and when building a market from the ground up, would require a forced and artificial deconstruction.

However, one of the things that prohibits an entity from taking on any or all of these functions can be the specifications of a regulation. To say it another way, much of current market structure is a creation of regulatory artifact rather than a reflection of a thoughtful and holistic approach to marketplace design, efficiency, transparency, and risk management. FTX built and continues to evolve its trading ecosystem with the latter approach in mind.

We believe that so long as the various needed functions necessary to the lifecycle of a transaction are being met, policy makers would do well to remain otherwise neutral on how a market is structured (so long as appropriate customer protections also are in place, discussed below). For one example, most market regulation today envisions an intermediated market place where an intermediary such as a broker interfaces directly with a customer (think back to calling in, or mailing in, your order to a broker that had access to the physical exchange floor). In contrast, crypto-asset platforms largely dispense with this mode in favor of a direct-membership market structure, where end investors onboard directly to the platform for trading, and not through an intermediary or broker (although service providers such as Internet and data-center providers are involved).

A non-intermediated market allows all users to get the same access to market data (consider that FTX's data is free, globally, versus much of the global trading venue industry where data fees are a material commercial component of the business), connectivity, and key features related to functionality and risk management, regardless of the sophistication of the user. The positive implications of this are potentially enormous, and are only just beginning to be seen, interestingly, around the direct-to-consumer crypto marketplace models. The public is better served if the barrier to entry to transact competitively with global markets is an internet connection, rather than a $100,000 (or more) data-subscription fee and a costly fee- or commission-based relationship with a broker that merely plugs you into the trading venue's technology. Non intermediated markets create a more level playing field that's often lacking in many traditional financial systems, whose market structures have created a number of challenges including real and perceived conflicts of interests between intermediaries and their customers.



Consequently, a direct membership market structure should be expressly permitted (not required, but permitted) so long as the relevant customer protections continue to be afforded, in this case by the platform provider.

3. Custody of Crypto Assets -- Key Functional and Disclosure Requirements

For crypto assets, the asset is safekept in a wallet, where custody can be performed by the asset owner or by a wallet holder on the customer's behalf. Where custody is performed on a customer's behalf by a platform operator or intermediary, appropriate safeguards should be disclosed in policies and procedures of the custodian. Key areas of focus and disclosure should include: wallet architecture; whether insurance is provided by the custodian; how private keys are kept secure, managed and transferred; managing risks related to insider collusion or fraud; and physical security of data centers.

Importantly, in the case of platform operators, consideration should be given to the increasingly common practice of using third-party providers for data centers (i.e., cloud-service providers) as well as custodial services. In these instances, the platform operator will not itself perform these functions but nonetheless will be held responsible by users for them, and users should be given visibility into how third parties will address the aforementioned issues. Market supervisors should require regulated platform operators to perform regular diligence on their vendors and to have sufficient business continuity and disaster-and-recovery programs in place in connection with their vendor suite.

4. Full-Stack Market Infrastructure Providers and the Lifecycle of a Trade -- Addressing Risk Related to Token Issuance and Asset Servicing, Orderly Markets and Settlement of Trades, Cross Margining and Risk Management of Positions

Again, native crypto-trading platforms integrate into a whole the system for custody, issuing tokens, settlement of trades, and risk managing positions with one technology stack. In creating or fine-tuning a regulatory framework for these platforms, policy makers should ensure that market supervisors understand this system through well developed and clear policies and procedures disclosed by the platform operator. The framework should address the following key issues related to the lifecycle of a spot or derivatives trade.

Token Issuance and Asset Servicing

Token issuers who have access to the platform for purposes of issuing a token should be governed by disclosed policies and procedures that explain the listing standards for tokens. In some cases, existing securities laws will apply, in which case the policies and procedures should explain how such laws are complied with by the platform as it relates to issuing the security tokens.

This document does not address whether existing securities laws should be amended to account for distributed-ledger technologies and new methods of issuing securities in tokenized form. Suffice it to say here that some of the traditional requirements for central securities depositories might not be appropriate for platforms that offer these services, but others will be.

To the extent a token is not a security but has some security-like features at some point in time, and policy makers otherwise have not addressed whether such tokens should be treated as securities, a platform operator in any case should be required to disclose, or otherwise facilitate disclosure of (i.e., most material information for a token can be easily found on the Web, and a platform could direct a platform user to this information), key material information about the token issuer as part of the platform's listing standards.

Likewise, in the case of all tokens, the platform operator should develop and disclose policies and procedures for how a token issuer will interact with the platform for purposes of facilitating asset servicing, so that supervisors and platform users both can understand and assess the risks to the platform posed by token-issuance functionality. This would be especially relevant in the case of security tokens, where dividend payments and changes in ownership, for example, would impact the token and the owner of the token.

Market Surveillance

Good public policy would require that a crypto-platform operator has policies and procedures concerning the practices and technology used to perform market surveillance of the platform's trading environments in order to curb market manipulation and promote orderly markets. This is standard policy for traditional supervised markets and should be carried over to supervised crypto markets as well.

