



Promoting Sound Marketplaces – DeFi/CeFi, Crypto Platforms & Exchanges

28 September 2023

Background

Established in 1961, the WFE is the global industry association for exchanges and clearing houses. Headquartered in London, it represents over 250 market infrastructure providers, including standalone CCPs that are not part of exchange groups. Of our members, 34% are in Asia-Pacific, 45% in EMEA and 21% in the Americas. WFE's 90 member CCPs and clearing services collectively ensure that risk takers post some \$1.3 trillion (equivalent) of resources to back their positions, in the form of initial margin and default fund requirements. WFE exchanges, together with other exchanges feeding into our database, are home to over 50,000 listed companies, and the market capitalisation of these entities is over \$100 trillion; around \$140 trillion (EOB) in trading annually passes through WFE members (at end 2022).

The WFE is the definitive source for exchange-traded statistics and publishes over 350 market data indicators. Its free statistics database stretches back more than 40 years and provides information and insight into developments on global exchanges. The WFE works with standard-setters, policy makers, regulators and government organisations around the world to support and promote the development of fair, transparent, stable and efficient markets. The WFE shares regulatory authorities' goals of ensuring the safety and soundness of the global financial system.

With extensive experience of developing and enforcing high standards of conduct, the WFE and its members support an orderly, secure, fair and transparent environment for investors; for companies that raise capital; and for all who deal with financial risk. We seek outcomes that maximise the common good, consumer confidence and economic growth. And we engage with policy makers and regulators in an open, collaborative way, reflecting the central, public role that exchanges and CCPs play in a globally integrated financial system.

If you have any further questions, or wish to follow-up on our contribution, the WFE remains at your disposal. Please contact:

James Auliffe, Manager, Regulatory Affairs: jauliffe@world-exchanges.org

Nicolas Höck, Junior Analyst, Research: junior.analyst@world-exchanges.org

Richard Metcalfe, Head of Regulatory Affairs: rmetcalfe@world-exchanges.org

Nandini Sukumar, Chief Executive Officer: nsukumar@world-exchanges.org

Introduction

Technological innovation can enhance financial markets, and we see distributed ledger technology (DLT) as something which can aid these goals. DLT has the potential to deliver lower costs, faster execution of transactions, improved transparency, auditability of operations, and other benefits. Our members have been at the forefront of technological change for a long time and are interested to see whether DLT can help to improve their services and offerings to customers and the broader market.

Over the last year, adoption of digital assets has continued to advance. Developments have included the growth of available products globally, large inflows into crypto-exchange traded products (ETPs), increasing investor interest and a heightened focus on crypto-asset trading platforms. There have been a number of notable incidents, with the biggest of them being the demise of FTX, among other hacking, anti-money laundering (AML), and control breach related incidents. Regulatory focus, at this point, has turned with full speed to the core activity of such platforms: trading.

Such increased scrutiny is a key area of interest for exchanges, market participants and regulatory authorities, particularly those with authority over secondary markets in general and those who may soon have broader authority over Crypto-Asset Trading Platforms (CTPs). With the aim of providing a resource for its membership and the wider public, this WFE paper addresses topics of particular concern to the transparency, fairness, and security of CTPs, and highlights key policies and practices for such platforms. Exchanges and the WFE have a valuable perspective on this as operators of markets through the full value chain from trading, clearing and settlement services, and as pioneers in the adoption of technological innovations in financial markets.

Finally, the crypto-asset industry is rapidly evolving. Trading platforms are constantly refining and changing their operations and may decide to adopt new policies based on market conditions, regulatory requirements, or the findings of government agencies. Our comments here should not be taken as reflecting on the many legitimate and innovative businesses involved in the development and promotion of the technology at hand. Nevertheless, we think we can offer a valuable perspective on the way CTPs should be organised based on our members' experiences running regulated exchanges. Since the publication of this paper, certain platforms might have revised or improved various policies of interest. The information in this paper is current as of September 2023.

