DEFI PROSPECTS AND REGULATORY IMPLICATIONS

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DeFi - TradFi interconnectedness and the role of stablecoins

DeFi has been attracting an increasing number of retail and institutional investors in an environment that lacks any of the traditional safeguards for investor protection and market integrity, giving rise to risks that call for policy consideration and action.

Such risks are associated with excess volatility, unregulated leverage and other forms of regulatory arbitrage, governance weaknesses, risk of market manipulation and new forms of concentration risks, and risk of illicit finance or outright fraud.

Growing interconnectedness between DeFi and traditional finance (TradFi) can give rise to investor risks at the micro-level, while it may also create channels of potential contagion to traditional markets.

Stablecoins: a double edged sword for DeFi and the key bridge to TradFi

Stablecoins are an indispensable ingredient and a foundational basis of DeFi. As stablecoins are perceived to be more stable than highly volatile crypto-assets, they are used as a way to hedge against crypto volatility without needing to convert crypto into fiat and without the use of traditional financial institutions. Stablecoins are also used as collateral in leveraged lending, and as trading facilitators within DeFi in decentralised exchanges.

But stablecoins also constitute one of the greatest points of vulnerability of DeFi, and the connecting tissue that links DeFi and TradFi. Recent OECD analysis around DeFi and the institutionalisation of crypto-assets anticipates a scenario where a major stablecoin loses its peg and describes the risks of disruption to digital asset markets that could result from mass redemptions of stablecoins.

The recent Terra failure points to the need for action

The recent failure of Terra's UST stablecoin was a good case study of such risks: UST broke its peg and suffered a "death spiral" that resulted in significant losses for holders without any recourse for compensation, becoming a valueless stablecoin in less than a week.

Although there are indeed differences between the different types and design models of stablecoins, the run-risk that UST experienced applies across the board for such arrangements. A fall in the price of reserve assets, failure to safeguard them appropriately, lack of clarity regarding the redemption rights of holders or operational risks and disruption related to cybersecurity are all factors that can undermine investor confidence, leading to self-reinforcing cycles of redemptions and fire sales of underlying assets.

A negative sentiment toward crypto-assets or a severe disruption in DeFi platform could spike large demand for stablecoin redemptions that would as well turn into a classic run due to an insufficient amount of liquid backing assets. Such fire sales could disrupt critical funding markets with potential impact on financial stability overall, especially given that traditional financial institutions may hold assets of stablecoin reserves.

The importance of confidence in DeFi markets

The subsequent de-pegging of Tether's USDT stablecoin points to these risks: although the price of Tether's stablecoin recovered quickly, the incident highlighted stablecoin vulnerabilities and the important role of trust and confidence in DeFi markets.

This is particularly critical amid a broader market sell-off of mainstream crypto-assets and given the possible spillovers of risks from DeFi to TradFi. As OECD analysis highlights, given the significant holdings of commercial paper as part of reserves backing major stablecoins such as Tether, sudden mass redemptions of stablecoin arrangements can affect the stability of broader short-term credit markets.

DeFi risks and growing interconnectedness DeFi - TradFi calling for policy consideration and action

If the adoption of crypto-assets continues to increase, the linkages between DeFi and TradFi may become stronger, possibly increasing the risk of spillovers into traditional financial markets. Policy makers have a role to evaluate emerging risks and consider policy actions to address them, in a coordinated manner given the inherent global nature of DeFi markets.

All that said, the potential benefits of DeFi should not be underestimated or overlooked. It is important that policy makers consider ways to enable safe and responsible DeFi innovation in a compliant manner, while anticipating and addressing emerging risks for both participants and the markets.

The OECD and its Committee on Financial Markets remain committed to exploring how to foster the benefits of digitalisation for financial markets and their participants, while proactively addressing the prudential and potentially systemic risks emerging from applications such as DeFi at a global level.

For more on DeFi https://www.oecd.org/finance/why-decentralised-finance-defi-matters-and-the-policy-implications.htm ;

https://www.oecd.org/publications/institutionalisation-of-crypto-assets-and-defi-tradfi-interconnectedness-5d9dddbe-en.htm

FERNANDO RESTOY

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DeFi: some points for a regulatory reflection

In principle, the concept of DeFi extends way beyond the cryptoasset world. While both share a reliance on new technological capabilities enabled by DLT, such as programmability, composability and tokenisation, DeFi could, at least theoretically, expand over a large set of financial activities that do not need to be associated with specific tokenised assets. Yet, in practice, most relevant DeFi applications are linked to cryptoassets. In particular, DeFi applications have been instrumental to the development of lending and trading facilities for some (normally unbacked) cryptoassets. Moreover, such applications rely on stablecoins (SC) for the transfer of funds and settlement of transactions.