Settlement

With regard to settlement, our recommended policy would require the platform operator to have clear and transparent policies and procedures that explain when settlement of a transaction becomes final, and the conditions and circumstances under which the platform provider would reverse settlement due to errors, etc. By and large, regulated venues do this today in their terms of service, etc., and we think it is important they continue to do so.

One of the hallmarks of the FTX trading experience is to allow users to pair in a transaction nearly any combination of assets for purposes of settlement -- for example, a user could exchange BTC for USDC or for SOL. Sound policy would allow the platform to settle transactions by pairing the assets with any of the others listed on the platform, including stable coins or cash fiat currencies (see below for discussion of stable coins) but also other crypto assets, so long as the platform otherwise made clear how and when settlement becomes final.

Another hallmark of full stack trading experiences is access to credit to ensure and promote liquidity on the platform. Public policy should allow platform operators to facilitate the provisioning of credit to platform users so long as this service and function are well documented and explained to the supervisor and market participants on the platform. This is a clear example of where services previously provided by intermediaries can be solved by the trading venue itself.

Because crypto platforms have led the way in exchange innovation, public policy should anticipate that crypto firms will become more and more integrated with traditional payment rails and similar systems. Policy makers should consider whether and when to expressly delineate under what circumstances these platforms could access government-sponsored payment systems created for the settlement of securities, for example. Other policy initiatives will address whether and under what circumstances securities, including government-issued securities, can be reflected in tokenized form, but if such tokenization is permitted, an otherwise properly supervised platform operator should be allowed to access existing payment systems to facilitate settlement of such securities, even if interaction with that system is not on a real-time basis. Such a policy is recommended because otherwise access to this payment system would involve an intermediary, introducing various types of counterparty, operational, and credit risks to the platform that would not be in the interests of the participants on the platform (which itself would be highly supervised under our proposed framework).

Cross Margining and Risk Management

The regulatory framework for crypto should clearly allow for the cross-margining of both derivatives and spot positions on the platform with any and all assets permitted in the customer wallet and account, subject to appropriate risk weights and haircuts, as applicable. For the settling and risk management of crypto asset transactions on a crypto platform, the settlement and risk systems are automated and the relevant software interacts with the wallet and account that contain customer assets.

A well-designed regulatory framework would allow a single platform to perform all risk functions, and require the appropriate standards on those functions. For example, in addition to the custody requirements mentioned above, the settlement and risk-management systems should be appropriately explained to the market supervisor through the platform's rule book, and the regulator should be made aware of major changes to the system.

Sound policy also should ensure that risk-management systems used by a platform operator are configured to prevent customer accounts from going net negative across positions. A risk-management system that effectively performs this function with this goal, including through liquidations of customer positions, should not be allowed to do so in an arbitrary manner. Instead, the rules, risk parameters and business logic that trigger any actions taken by the customer platform as it relates to customer assets should be clearly disclosed and appropriately explained to the supervisor as well as the platform users in the platform's rule book, which should be approved by the primary market supervisor.

In permissioning the use of a risk-management system for clearance and settlement, policy makers should take care to remain technology and methodology neutral, so long as the platform operator can effectively demonstrate its responsibilities can be adequately met.

5. Trading Platform Providers -- Ensuring Regulatory and Market Reporting

Regulatory reporting of transactional activity should be required in order to provide market supervisors appropriate visibility into the trading platform, and to better allow supervisors to police for market manipulation and other unfair trade practices.

Policy makers should consider carefully how best to provide this data -- a requirement should be considered that would mandate that trading platforms create an API for the beneficial use of market supervisors to directly ingest data from the platform itself, rather than require a separate entity to undertake reporting responsibilities.

With respect to market reporting, a hallmark of the crypto-asset industry (as previewed above) is the provisioning of market data to users free of charge. Policy makers should carefully consider the standards under which platforms are permitted to charge users a fee for the provisioning or use of market data related to trading that takes place on said platform along with the implications of that activity for market access, transparency, and fairness policy initiatives. The right standards could incentivize the platform operators to focus on risk management, user experience, and product innovation for competitive advantage rather than fees based on trading activity brought to the platform by the user.

6. Ensuring Customer Protections

As suggested, crypto-asset platforms have ushered in an evolution of market structure in favor of a non-intermediated model, where entities separate from the platform are not needed in order to access the platform and the trading environment.

In this market structure, however, key customer protections should remain in place. From a policy perspective, one approach could be a very general and non-prescriptive one that requires that platform providers or intermediaries develop and disclose policies and procedures to ensure the best interests of all customers are protected at all times, and leave it to the entity's discretion. This would allow investors to choose a platform provider based on the robustness of those policies and procedures.

If a more detailed or prescriptive approach is favored, such an approach should consider whether specific requirements related to practices impacting platform customers such as front-running trading activity, market manipulation, general risk disclosures related to the assets and instruments listed for trading, appropriate and non-misleading communications with customers, and avoidance of entering into conflicts of interest with customers. Again, appropriate customer-protection requirements can be borrowed from the traditional finance space -- the key is to ensure that the platform provider can provide them rather than insisting that an intermediary perform the function. FTX believes that market place operators are properly positioned (perhaps best positioned) to deliver these types of disclosures and materials to users in a way that can be built directly into the trading venue user interface/user experience.