Summary

- Exchanges play a pivotal role in facilitating the financing of the economy for the benefit of issuers, investors and wider society. With adequate rules and supervision, CTPs could expand this and also contribute to servicing the 'real' economy.
- Decentralised finance (DeFi) is an innovative approach to the provision of financial services. However, its similarities to traditional finance and centralised finance and the risks that DeFi present suggest regulation could benefit its development.
- The financial ecosystem evolved, with the assistance of governments and regulators, to ensure market integrity, reduce systemic risk and protect investors. Pro-actively applying the same principles to CTPs would help to prevent the same underlying risks manifesting in this new area.
- Governments and regulators should seek to ensure sound marketplaces for the protection of investors and ensure that the principle of 'same activity, same risks, same rules' apply to CTPs and exchanges.

- Governments and regulators could require CTPs to meet the high standards they expect of exchanges by following certain principles such as:
 1. Segregate market infrastructure functions within a CTP where appropriate such as limiting CTPs trading their 'own book' or in potential conflict with their customers;
 2. Operate orderly markets by having in place systems and controls for broader risks, such as abusive trading, to protect integrity of price formation;
 3. Hold sufficient financial resources to meet expected operational stress events;
 4. Facilitate compliance with best execution requirements;
 5. Increase robustness of listing standards;
 6. Have appropriate governance and management requirements.
 - In the short term, CTPs could disclose their regulatory status and not describe themselves as 'exchanges' until they are appropriately regulated and adhere to the standards listed in this document.
-

The WFE sees the benefits that technological innovation can bring to financial markets, and we see distributed ledger technology (DLT) as one such type of innovation that may bring benefits. Our comments here should not be taken as reflecting on the many legitimate and innovative businesses involved in the development and promotion of the technology at hand. The technological innovation in question, has the potential to bring lower costs, faster execution of transactions, improved transparency, auditability of operations, and possibly other benefits. Nevertheless, we think we can offer a valuable perspective on the way CTPs should be organised based on our members' experiences running regulated exchanges.

Before setting out our view, it is helpful to provide some background. Blockchain and DLT are often used interchangeably but Blockchain is in fact just one type of DLT. Distributed ledger technology refers to digital and distributed transaction ledgers that store data blocks distributed across a network of computer nodes. The blockchain is a type of DLT in which transaction records are stored as a chain of blocks in a ledger. In this context, DLT can be divided into four categories. These are based on whether the DLT is public or private, meaning if nodes are permitted or not to freely join and contribute to the running of the DLT. And, on the other hand, if they are permissioned or permissionless, meaning users are required to verify their identity and meet certain requirements.

- **Public-permissioned** enables the deployment or removal of applications without the need to notify anyone, expose their name, or satisfy any application criterion requirements. However, not all nodes/roles are anonymous and free to participate. Some, for example, validators, need to be identified and approved by a DAO (eg, Sovrin) or the entity managing the DLT infrastructure (eg, Ripple).
- **Private-permissioned** ensures that both the network nodes that run the applications and those applications must be invited to join the network and must comply with specific standards or produce identification documentation (e.g., Hyperledger Fabric, Corda, Quorum).
- **Public-permissionless** enables the deployment or removal of applications without the need to notify anyone, expose their name, or satisfy any application criterion requirements. The nodes of the network can also join and participate freely and anonymously, typically in exchange for the native coin of the network. The most decentralised kind of network is one like this (e.g., Bitcoin, Ethereum).

- **Private-permissionless** DLT mandates that applications that are already in use must be requested to join the network and are subject to unannounced removal at any time. The nodes that comprise the network and power the applications are openly and anonymously able to join and contribute, typically in exchange for the native money of the network (eg, Holochain, LTO Network).