In other words, DeFi is currently far from becoming an alternative mechanism for the allocation of financial resources within the real economy. Instead, it has focused mainly on speculative investment in a set of specific instruments that contribute little to market completeness or social welfare.

Yet one should not underestimate the potential of DeFi to become much more relevant in the future. The possibility of using new technology to facilitate financial transactions without the participation of intermediaries may contribute to cost-efficiency. At the same time, it remains to be seen whether totally decentralised systems can achieve sufficient scalability and security to become a truly effective substitute for traditional financial intermediation.

In any case, the currently limited importance of DeFi applications and the potential for further future expansion make a good environment for policy reflection. This should aim at establishing a regulatory framework that could ensure that DeFi developments take place in an orderly and socially acceptable fashion.

There is already an emerging consensus on the main risks posed by DeFi. These risks arise from the possible use of such instruments to finance illegal activities, their potential to promote overleveraging and lending procyclicality, operational discontinuities stemming from the underlying technology and cyber attacks and a number of issues affecting consumer protection, among others.

DeFi requires specific regulation and enforcement but let's start with stablecoins.

These risks are no different to the ones currently addressed by existing financial regulation. Yet, it would be a mistake to conclude that DeFi requires authorities only to adjust the regulatory perimeter of different financial activities to include DeFi alongside traditional finance. This is so for at least two reasons:

- First, specific rules may be required, as most of the risks posed by DeFi manifest themselves in a singular fashion. This is certainly the case with AML/CFT regulation. Standard obligations relating to customers' due diligence and KYC, as currently imposed on legal entitites, could be ineffective in a decentralised setting. As for excess leveraging, this may come from specific developments such as the multiple use of the same (cryptoasset) collateral for different lenders, a problem that is less likely to apply to bank lending. In addition, operational risks stem from unique features such as unstable or insecure software or automatic protocols (smart contracts).
- Second, for both regular and DeFi-specific rules, enforcement procedures need to be specifically designed to cope with decentralised operations that extends beyond borders. A major task should be to identify the parties benefiting from the DeFi business and assess whether and how they could be made responsible for regulatory compliance.

Under such conditions, it is not sensible to simply rely on the slogan "same activity, same regulation". Since the activities are performed differently and the risks materialise in different forms, regulation would need to address DeFi's special characteristics. Furthermore, the application of the (conceptually sounder) slogan "same risk, same regulatory outcome" may face substantial challenges. A thorough and internationally coordinated consideration of these issues is therefore needed.

An area where regulatory action is particularly urgent is that of SC. Recent experience shows the potential for SC to generate considerable stress. Failure to maintain confidence in the convertibility of SC with fiat currency at par value could generate runs and turbulence that could eventually spill over into other payment instruments.

The use of SC in DeFi applications – including collateralised leveraged transactions – could certainly amplify the disruption that stablecoins could generate, creating the potential for contagion to the traditional financial system. DeFi therefore strengthens the case for regulatory actions aiming at addressing risks posed by SC-related activities.

At the very least, it would seem warranted to introduce prudential requirements – akin to those imposed on credit institutions – for SC issuers to ensure that they can manage the risk and liquidity transformation they undertake.

MARTIN MOLONEY

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What is decentralised finance telling us?

As the prices of crypto assets have plummeted, it might seem to some that crypto require less attention. Decentralised Finance ('DEFI') tells us a very different story, simply because it has been replicating so much of what happens in traditional finance, but in slightly different ways.

The similarities to conventional finance are significant, particularly when considered with the differences. The best illustration of the point is the publicly reported application by FTX to the USA CFTC for approval to offer Bitcoin futures contracts with an automated margining mechanism. The proposal relates to Bitcoin and is based on ways of doing things developed in DEFI. However, the implications for margining practices more widely in the futures markets are obvious. In an intermediated market, margin calls involve a lag while the intermediary gives some time for the investor to provide the additional margin. In the DEFI world, there is no margin call and no time delay. Additional margin is automatically withdrawn and if unavailable immediately the futures contract is closed out.