7. Ensuring Financial Responsibilities are Met

As with traditional markets, ensuring that customer assets are protected to the maximum extent possible should be a principle for regulating crypto-asset markets.

Again, the prominence of the wallet as a tool for storing assets is key to the crypto-asset space, and apart from requirements to ensure that the wallet itself is safely maintained and secured, policy makers should ensure that customers have access to real-time information about their account levels at all times (and redundant access paths, in the event of disruptions on one access path), particularly if and when a platform operator commingles customers' assets in an omnibus manner. If a platform provider elects to provide this infrastructure, operational complexity can be substantially reduced while customer assets are meaningfully protected.

In the case of a platform operator or an intermediary, policy makers should consider whether to adopt a minimum capital requirement (or other financial wherewithal condition) to ensure there are adequate resources to address operational and other types of risks that could jeopardize customer assets in custody. For platform operators, this could take the form of ensuring operational resiliency but in addition also ensuring adequate resources to address defaults and liquidations performed by a risk-management system (see above discussion on platform risk management). The goal should be to ensure platform operators need not depend on off-platform resources for settlement and risk management.

With respect to margining customer accounts, there should be a policy that expressly allows portfolio margining of all customer positions in all assets on the platform. This risk-management approach promotes capital efficiency and reduces operational risks to the platform or intermediary managing the customer account.

8. Ensuring Stable Coins Used on Platform Meet Appropriate Standards

A platform operator that permits the use of stable coins for settlement of transactions should be required to explain the standards the platform operator uses in deciding which stable coins it permits for such purposes. FTX has articulated and explained its policy recommendations for stable coin issuers (see https://blog.ftx.com/policy/context-stablecoin-regulation/).

The reason such a policy is recommended is that stable coins are exposed to reserve-volatility as well as redemption risk, and platform users should be entitled to some understanding of whether and to what extent those risks could impact their activity on the platform, including their impact on settlement of transactions (which might not be direct, but nonetheless indirect).

For example, a stable coin backed by risky and volatile assets and not transparently backed by an adequate amount of such assets with appropriate haircuts, could become exposed to price risk. This price risk could interfere with settlement finality on the platform, insofar as the value of the stable coin delivered as payment for the crypto assets in a transaction on the platform are suddenly not equal. Ensuring that stable coins allowed for use on the platform meet adequate standards set by the platform operator (or by public policy makers if applicable) mitigates this risk, and should better protect the users of the platform.

9. Full-Stack Infrastructure Providers -- Ensuring Appropriate Cybersecurity Safeguards are Kept

Market regulators in recent years have developed comprehensive cybersecurity requirements for market infrastructure providers. Policy makers should either apply the relevant safeguards already in place for exchanges, or otherwise require that the platform provider develop and disclose to market participants its policies and procedures regarding cybersecurity safeguards. In the case of platform operators already licensed by a market regulator, system-safeguard requirements already will be in place. In the case of platform operators not already licensed, one consideration for policy makers is to adopt a policy that helps facilitate standardization of these safeguards domestically as well as globally.

10. Full-Stack Infrastructure Providers -- Ensuring Anti-Money Laundering and Know Your Customer Compliance

Platform operators must perform appropriate KYC as part of user onboarding and must conduct regular anti-money laundering surveillance of user activity (both on the trading venue and via the scrutiny of related on-chain transfers in and withdrawals out). Many platforms, including FTX, use a combination of vendors and internal compliance personnel to assist with these functions today. However accomplished, it is critical that crypto market place regulation continues to require significant focus on the performance of KYC and AML obligations. To ensure this, market place operators should be performing periodic self-audits and should also be subject to regular review and exam by their primary regulator on these requirements.

Exhibit C

FTX's Key Principles for Ensuring Investor Protections on Digital-Asset Platforms

Introduction

FTX strongly believes that ensuring investor protections is critical to the successful operations of digital-asset platforms, including our own, as well as to ensuring a positive user experience for our customers. FTX also believes that non-intermediated "direct access" markets, such as the FTX exchanges, can and do provide a level of investor protection that meets and exceeds the policy goals and purposes of traditional investor protection regulation (notwithstanding the absence of an intermediary or "broker"). Technology continues to displace the need for an investor to rely on intermediaries and brokers to access certain markets or asset classes, and one of the most important innovations of the digital-asset industry is a simplified market structure that does not need to rely on intermediaries for access to markets. From this observation, this paper addresses the key investor protection principles (described below) applicable to any market and the ways in which non-intermediated "direct access" digital-asset platforms can and do provide these protections for their users.

The goal of this paper is to support two critical propositions:

- The investor protection principles we describe in this paper can be provided directly by a digital-asset exchange or platform, using a non-intermediated market model, at an effectiveness level that exceeds relying on a series of intermediaries to provide similar protections and that ultimately leads to what FTX believes will be an overall risk-reducing market structure, for the benefit of investors.
- To the extent that legacy regulations or policies would assume or require an intermediary to provide these protections, we believe that approach often imposes unnecessary burdens and costs (including fees and both capital and operational inefficiency) on investors and markets without any corresponding benefit–and any such rules should be updated and modernized.

