DEFI OPPORTUNITIES AND CHALLENGES

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Why DeFi should lead us to innovate in regulation

What is DeFi?
At first glance, DeFi can be defined a set of crypto-asset services, similar to financial services, performed without the intervention of intermediaries. The concept remains however unclear. A set of criteria is often used to identify its outlines: (i) an architecture based on public blockchain; (ii) protocols based on smart contracts; (iii) a decentralised governance, sometimes around a "decentralised autonomous organisation" (DAO); (iv) the absence of a custodian for digital assets.

Nevertheless, "pure" DeFi projects are rarely encountered. Even more so, the DeFi ecosystem is paradoxically highly concentrated in many respects and depends on centralised players to perform certain functions, while the governance of blockchains or applications is sometimes heavily centralised (concentration of governance tokens in the hands of a small number of players, existence of admin keys...).

One might question the interest of the subject today: the ecosystem is currently of limited size, with a net total value locked – to avoid double counting as much as possible – of 40-50 billion USD in the first half of 2023 (less than 10 % of the market value of crypto-assets). Moreover, use cases are limited and more related to speculation than to serving the real economy.

DeFi has nevertheless attracted considerable interest, both in the public debate and from supervisory authorities, notably because of what it could foreshadow for the future: "tokenization" of finance, benefits of blockchain technologies for a wide range of activities in all sectors of the economy. Another reason for the supervisors' interest obviously lies in the risks that DeFi carries.

Risks related to DeFi
In addition to the fragilities of the crypto-asset ecosystem, highlighted by a number of recent bankruptcies, DeFi carries specific risks.

This is first the case for decentralised governance of blockchains or protocols: an individual or a small group of individuals can make decisions that are detrimental to minority owners. This issue is all the more important given that many DeFi protocols are decentralised in name only ("DINO").

Moreover, the blockchain infrastructure and DeFi applications have been subject to numerous computer attacks. In fact, the advantages of DeFi can create its specific vulnerabilities: for instance, open computer code makes it a target exposed to all.

Finally, the volatility of crypto-asset prices, the complexity of the products offered, the proliferation of scams, theft and hacking have exposed retail customers to high risks of capital loss.

Regulatory avenues
These risks obviously call for a framework, primarily to protect users, especially the most vulnerable among them. This regulatory framework must be innovative. Indeed, while regulation must be technology-neutral ("same activity, same risks, same rules"), it cannot be technology-blind: for example, it must take into account some of the technical characteristics of DeFi when they generate specific risks. Therefore, the regulatory framework cannot simply replicate traditional regulation, but must innovate, for example by drawing inspiration from regulations in other sectors.

With this in mind, the ACPR recently published a discussion paper on regulatory options for DeFi. This paper does not express the ACPR's definitive position, but seeks to develop an initial analysis of regulatory options with a view to discussing them with all stakeholders (in particular during a public consultation, which recently took place). The proposals cover the three main strata of DeFi.

Firstly, ensure the resilience of the blockchain infrastructure that support DeFi, for example by imposing security standards on public blockchain and limiting the risks of concentration of transaction validation capacities in the hands of a few players or, as an alternative, impose the use of secured private blockchains.

Secondly, strengthen the security of *smart contracts* via a certification mechanism covering the security of the computer code, the nature of the service provided and governance. Interaction with non-certified smart contracts would be either discouraged or prohibited, through the regulation of contact points (see below). The proposal is inspired by the EU's product safety regulations, with the idea of imposing obligations on products, even where there is no producer.

The regulatory framework must innovate, for example by drawing inspiration from other sectors.

Thirdly, regulate access to DeFi, in order to protect users, especially retail customers. Intermediaries – or "access points", whatever their form – that provide access to DeFi must comply with rules of good conduct and be subject to due diligence and advice as well as to know-your-customer (KYC) requirements, where necessary.

With these proposals, the ACPR wishes to contribute to the gradual development of a European or even international regulatory framework that strikes the right balance between innovation and protection.

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Regulatory and supervisory challenge to decentralized finance

The events of the past year have highlighted the volatility and structural vulnerabilities of crypto assets and related players which led to increasing doubt about the crypto market ecosystem. They have also illustrated that the failure of a key service provider in the crypto asset ecosystem can quickly transmit risks to other parts of that ecosystem, and if linkages to traditional finance were to grow further, spillovers from crypto assets markets into the broader financial system could increase.

It has now been four years since Financial Action Task Force (FATF) extended its global standards on anti-money laundering and counter-terrorist financing to apply to crypto assets and crypto asset service providers. According to FATF findings some jurisdictions have introduced regulations, but global implementation is relatively poor, and compliance remains behind most other financial sector players. And then there comes decentralized finance (DeFi) that offers the promise of an emergent alternative financial architecture that prioritizes disintermediation and decentralization to empower individuals along crypto principles.