Irrespective of the CFTC's decision on the FTX application, the point in the example is clear: there are other ways to design financial products with lower intermediation costs and some of those are the focus of experimentation in the world of DEFI.

A futures contract with an automated margining mechanism is probably a different product than a conventional futures contract with a margin call mechanism. The two could in principle exist side by side: different products with different pricing and different risks. But they don't. They could compete for survival and the market could decide which it likes: but they don't.

Conventional markets don't offer automated margining mechanisms and DEFI markets do. That is the point: 'crypto' has proven to be an alternative space over the last decade and particularly since DEFI emerged for financial products to develop.

To build an analogy with evolution in nature, we might imagine a peninsula turned into an island by rising seas, new species evolve in this separate space and somehow get back to the mainland to compete with their erstwhile brethren. DEFI shows that crypto might be such a space.

In some ways, this development answers the long-term, often valid scepticism over the last decade that crypto has no substantial uses. Its claimed use-cases are often just empty hype. In the case of DEFI, we see some apparently viable new species of products. Will any survive contact with the mainland?

> **DEFI signifies that crypto has become an alternative space for financial products to develop.**

Regulators now face the challenge of deciding whether to facilitate the potential competition between financial products designed in DEFI and more conventional financial products. How will regulators proceed? The principle of 'same risk/same regulation' guides most regulators in figuring out what to do. An additional key principle can be imported from IOSCO's work with the CPMI to assess how Stablecoins should be managed, namely that there must be clear and direct lines of human responsibility and accountability for the operations and actions of any supposedly decentralised system. As legislators begin to develop better legislative frameworks – notably MICA – that also helps, particularly when it comes to the key issue of how far to go in facilitating innovation.

IOSCO has recently published its roadmap for crypto regulation. This comes after publishing a detailed report on DEFI. We think DEFI is very significant for indicating what crypto has become. Close attention again to DEFI is, unsurprisingly, at the heart of what we are going to focus on in this next phase of our work. Our ambition is to lay out a basic, internationally applicable framework based on our principles and recommendations to govern crypto and digital asset activities that mimic financial products.

Regulators will need to keep in mind that crypto has repeatedly shown us that the challenges to market integrity and the risks of investor harm that we work to address in all financial markets recur as soon as anyone tries to replicate any aspect of financial markets. As part of recent events, we also saw the failure of the Anchor Protocol and a number of crypto lenders in a chain reaction of significant distress.

One of the lessons of those events is that if DEFI can replicate financial products, it can also replicate other features of financial markets: in particular, their capacity to develop inter-connections that can threaten system-wide instability. The brave new species that developed on the crypto island will need to prove its competitiveness if released back into the mainland and will be at least as in need of regulation. What has been will be again.

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FMIs have a crucial role to play in advancing accessibility of DeFi

Decentralised Finance, more commonly known as DeFi, has been one of the finance industry's hottest buzzwords this year.

At a high level, DeFi is defined as technology-enabled access to financial services such as the trading, lending and safekeeping of assets without the reliance on financial intermediaries. However, recent events have shown that this term is often overused and that, in many instances, DeFi activities are not as decentralized as some may think. The most recent crypto crash, and the resulting scrutiny, has shone a spotlight on intermediaries, raising questions about just how decentralised these DeFi models really are and what risks they may introduce to the ecosystem.

At the same time, the industry has begun to differentiate between specific areas of financial services, such as traditional finance (TradFi) and centralised finance (CeFi), as well as pure DeFi where there is truly no central control/operator. While aspirations to establish true DeFi models remain, the practical reality is that many institutional market participants are not yet ready to realise this vision and some functions will continue to be performed by central intermediaries.

When considering the move to DeFi, regulated financial market infrastructures (FMIs) have an important role to play. FMIs are the optimal providers to serve in an intermediary role, bringing the robust risk management and proven capabilities that come with such a responsibility. Additionally, FMIs are well placed to ensure the worlds of TradFi and DeFi do not develop in silos. The concept of on-ramps and off-ramps, where there is an exchange of DeFi assets with TradFi assets, clearly highlight where regulatory checkpoints are needed if TradFi assets are to interact with DeFi.

FMIs can also provide solutions around on-chain identities to address regulatory compliance concerns, as well as to satisfy KYC requirements. For example, consider the use case where an FMI plays a role in credentialing market participants with a verifiable ID. This could go a long way in building trust in DeFi by ensuring that even if a transaction occurs without any intermediary, the parties to that transaction can be confident in who they are transacting with.