If market structure policy is truly to be technology neutral (which is an important and often stated principle expressed by policy makers), market regulators must acknowledge that intermediated market structures are due, in many instances, to the fact that technology was less robust when those markets were first developed. While intermediaries previously were helpful because the cost and complexity of accessing (1) a market for trading assets or (2) the assets themselves (especially when securities, for example, were in material or paper form) were substantial enough that it was economically efficient for an investor, especially an individual investor, to rely on

an intermediary to provide such access and attendant services. However, intermediated market access is NOT an *a priori* first principle of market structure design, and technology has meaningfully changed what is possible.

Today, the only tools necessary to access a centralized market place for assets directly are (1) a computer or mobile device; (2) relevant "trading" software accessible on that hardware; (3) access to broadband services to transfer data over the Internet, and (4) an application programming interface (API) to allow the trading software to be built and integrate with the trading platform's software. As a result, while investors might elect to use intermediaries for various reasons, those intermediaries are no longer indispensable for gaining access to financial products if the investor has the aforementioned tools.

We believe this has led to the possibility of the reduction of many types of risks, as explained in ***FTX's Key Principles for Market Regulation of Crypto-Trading Platforms*** (hereinafter "**Market Regulation Key Principles**"; see https://www.ftxpolicy.com/). Combined with other best practices and enhanced risk-management techniques utilized by FTX, this simplified market structure forms the basis for our argument that a well designed and operated non-intermediated "direct access" digital-asset platform can be ***risk reducing*** relative to traditional market infrastructure. Building on FTX's **Market Regulation Key Principles**, this paper continues the discussion about critical investor protections and our view that platform operators should be allowed to provide these protections, and be held accountable for them, rather than insisting that they be fulfilled by intermediaries on the platform.

While not the core goal of this paper, we also note that intermediation can reduce transparency and information available to the customer. Traditionally, most users are not given full market data; neither are they allowed full access to exchanges, preventing equitable access. FTX's disintermediated structure ensures that all users have equal access to its information and markets.

Key Investor-Protection Principles

Ultimately, all policies affecting the operation of a digital-asset market ensure the protection of the investor on the platform, and FTX's ***Market Regulation Key Principles*** paper addresses those.[18] Here we focus on specific principles related to the core of protecting customers' interests and their assets kept on a digital-asset platform. These include (1) maintaining adequate liquid resources to ensure the platform can return the customer's assets upon request; (2) ensuring the environment where customer assets are custodied, including digital wallets, are kept secure; (3) ensuring appropriate bookkeeping or ledgering of assets and disclosures to protect against misuse or misallocation of customer assets; (4) ensuring appropriate management of risks including market, credit/counterparty, and operational risks; and (5) avoiding or managing conflicts of interest. Each of these is addressed in turn.

[18] *See* https://www.ftxpolicy.com/.

1. Maintaining Adequate Resources to Return a Customer's Assets

A hallmark of the investor-protection regimes for markets globally and in the U.S. are requirements to ensure that the intermediary holding a customer's assets has adequate liquid resources available at all times to ensure that the customer can redeem her assets when she chooses. Often these policies are designed to ensure that there is (1) ***no delay*** in returning customer securities upon request, or (2) ***no shortfall,*** where an amount lesser than the value of the customer's asset can be returned to the customer.[19] This principle often involves other restrictions on the custodian, including, for example, a restriction of the use of customer assets to finance other business expenses or initiatives.[20] To ensure adequate liquid assets, familiar policies require a reserve of funds or qualified securities that is at least equal in value to the net cash owed to customers.[21] U.S. derivatives policy is very similar and also requires a cushion of resources to be held by the entity managing a customer's derivatives positions to ensure timely return of customer assets.[22]

FTX recommends policy makers consider a policy embodying this principle for digital-asset platform operators: fashioning a requirement, to be reflected in the platform's policies and procedures or otherwise, where the platform operator is accountable for keeping adequate liquid resources to ensure it can deliver customer assets back to the customer upon their request. This principle is sound for all asset types, and while the policy today tends to fall on intermediaries, it can just as easily be applied to the platform operator; in general it should apply to whichever entity is custodying customer assets. Such a policy as applied to digital-asset platform operators would be independent of other requirements to ensure adequate capital to cushion losses (see discussion below).

To the extent existing regulations have implemented this principle by fashioning restrictions on intermediaries, most market supervisors – including those in the U.S. – have other authorities that would permit appropriate or conditional application of such a duty on a market operator. The fact that customer assets include digital assets and tokens in principle need not alter the basic policy of ensuring there is the availability of liquid assets.

FTX has policies and procedures for its platforms today that reflect this basic principle by maintaining liquid assets for customers withdrawals, including a sufficient balance of digital assets funded by the company for its non-U.S. platform. The resources are funded to provide sufficient cover against user losses under certain events

[19] *See, e.g.,* SEC Rule 15c3-1, Rule 15c3-3 Adopting Release, Exch. Rel. No. 9775, 1972 WL 125434, at *1 (Sept. 14, 1972). *See also* FINRA Rule 2150.