In this light, the EU has approved the Markets in Crypto-Assets (MiCA) Regulation, that marks another step in the decentralized finance sector, making digital finance available to European customer and business. New regime could represent a positive boost for the EU crypto businesses and the EU economy overall, but its success is highly dependent on the upcoming development of practical implementation standards. If MiCA proves to be workable for the industry, consumers, and regulators, it will have a global impact.

MiCA Regulation is expected to strengthen the supervisory framework applicable for crypto asset service providers. However, regulation excludes fully decentralized services from its scope, that leverages distributed ledger technologies to offer services such as lending, investing, or changing crypto assets without relying on a traditional centralized intermediary. DeFi relies on publicly distributed ledgers and automated digital (smart) contracts to provide financial services without requiring the presence of intermediary agents. MiCA Regulation mandates a development of a report to be drawn up within 18 months of its entry into force, assessing, among other things, the value of and procedures attached to a European regulation on disintermediated finance.

DeFi is a relatively young branch of crypto family. Activity in DeFi gained traction during the last decade and as of now has not grown to present a considerable financial stability risk. The risk for retail and institutional investors however is more prominent. Considering potential policy choice there is therefore a need to access how and which risks from the DeFi protocols should be addressed. Another area is guidance on DeFi acting for crypto service providers to combat money laundering and criminal activities and link between DeFi activity and traditional financial sectors.

A standard approach to the regulation and supervision of financial markets has been the setting of rules to guide and delimit the scope and behaviour of financial intermediaries by setting capital requirements, liquidity ratios, rate controls, know-your-customer rules, and anti-money laundering detection settings. Regarding the DeFi it is important to keep in mind that some of the risks associated with disintermediated finance are closely linked to the specific features of the technology used. The transparency of computer codes, governance issues, the composability of smart contracts, their reliance on blockchain – all these are advantages of disintermediated finance and factors for their vulnerabilities.

Additionally, structural flaws embedded in both DeFi, and crypto assets more generally stem from the underlying economics of incentives rather than just technological limitation or complexity of the ecosystem. In view of these risks, one can argue that the regulation of disintermediated finance cannot simply replicate the systems that currently govern traditional finance. On the contrary, regulations must consider the specific features of DeFi.

DeFi poses a general challenge to standard policy frameworks.

While public attention to the regulation and monitoring of DeFi systems is growing, the very nature of service provisioning in DeFi poses a general challenge to standard policy frameworks. At the centre of this challenge lies the absence of legal entities - both on the supply side and the demand side - upon which policy institutions have traditionally enforced their requirements. These key features should be accessed in shaping the future of DeFi and interaction with the rest of the economy keeping in mind that prime objectives of public policies is to ensure that benefits from innovation do not come at an irremediable cost.

RICHARD TENG

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Give DeFi the time to show its potential

As is often the case with other disruptive technologies, the public discussion about the regulation of Decentralised Finance, or DeFi is coloured by hard to reconcile views about its risks and potential.

DeFi is as old as the Ethereum blockchain, which was launched in 2015. But it only got on the radar of regulators in the years of 2020 - 2022. During the DeFi Summer, the Total Value Locked in DApps, the reference indicator, increased from a few hundred million dollars to $180bn. At the end of July, it was about one quarter of that, according to Defi TVL aggregator DefiLlama.

DeFi refers to the provision of financial services without intermediaries, through open protocols that allow for programmability and composability. It is associated with blockchain technology and the concepts of 'tokenisation' and smart contracts.

DeFi already provides alternatives to traditional services, especially when involving crypto assets (e.g. lending, trading, investments, insurance). In many instances, it does so in more efficient and inclusive ways. Furthermore, it offers the potential for innovation and the creation of new services that change the way financial markets work. This is why even central banks and traditional finance incumbents are eagerly exploring it.

Innovation comes with risk and uncertainty, but policymakers shall not lean against it. Consumer protection, financial stability, market integrity and other policy objectives must be pursued alongside the support for growth and adoption of the technology.

Importantly, it must be recognised that replicating existing financial regulation and applying it to DeFi would be incompatible with that. Traditional financial markets are heavily reliant on intermediaries, which provide liquidity, clearing, settlement, among others. Existing financial rules are imposed and enforced mostly on these intermediaries.

In contrast, in DeFi, access is permissionless and services are provided by (legally) unidentified agents, through automated protocols. The new setting calls for a bespoke approach to regulation and supervision.

What would the regulation of DeFi look like? This is a fair question to ask, but not one we should rush to respond to. The answer should be given over time, as the technology evolves and financial markets adopt it.

Regulators should focus on incentivising the collaboration among industry players and the development and take-up of standards. This - combined with robust regulation of intermediaries, such as Crypto Asset Service Providers - will lay sound foundations for the development of the ecosystem.

DeFi is permissionless and decentralised. This calls for a bespoke regulation.

A self-regulatory approach has three main advantages. First, it can leverage numerous underlying technical concepts and established standards, which take into account the specificities of the blockchain technology. Second, it can address the heterogeneous nature of the blockchain ecosystem by developing tailored approaches through different initiatives. Third, it can offer flexibility to keep up with the pace of innovation and respond to the evolving challenges.