TradFi/CeFi/DeFi

The similarities and differences between traditional finance, centralised, and decentralised finance are somewhat misunderstood. Before setting out our view, we want to make it clear what we are talking about. In the context of trading:

- Traditional finance (TradFi) refers to those entities which facilitate execution of trades of traditional financial instruments such as securities, derivatives, or cash. These are regulated exchanges, alternative regulated venues and over-the-counter (OTC) brokers.
- Centralised Finance (CeFi) refers to entities in the crypto-sphere that facilitate execution of trades of crypto-assets in a system that broadly replicates the traditional financial system. An example of this would be Binance which operates a CTP that functions, among other things, in a similar way to an exchange.
- Decentralised Finance (DeFi) refers to a system in the crypto sphere that facilitate execution using a decentralised finance protocol. An example of this would be Uniswap, where owners of governance tokens control changes to the protocol.

The concept of Decentralised Finance (DeFi) with financial products built on DLT networks, often on public blockchains, might bring innovation to financial products but is attracting growing interest recently among regulators. These peer-to-peer layers offer their financial services to (retail-) clients without a central intermediary, processing the application of certain rules automatically on the basis of, eg, programmed smart contracts. This makes it even more important to protect consumers/investors. Market Infrastructures (MIs) could fulfill such function and roles, as not every task is best served when outsourced to the technology alone.

In our view, it is important to differentiate between crypto as an asset class and industry, and fraud. The recent collapses should not discredit crypto-assets in general, but rather should motivate regulators to allow regulated actors to start playing a role in the space. If you make it impossible for regulated institutions to run services in crypto-assets, you effectively chase this business out of the institutions who know how to run it properly, and into the shadows, where it may be run by new entrants with limited experience. Further, one could try to channel individual interaction through, e.g., distribution networks of regulated players. One way to do this could be to allow regulated MIs to interact with decentralised exchanges (DEXs), after validating “minimum” technical standards of a smart contract in question, by also involving independent technical auditors at the first place.

Service	Crypto financial system		Traditional Financial System (TradFi)
	DeFi	CeFi	
Asset trading	Crypto Asset DEX (Uniswap)	Crypto CEX (Binance, Coinbase)	Regulated Exchanges, [alternative regulated trading venues] and OTC brokers
Derivatives trading	Crypto derivatives DEX (Synthetix, dYdX)		

Recreated from [BIS report](#)

As CeFi can operate in a very similar way to TradFi there is a clear rationale to treat it in a similar, if not the same way. DeFi appears to operate differently but the differences are not quite as stark as they seem.

Firstly, DeFi is just another way to enable financial services. It carries many of the same risks that all financial services and trading of assets carry. As regulators start to engage with and regulate CeFi, there seems to be no justification on the grounds of the risks DeFi presents or the objectives of regulators to not introduce regulation to protect consumers and ensure market integrity.

Secondly, a platform where buyers and sellers meet is, by its very nature, a central entity. Decentralised platforms also often rely on automated market makers to provide liquidity. These automated market makers are indeed often automatic after they are created but they are created by individuals, groups of individuals or entities. One of the main problems regulators have with DeFi is identifying who or what to regulate; or, what they can 'hook' regulation to. Regulators can 'hook' these entities when looking to apply regulation (as has been the case in the US when it comes to decentralised autonomous organisations or DAOs¹). This would mean applying regulation on the applications and not protocol level, which helps to ensure that a technological neutral approach is adopted.

Furthermore, we are aware that DeFi contains power concentrations. In an effort to avoid having faith in any individual or organisation, many DeFi apps have experimented with novel organisational forms – DAOs. By issuing unique "governance" tokens that provide its owners the opportunity to suggest and vote on protocol improvements, the DAO's core principle is to distribute decision-making authority among all interested parties. However, if someone were to purchase a large number of governance tokens, DAOs may become captured by singular interests. Moreover, we know from traditional finance that decentralised governance models can be inefficient.