[20] *Id*.

[21] The amount of net cash owed to customers is computed pursuant to a formula provided by the rule. While the formula itself is somewhat complex, it embodies a basic concept for the responsible stewardship of customer cash: if a broker-dealer owes more to its customers than its customers owe to it, the broker-dealer must set aside at least an amount equal to that difference so that it is readily available to repay customers. *See also* https://www.sec.gov/divisions/enforce/customer-protection-rule-initiative.shtml.

[22] *See, e.g.*, CEA Sections 4d(a)(2), 4d(f), and 30.7. The CFTC's customer-protection rules for FCMs are very similar, and the rules embody, inter alia, the concepts of "segregation of customer assets" as well as "targeted residual interest," which like the SEC's requirements require that adequate resources provided by the FCM itself, in this case, are included in the customer's segregated account to ensure there is efficient and adequate return of customer assets upon request.

and extreme scenarios in order to, among other purposes, ensure a customer without losses can redeem its assets from the platform on demand.

2. Securing Environment Where Customer Assets Are Custodied

Another key customer-protection principle is making sure that the environment itself, where customer assets are kept, is safe and secure. Existing market regulation often looks to the requirements of other financial custodians and intermediaries that also custody assets as a proxy for safety and security. For example, U.S. policy has the concept of requiring the use of a "qualified custodian" for the custody of customer cash and securities,[23] which in many instances is another intermediary that is also supervised and otherwise equipped to ledger and track a specific customer's funds.[24] Interestingly, the U.S. derivatives regulator explicitly recognizes that a clearinghouse is subject to sufficiently rigorous standards and supervision that it can be entrusted with safekeeping customer assets.[25] In any case, this principle mandates that appropriate arrangements to safeguard the clients' rights in client assets and minimise the risk of loss and misuse are in place, which can be accomplished by ensuring that the custodian of the assets maintains adequate levels of financial integrity, physical and cyber security, as well as transparency to customers about the locus and availability of their assets.[26]

Regarding a digital-asset platform operator, the assessment of whether the environment delivers on this principle is different from that for traditional assets because the ecosystem often involves traditional fiat currencies as well as digital assets and tokens related to public blockchains. For digital assets, the digital wallet is central to the custody arrangements. For fiat currency, FTX and other other platform operators will necessarily rely on licensed banking institutions to custody a customer's fiat currency; for traditional, non-tokenized securities, the custody function will follow the lines of the traditional market structure, unless some exemption is provided to allow some other arrangement – in the U.S., for example, existing regulations would require that custody be performed by a licensed intermediary legally permitted to custody such securities. (It certainly would be interesting, however, for policy makers to consider permissioning platform operators with the proven resources to custody these assets as well – again, derivatives regulation allows clearinghouses to custody assets.)

For digital assets, however, where policy is much less developed, custody involves control of private keys to digital wallets, and physical security involves the safekeeping of those private keys. When digital assets are left in the custody of platform operators such as FTX, safekeeping private keys can be performed in-house by the

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[23] Under the SEC's framework, "qualified custodians" typically include banks, broker-dealers, and futures commission merchants. *See* SEC Rule 206(4)-2(c)(3).

[24] *See, e.g.*, Securities Exchange Act of 1934 Rule 15c3-3. The CFTC's rules mandate that customer assets held at an FCM be segregated and clearly identified as customer assets, and be custodied by a bank or trust company, a registered clearing house, or another FCM. *See* CEA Sections 4d(a) and 4d(b) and CFTC Regulation 1.11.

[25] In the United States, some CFTC regulated clearinghouses already have direct clearing relationships with traders and are therefore holding customer funds without using intermediaries.

[26] *See IOSCO Final Report on Recommendations Regarding the Protection of Client Assets* ("*IOSCO–Protection of Assets*"), Principle 3 (Jan. 2014) http://www.iosco.org/library/pubdocs/pdf/IOSCOPD436.pdf.

platform operator, or by the platform operator contracting with a third-party (the platform operator would remain accountable for regulatory requirements under this arrangement). Notably, both approaches have been permitted by market regulators and embraced by market participants.

Multiple architectures exist for the storage of private keys, which can be accomplished through use of a "hot wallet," cold storage, multi-signature wallet, or even by a smart-contract wallet. To be sure, policy makers could decide if a particular approach should be allowed or prohibited based on a particular policy emphasis – each approach has trade offs related to security and efficiency – but at this time, the best policy approach is likely allowing market participants to decide their preferred custody approach by electing to transact with the platform operator that offers it. This approach necessarily would require that a platform operator adequately disclose its wallet architecture and security practices. In any case, limiting access to the private keys under custody through appropriate permissioning, and ensuring adequate cyber-security protections, are critical to discharging this principle regarding securing the environment where assets are kept.