Over time, striking the right balance between standards, self-regulation and any form of regulatory oversight would be the right approach to nurture a crypto ecosystem that is responsible and continues to innovate, grow and provide benefits to consumers.

Binance is fully committed and ready to play a part in this process. In response to a recent consultation paper by the Autorité de Contrôle Prudentiel et de Résolution, the prudential arm of the Banque de France, we proposed the creation of an Observatory of DeFi.

This observatory would be tasked with gathering knowledge and proposing tools that facilitate the monitoring of DeFi protocols and developments in the market. It would promote a shared understanding of the risks and benefits, develop technical expertise and inform the discussion on possible adapted forms of supervision, including the notion of embedded supervision.

This proposal is consistent with the approach of Markets in Crypto Assets Regulation, which excludes DeFi, understood as services provided on a fully decentralised basis, from its scope and makes it one of the subjects of the upcoming review.

With just more than one year to go until the MiCA implementation, our collective focus should be on preparing for it and ensuring the level 2 rules are fit for purpose. This will require significant efforts and dialogue from everyone.

Getting MiCA right should be our collective priority. As for DeFi, give it time to show its potential and prove its worth.

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Centralized intermediaries empower decentralized innovation

The internet revolution promised and delivered major changes in how we connect, learn, engage, exchange, and transact. We can do day-to-day things like share content and pay bills in more efficient, personalized, and instantaneous ways than we would have thought possible 30 years ago. The next wave of innovation has emerged, as technology delivers the societal benefit of disintermediation and decentralization. Important regulatory questions will need to be answered in the short to medium term.

The blockchain ecosystem is a vision of a new and improved internet that uses decentralized blockchains and tokens to enable social and commercial interactions without intermediaries. Blockchain users will build and operate their own content and ecosystems.

Decentralized finance (DeFi) is a growing area, representing open financial infrastructures and decentralized applications built on software protocols such as blockchains and smart contracts. It aims to shift traditional financial systems to peer-to-peer networks in order to remove third party rent-seeking and control. There is an ever-increasing set of protocols that govern specific systems for DeFi participants. DeFi applications, built and governed by users, can enable those users to gain access to credit, or to save and invest.

DeFi is nascent but growing. Estimates suggest the DeFi market is currently ~50 billion USD in assets, relative to the one trillion USD in the broader crypto market and hundreds of trillions in the traditional financial system. So, it remains important to understand the intricacies of this nascent sector and its evolving links with centralized finance.

Centralized exchanges such as Kraken are not DeFi. Yet, they have become an important bridge to buy, sell and trade tokens that drive innovation by enabling the exchange of value, underpinning governance, and empowering individuals to access new decentralized ecosystems.

Centralized digital asset exchanges will continue to serve as a regulated bridge to DeFi.

For over 12 years, Kraken has worked to safely accelerate adoption around digital assets and enable decentralized ecosystems to thrive. We are part of a centralized layer that includes exchanges where you can buy, sell, and use tokens; custodians who can keep them safe; and distributors who can make them widely accessible. We believe secure and well regulated centralized service providers can be engines for growth and connectivity between centralized and decentralized worlds. Many DeFi services providers, such as lending protocols, depend on reliable reference prices for tokens that can be found on liquid centralized exchanges. Customers may also go through centralized players to participate in DeFi, for instance in proof-of-stake ecosystems where token ownership is the key to governance.

Regulation has appropriately focused on this centralized layer and makes it a safe environment for innovation, as the EU's Markets in Crypto Assets Regulation (MiCA) has done. Indeed, the customer protection failures and frauds seen in the crypto landscape in recent times have revolved around fraudulent centralized players.

As developed and emerging economies advance regulatory frameworks in the crypto markets, there are two principles that should be applied.

First, the risks in DeFi are not the same as in traditional finance. For example, centralized governance risks are diminished in a transparent and permissionless environment; operational and cyber risks are more relevant. The benefits of disintermediation will need to be protected while accounting for the different risks.

Second, as with prior evolutions of the internet, regulating open-source software providers and code writers is not the right path. The user experience through centralized intermediaries such as apps or intermediaries will need to remain in focus. Businesses have the capability to make their apps or platforms compliant, subject to local regulation in ways that software protocols (i.e. the underlying blockchains, smart contracts and DeFi networks) should not be required to do. Early internet legislation did not regulate the underlying technology or protocols such as HTTP (website data), or SMTP (email), and instead focused on the user-facing apps. The principles which governed early internet legislation should be similarly applied to decentralized applications.

Decentralization has arrived and presents innovative potential for society. Centralized digital asset exchanges will continue to play an important role as a regulated bridge to DeFi. It is important to design a regulatory framework that will allow DeFi to remain what it is - decentralized, permissionless technology that is accessible to all - while continuing to focus on effective frameworks for regulating centralized intermediaries who can help drive the next evolution of the internet.