These problems are far from theoretical, Ethereum's recent switch to proof-of-stake from proof-of-work was largely driven by the centralised team at the Ethereum foundation. "The Merge" – as it has come to be known – could be transformative for Ethereum as it may reduce energy usage by 99% if reports are to be believed. But, it also shows that a central actor, or set of actors, can take control of a so-called decentralised app. The smart contracts governing DeFi are also not accessible to ordinary individuals. In fact, owners of governance tokens may be asked to vote on something that they have no understanding of. That means that they are open to being exploited. Issues like these have led to international standard setters like the Bank for International Settlements to label decentralisation an "illusion"² and for the International Organization of Securities Commissions (IOSCO) to determine that most of the new services in decentralised finance which are emerging "replicate more traditional financial services and activities, but with weaker regulation and increased risks for investors"³

We therefore welcome IOSCO's work aimed at exploring how to regulate DeFi. IOSCO is right to consider DeFi in a new way and possibly suggest a bespoke regime given how different DeFi is to CeFi and TradFi. Nevertheless, the principles underpinning regulation remain valuable. Looking at IOSCO's principles for Secondary and Other Markets which are cited further down this paper is a valuable starting point. In some jurisdictions, e.g. the European Union there will be more analysis on the developments of impact, market capitalisation and benefits/risks of DeFi.

Same activity, same regulation – CTPs and exchanges

Exchanges have evolved over hundreds of years so that they are now well-established, well-regulated venues where buyers and sellers meet. From the establishment of the first Bourse in Antwerp in the mid-sixteenth century to the

¹ <https://corpgov.law.harvard.edu/2022/09/17/a-primer-on-daos/>

² https://www.bis.org/publ/qtrpdf/r_qt2112b.htm#

³ <https://www.iosco.org/news/pdf/IOSCONEWS637.pdf>

onset of electronic trading, exchanges have embraced technological change. This has brought numerous benefits such as allowing regulators to track real time trading to prevent abusive practices or enabling investors to take advantage of improved access to markets. In this context, DLT could be the logical next step towards developing a robust financial system that delivers more for everyone.

Yet, it is the popularity and the unregulated status of many providers of crypto-assets, rather than questions around market infrastructure, which are attracting the most regulatory attention right now. According to [coinjournal.net](https://coinjournal.net/news/42-percent-of-failed-crypto-exchanges-vanished-leaving-users-in-the-lurch/) 94 CTPs failed in 2021 alone.⁴ That same research shows that 42% of failed CTPs since 2014 disappeared without a trace, leaving investors with nothing (no figures have been published for 2022). Considering the number of bankruptcies in the crypto space, the number is likely underestimated.

FTX is merely the latest, and probably largest example of poor practices in the sector. It so far appears that the issues were not necessarily related to crypto or the underlying technology of DLT and cryptography. Instead, it looks like a classic financial services collapse related to a lack of proper systems and controls, poor governance, a lack of segregation of client assets, significant conflicts of interest and possibly even fraud.

With WFE members exploring and already deploying possible applications of DLT to their current business, the necessity of a well-regulated marketplace which allows them to compete on a level playing field is of the utmost importance. Moreover, as stated above, the issue is not necessarily the technology in use but rather the assets, services or operational structure utilised within a CTP can cause problems and effective regulation can alleviate those problems.

Where public-permissionless DLTs allow users to join and nodes to help operate the DLT anonymously, without adequate processes in place to protect integrity and perform relevant oversight it becomes easier for users to act inappropriately.

In a move welcomed by the WFE, regulators and the Financial Action Task Force (FATF), the global anti-money laundering body, have recently sought to apply regulation to CTPs to ensure that they know who their customers are. This allows regulators to monitor transactions without compromising the underlying DLT and is a helpful example of how regulation can be applied to DLT and CTPs for the better.

It is worth noting that, given the public nature of many applications of DLT, crypto-assets used for money laundering or other illegal purposes can be traced. Firms are already developing tools that can link entities and individuals to cryptocurrency activity. The technology itself can also be used to verify ownership of real world assets, rather than relying on paper certificates.