Some have suggested that allowing the platform operator to serve as the digital-asset custodian might present a conflict of interest for the platform operator, presenting more opportunities for misuse or misallocation of customer assets. It is far from clear to FTX that contracting with a third party for custody would in every instance lower the risks of misuse or misallocation of a customer asset, particularly when the platform operator would presumably remain accountable and, indeed, liable in every case; and each additional party added to a customer's experience adds another potential point of failure. We believe that rather than focus on any perceived conflict, policy makers should instead focus on the first principles described above for asset safekeeping (i.e., regular auditing of the cybersecurity aspects of the custody plan along with auditing the actual assets held in custody), and perhaps consider requiring the platform operator to disclose any remaining potential conflicts while developing policies and procedures to address them.

FTX uses both approaches, using a third-party custodian in part for the U.S. derivatives platform and a proprietary in-house custody solution for the other platforms. For its in-house wallet solution and to maximize security, FTX leverages best-practice, hot- and cold-wallet standards whereby only a small proportion of assets held are exposed to the Internet and the rest are stored offline. FTX policies and procedures also address and dictate other key components to the security of private keys, including applicable multi-signature arrangements, as well as the storage of backup relevant backup information. FTX's custody solutions comply with all relevant regulations, including those of the U.S. CFTC, and the company takes pride in the confidence in our security measures our customers have given to us.

3. Ensuring Appropriate Ledgering and Disclosures of Assets to Protect Against Misuse

Another key investor-protection principle is making sure there is adequate bookkeeping (and related records) to track the customer's assets, combined with appropriate disclosure and reporting.[27] This is to ensure that whoever is in control of a customer's assets is not misallocating or misusing those assets, particularly in furtherance to their own purposes at the expense of the customer's best interests. The basic concept here is that there should be controls in place to ensure the custodian has books and records that keep track of and identify which customer owns what, and there is adequate regulatory and customer reporting, as well as independent auditing, to verify the same.

In keeping with this principle, FTX provides a user experience that enables any user to easily view account balances for all assets, for all of its platforms, in real time. By logging in to the customer's account at FTX, the customer can immediately view the types of assets they own held in custody by FTX. The assets are ledgered and easily identifiable to the user (but held in an omnibus wallet in the case of the customer's tokens in order to better promote liquidity on the platform) pursuant to internal policies and procedures, and FTX regularly reconciles customers' trading balances against cash and digital assets held by FTX. Additionally, as a general principle FTX segregates customer assets from its own assets across our platforms.

Relatedly, and previewing the risk management discussion below, FTX ensures redundancy, resiliency, and disaster-recovery preparedness by using multiple geographically dispersed cloud and data service vendors and facilities to ensure industry-leading 24/7 service.

4. Conducting Adequate Risk Management to Protect Digital Assets

The next key principle is ensuring that any market participant in possession of customer assets is performing adequate risk management to protect those assets, regardless of their particular role in the ecosystem. There are multiple types of relevant risks that are inherent to any market structure, including but not limited to credit or counterparty risk, market risk, funding liquidity risk, and operational risk. (All of these in turn have a bearing on or contribute to systemic risk within the overall ecosystem.)

Credit and counterparty risk refers to the risk that a counterparty will fail to perform its obligations. Market risk is defined as the potential for losses arising from the change in value of an asset. Liquidity risk is the potential that a position in an asset cannot be unwound due to a lack of depth or a disruption in the market for the asset. Operational risk includes a risk of loss from a failure of internal processes at an organization, which can be caused by human error, technology-system breakdowns, or communication-network failures; they also can include losses caused by external factors such as "acts of God" or other naturally occurring events.[28]

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[27] *See IOSCO–Protection of Assets*, Principles 1 through 3.

[28] For source of definitions, see T*he Joint Forum of the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, and the International Association of Insurance Supervisors, Risk Management Practices and Regulatory Capital*, November 2001, p. 15, at https://www.iosco.org/library/pubdocs/pdf/IOSCOPD122.pdf.

Market participants in any market, including digital-asset market operators, must address each of these risks to ensure against substantial or catastrophic losses that could lead to existential threats against their own firm, thereby imperiling the assets of their customers. In general, policy makers that develop market regulation have required that both market operators as well as intermediaries manage risk by developing appropriate policies and procedures to address them, which contemplate the use of quantitative methods to measure risk, pricing products according to their risks, establishing risk limits, active management of risks through hedging and other techniques, and the building of cushions to absorb losses.[29]

FTX is a full-stack infrastructure provider, combining the matching engine and the clearing function on the same platform, providing a unified user experience for the trading of assets as well as the clearing and settlement of those assets. FTX's ***Market Regulation Key Principles*** addressed other risk-management considerations for the trading venue itself, but here we focus particularly on risk management embedded in the clearing and settlement functions that relate to investor protections.