Despite recent advances, the legal characterisation of digital financial products in many jurisdictions is still subject to some uncertainty that hinders both the legitimate development of these products and their effective regulation. On this basis, the WFE welcomes the work of the IOSCO and various regulators around the world in establishing crypto taskforces (such as the Crypto and Digital Assets Working Group) and their attempt to develop a taxonomy for crypto-assets. Governments and regulators around the world are considering how to address crypto. Most notably, the Markets in Crypto-Assets Regulation introduced by the European Union. In the development of regulation, we support an approach that seeks a technology neutral solution and hope to emphasize with this paper, ways in which CTPs and exchanges can learn from each other, and be regulated in a technology neutral framework.

⁴ <https://coinjournal.net/news/42-percent-of-failed-crypto-exchanges-vanished-leaving-users-in-the-lurch/>

Delivering market integrity, reducing systemic risk, and protecting investors

Exchanges help enforce rules and laws and are subject to numerous regulatory requirements which assist regulators to monitor public markets. Exchanges are required to report specific information, such as instances of market abuse, transaction data and large positions held by market participants to regulators. Exchanges take on this responsibility to maintain the high standards in their markets, which equally applies to users of those markets, and ensures the market operates efficiently and neutrally which results in investors having confidence in the marketplace.

Although authorisation limits the participants who can join the exchange, it also guarantees that those who are members are usually regulated and follow a strict set of rules due to their own regulatory status and the applicability of the Exchange Rule Book. Combined, these rules protect issuers and investors by ensuring certainty and transparency. In contrast different CTPs have different access criteria. Some permit non-intermediated access to retail investors, whereas others restrict trading access to regulated intermediaries.

While it is true that excessive regulation can stifle markets, if set at a suitable level, regulation can provide market participants with confidence in the available information about the financial products they trade and where they trade them. Therefore, CTPs should welcome a degree of regulation as a mean to bolster the appeal of their markets and their ability of enforcing a clear set of rules. Furthermore, this could be done by meeting the high standards expected of exchanges, such as the IOSCO Principles for Secondary and Other Markets:

IOSCO Principles for Secondary and Other Markets

- IOSCO Principle 33 The establishment of trading systems including securities exchanges should be subject to regulatory authorization and oversight.
- IOSCO Principle 34 There should be ongoing regulatory supervision of exchanges and trading systems which should aim to ensure that the integrity of trading is maintained through fair and equitable rules that strike an appropriate balance between the demands of different market participants.
- IOSCO Principle 35 Regulation should promote transparency of trading.
- IOSCO Principle 36 Regulation should be designed to detect and deter manipulation and other unfair trading practices
- IOSCO Principle 37 Regulation should aim to ensure the proper management of large exposures, default risk and market disruption

For the full list, please refer to: [IOSCO’s Objectives and Principles of Securities Regulation](#)

A trusted system

Traditional financial structures involve a plethora of actors. For exchanges, this means that, broadly speaking, investors must go through intermediaries to access the marketplace. This system recognises the differing motivations of differing actors, with exchanges being a neutral platform between them. This helps to ensure a trusted trading environment – you know who is participating and on what basis.

In a typical trading environment, certain commercial activities that are frequently carried out by CTPs would not be allowed on an exchange or would be closely regulated as it could impair neutrality. CTPs often serve as (i) venues of exchange, operating the platform on which buyers and sellers trade virtual and fiat currencies; (ii) in a role similar to a traditional broker-dealer, representing traders and executing trades on their behalf; (iii) as money-transmitters, transferring virtual and fiat currency and converting it from one form to another; (iv) as owners of large virtual currency holdings; (v) as issuers of a virtual currency listed on their own and other platforms, with a direct stake in its performance and also (vi) as custodians of customer assets.

Due to regulation, exchanges cannot take on these multiple roles. They are also forbidden from trading on their own platform to prevent conflicts of interest. Examples of these conflicts have been seen on CTPs where their operators have secretly enjoyed unfair informational advantages, which were used to front-run investors' trades. Exchanges have extensive requirements to prevent conflicts of interest which prevent this type of activity.

Hence, considering the ongoing and potential conflicts of interests in the crypto market infrastructure, the same should be expected of CTPs. In the interest of all market participants, crypto-asset trading platforms could take a transparent approach in disclosing conflicts whilst regulators and governments consider long-term plans on whether segregating activities within the platforms is appropriate, including limiting CTPs trading their 'own book' or in potential conflict with their customers.

Furthermore, whilst it is brokers that generally must seek best execution for clients, exchanges must have non-discretionary rules for the execution of orders on the markets it operates. Taken together this means that investors get the best possible price for the trade which they are entering (i.e., best execution). Research by the National Bureau of Economic Research found that CTPs can lack requirements to ensure the best possible price for investors.⁵ Therefore, CTPs could develop systems like exchanges to help investors get best execution.

Preventing abusive trading

Abusive trading includes but is not limited to wash trading (creating artificial volume), front running (trading on information about a large order) or insider trading (trading on material non-public information). These all create problems by misleading markets and investors. CTPs could develop appropriate systems and controls to prevent this type of activity in a similar way to exchanges.

Sufficient resources

Laws and rules applied to exchanges ensure that they have adequate financial resources to meet their operating costs. For example, the UK's Financial Conduct Authority (FCA) requires exchanges to have six months' worth of operating costs on hand. This ensures that the exchange itself is financially viable and generates confidence in trading on the venue. It also helps to mitigate systemic risk which could be caused by the collapse of an exchange. CTPs are under no such obligation to hold sufficient resources which could reduce confidence in trading on them. Therefore, CTPs could be subject to requirements that require them to hold sufficient financial resources to continue to operate.

Vetting of Products

Exchanges provide a trusted space for investors by setting requirements for products offered on their venues. For example, stock exchanges frequently require that there is a minimum level of liquidity for a company to become listed (this is often measured through the number of shares already issued). This liquidity requirement provides reassurance

⁵ https://www.nber.org/system/files/working_papers/w29396/w29396.pdf

to investors that they will be able to sell their share if they need to. Requirements like these ensure that only high-quality products are traded on exchanges. This reassures investors of the integrity of both the exchange and the traded product. Depending on the jurisdiction, governments and regulators might have additional requirements for listings.

Exchanges are subject to rules which enforce disclosures. Issuers are obliged to disclose in a timely manner information that investors would require to enable them to make informed investment decisions, including events that pertain to the dynamics of a company or otherwise have the potential to affect share value. CTPs could follow exchanges lead on this and provide clarity on their listing requirements as well as developing and enforcing rules around timely disclosure of issues of material interest.

Governance and management

Much like the financials of a company, individuals that are responsible for the management and governance of exchanges are also subject to scrutiny. When considering whether a person meets a test like this, a regulator will generally consider a person's honesty, competence, capability, and financial soundness. There must also be effective governance arrangements in place that, for example, the management body has effective oversight of the activities undertaken by the exchange. CTPs could be subject to appropriate governance and management requirements like exchanges, preferably with corporate structures that do not prevent effective supervision.

Conclusion

Exchanges are robust and highly regulated venues. They undertake significant steps to ensure market integrity, reduce systemic risk and protect investors. Governments and regulators helped to shape the ethos of the current market infrastructure, developing it to operate in the trusted manner it currently does. The same logic must apply to CTPs to prevent the significant risks and realities set out in this paper. When exchanges and CTPs conduct the same activity, with the same risk, then the same principles could be applied. That means: subjecting crypto-asset trading platforms to the rules and laws governing exchanges set out in this note, with the aim of achieving a technology neutral approach to regulation.