Clearinghouses in traditional markets again are subjected to substantial regulatory rigor and are required to develop written policies, procedures, and controls that establish an appropriate risk-management framework which, at a minimum, clearly identifies and documents the range of the aforementioned risks and more to which the DCO is exposed, addresses the monitoring and management of the entirety of those risks, and provides a mechanism for internal audit.[30] Public policy typically provides clearinghouses discretion in setting, modeling, validating, reviewing and back-testing margin requirements that build the cushion to absorb potential losses, but must develop such requirements nonetheless; those models are then evaluated by appropriate regulators.[31] Clearinghouses are required by regulation to frequently check the adequacy of initial-margin requirements, value initial margin assets, back test products that are experiencing significant market volatility, and conduct stress tests with respect to each large trader who poses significant risk.

FTX platforms improve upon these requirements today in a number of material respects, and indeed the FTX US derivatives platform complies with the specific requirements of U.S. policy. First, the FTX international exchange imposes on its users a dynamic maximum leverage limit depending on their absolute position, which is limited to maximum leverage of 20 times the notional value of the user's account, and substantially lower in the case of larger positions. The limit is calculated as a function of market liquidity and volatility, along with the positions and collateral that the user holds. Second, FTX platforms check customer-account levels and asset amounts, including those used to collateralize positions, multiple times per minute as opposed to once per day,

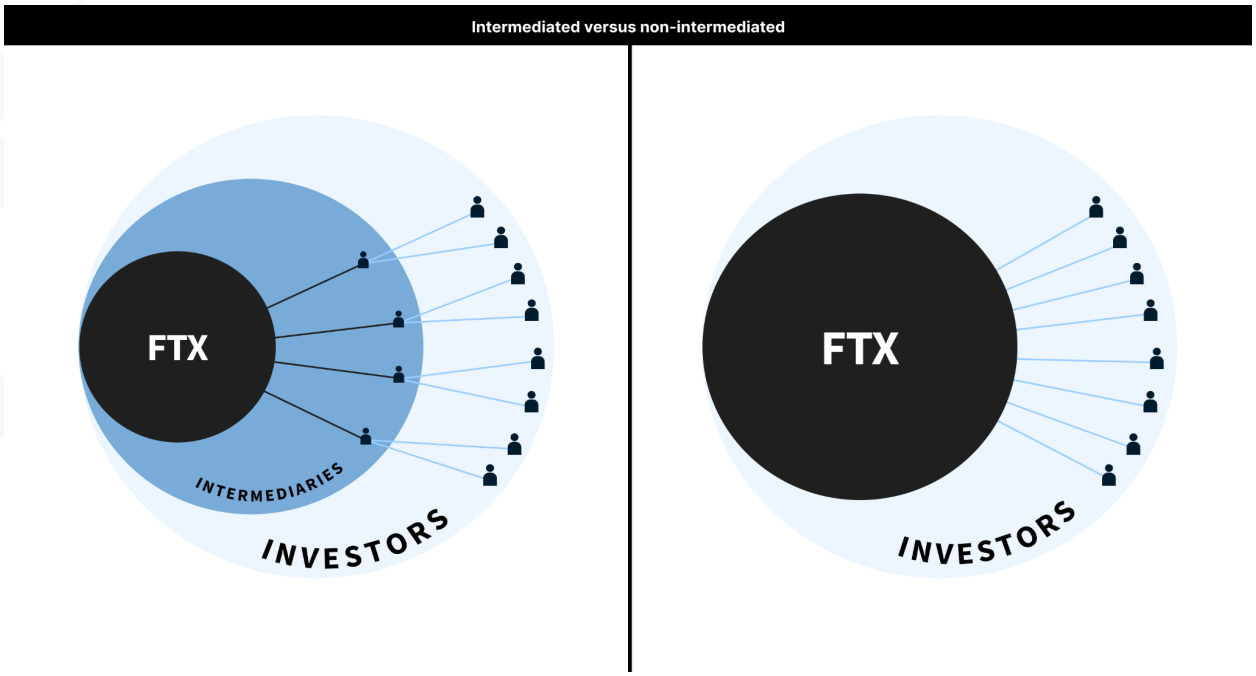
[29] *See id.*

[30] *See, e.g.*, Derivatives Clearing Organization General Provisions and Core Principles ("DCO Final Rule"), 76 Fed.Reg. 69334, 69,335 (Nov. 8, 2011); *see also* Standards for Risk Management and Operations of Clearing Agencies ("Clearing Agency Rule"), SEC Rule 17Ad-22, 17 CFR Part 240.

[31] *See id.*

as standard policy requires today. Third, customer positions are liquidated if the net balance of all of a customer's positions becomes negative, or positions fall below the maintenance-margin threshold, and the FTX risk engine performs this function automatically. FTX uses an advanced and user-friendly liquidation process that gradually reduces a user's position to bring it to solvency, instead of closing the entire position. Fourth, FTX's risk-management program requires that digital-asset collateral be placed on the platform itself, rather than pledged but not delivered to the platform, to ensure the platform has immediate access to the collateral for purposes of managing market risks. And fifth, FTX's markets are open 24 hours a day, 7 days a week, which protects against delayed management of customer positions or market conditions, and the consequent build-up of market risk.

FTX undertakes this risk-management program without any reliance on intermediaries, depending only on its own systems and personnel. Historically, in traditional market structures, intermediaries provided a first or outer layer of risk management, as the entity typically responsible for onboarding customers and maintaining the customer relationship, and thereby exposing that intermediary to all of the attendant risks from that relationship. Market operators and clearinghouses are beneath or within that outer layer and, as explained above, also engage in management of the risks outlined above.



In traditional market structure, any type of breakdown in the risk management at the *outer* layer of the intermediated market structure exposes the *inner* layer to consequent risks. This is so because those intermediaries are members of the trading platform as well, and the effects of a risk-management breakdown can be transferred to the trading platform as well as to the other members of the trading platform. Policy makers refer to this concept as interconnection risk. Arguably, the existence of this outer layer created through intermediation increases the opportunities for risk-management failure because there are so many more points of

potential lapses or failure. Many of these can be inconsequential to the overall ecosystem, but some or many can be consequential.

The simplified market structure native to the digital-asset ecosystem poses fewer interconnection risks within the system because the outer layer of participants is folded into the inner layer – investors access the digital-asset platform directly. Likewise, without intermediaries bringing their customers to the trading platform, the trading platform is not exposed to risk-management failures by an intermediary, and can focus instead on its own risk-management program. This in turn simplifies the role of the supervisory community overseeing such platforms, who by focusing on the risk management of the platform operator can dispense with concerns about the platform's members who are not intermediaries. Again, this concept is key to FTX's view that the market structure for our platforms is ***risk reducing*** compared to those found in traditional markets.

One corollary to this concept is that involving intermediaries in the market structure ***does not*** by definition lead to greater investor protections, as some have argued. Instead, greater protections would depend entirely on the risk-management resources and capabilities (operational and financial) of the intermediary and whether they are delivering on other key investor protections, which in part depends on the level of supervision of the intermediary *vis a vis* the level of supervision of the platform. As a general matter, the supervision of clearinghouses as it relates to risk management in particular is equal to or greater than that for intermediaries, with heightened financial integrity and reporting standards. And as explained above, FTX risk management is designed and has been implemented to improve upon those standards in multiple ways.

Fewer interconnections, combined with superior risk-management practices at the platform level, while delivering on core investor protections, leads to a superior and risk-reducing market structure that better protects investors.

5. Avoiding Conflicts of Interest

The final principle is that in order to ensure the investor's interests are protected, conflicts of interest between the investor and the entity offering the products should be eliminated, mitigated and/or managed appropriately. Once again, in traditional capital markets the policy focus has been on intermediaries who offer access to investment products or otherwise sell the products to their customers directly, and today there are considerable requirements directed at intermediaries. Although not all existing regulations related to conflicts will apply, to the extent that policy makers wish to apply the relevant measures to the digital-asset space, this could be accomplished rather smoothly by shifting the burden of those measures from intermediaries to the platform operator as needed.

Policy governing traditional markets generally takes two approaches to addressing conflicts of interest: expressly prohibiting certain types of conduct, and requiring policies and procedures that involve affirmative steps to identify areas of risk for conflicts, and measures to mitigate or eliminate those conflicts. As an example of the

former, most securities regimes, including in the U.S., expressly prohibit misstatements or misleading omissions of material facts, and fraudulent or manipulative acts and practices, related to the purchase or sale of investment products.[32]

An example of the latter approach is a "best interest" or "suitability" requirement for entities offering investment products to their customers, again typically intermediaries in the case of traditional markets. This type of policy seeks to discourage entities from offering or recommending products that the investor does not sufficiently understand or possess the resources to use properly.[33] Other regimes are less prescriptive and generally focus on the financial wherewithal of a customer seeking access to a trading market, on the premise of ensuring creditworthiness and an ability to meet financial obligations on the platform,[34] along with risk-related disclosures.[35]

FTX favors an approach that provides equal access to all investors, and follows sufficiently robust listing standards that ensure adequate information about the listing is provided to the customer. But if policy makers preferred to impose a heightened standard more similar to what is found in securities markets, for example, they would need to impose that responsibility on the platform operator, which again could easily be accomplished.

In any case, whether intermediaries are involved in the market or not, conflicts inevitably arise when each actor is pursuing its commercial or economic interests. The key point for this particular principle is that when they do, there are familiar methods for eliminating or mitigating those conflicts, even as they apply to platform operators. FTX conducts its business with a goal of maximizing our customer's interest, but supports reasonable policy measures to eliminate or mitigate conflicts that impose those responsibilities directly on the platform.

[32] *See, e.g.*, Section 15(c) of the Exchange Act.

[33] *See, e.g.,* SEC Regulation Best Interest (BI), FINRA Rule 2111. This type of policy seeks to discourage entities from offering or recommending products that the investor does not sufficiently understand or possess the resources to use properly. To accomplish this, some policy regimes require the intermediary to collect relevant information about the customer/investor in order to ascertain the customer's investment profile, and then have policies and procedures for assessing suitability based on that information.

[34] *See, e.g.,* CFTC Rule 38.602, Rule 38.604, Rule 39.12, all of which speak to financial fitness and wherewithal.

[35] See, e.g,. CFTC Rule 1.55 and 33.7.