Regulated financial market infrastructures have an important role to play in DeFi accessibility.

What is more, FMIs could potentially provide solutions that put TradFi assets to work in a DeFi ecosystem, leading to greater adoption by the institutional marketplace, and ultimately benefitting end investors. TradFi assets have significant potential to be leveraged in DeFi strategies, but only if the worlds of TradFi and DeFi can work together. Many opportunities could be unlocked, such as tokenising traditional assets to be leveraged as collateral in the DeFi lending ecosystem.

DTCC firmly believes in the potential of an increasingly digitised financial services ecosystem. However, any new technology initiatives in this space must provide equal or greater risk management and operational resilience capabilities than existing infrastructure and solutions, protecting and safeguarding the industry and individual investors.

Consider smart contracts that manage tokenised securities. While smart contracts could technically operate without any 'owner' and be truly decentralised, security and governance risks inherent to this model remain. There is also the possibility for FMIs to manage the smart contract, much like the approach DTCC is developing with its Digital Securities Management (DSM) service. Pending regulatory approval, DSM will employ technologies that allow for tokens to be held in a decentralised manner, with DTCC still providing governance and oversight, enabling more efficient processing and regulatory compliance.

As a final point, more concise regulation of DeFi in global jurisdictions can be expected to drive meaningful change in the marketplace by bringing clarity to existing participants and confidence to those adopting a wait and see approach. Asset definitions and regulatory agency oversight within the DeFi ecosystem could lead to more responsible growth and enable more institutions to participate in DeFi.

It is important to recognise that as the development and use of DeFi technologies evolve, it will continue to present risks as well as opportunities to the industry. Regulators worldwide are showing great interest in understanding the potential of DeFi and, as requisite legal parameters become more defined, it is crucial the industry can operate within an appropriate regulatory framework to capitalise on these opportunities, while mitigating risks to the financial system.

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Bridging the gap between Decentralised Finance and Traditional Finance

Standard Chartered Bank believes that Decentralised Finance (DeFi) offers important lessons and presents new opportunities for traditional finance. Whilst growth has predominantly been in North America and Western Europe, new platforms, exchanges and service providers have emerged globally, participating in a new decentralised, digital and open-source ecosystem built on blockchains. DeFi has grown rapidly in recent years, but its volumes are still small compared to traditional finance. According to the DeFi Pulse Index, the total value locked (TVL) of the DeFi market peaked at USD106.1 billion in December 2021. After significant volatility in April 2022, the TVL fell to USD 38.7 billion in June 2022.

The recent volatility in crypto-assets has been notable for triggering the collapse of a well-known protocol as well as several DeFi platforms and crypto investment firms. This is a timely moment for regulators, traditional finance and DeFi players to come together to review the journey so far and discuss the opportunities and risks that adopting new financial infrastructure may bring.

DeFi as an emerging financial technology is worth adopting

The technological innovation behind the DeFi evolution is an increasingly interesting proposition for traditional financial institutions. One of the interesting applications of the blockchain technology behind DeFi is peer-to-peer networks. The decentralised peer-to-peer model is scalable and can be applied to various forms of financial transactions that require an intermediary today (collateralized lending, interest-bearing deposits or investment portfolio management), the potential impact to the existing global financial system and its intermediaries become significant. By following the evolution closely, traditional finance could enable more efficient and scalable financial services to its clients.

Current challenges requiring consideration

To fully realise the potential of DeFi, key issues need to be addressed. An example is the lack of clarity on where the accountability lies in the event of a smart contract protocol not working as intended as the activity is performed by a software rather than a legal entity.

> **While TradFi and DeFi are now portrayed as competitors, the two models will co-exist.**

While DeFi has been increasingly attracting both retail and institutional investors, it remains fundamentally unregulated on the global scene. It lacks the safeguards for investor protection and market integrity that are embedded within the regulatory framework for traditional financial services. This is particularly concerning given the excess volatility, leverage and new forms of concentration risks which are currently associated with the technology.

Inherent issues of the technology coupled with the recent market downturn are proving that regulatory consideration and action are needed. Based on the principle that activities displaying the same risks should be subject to the same rules, appropriately calibrated regulation is required to protect consumers and provide security and confidence in DeFi's underlying protocols. Effective regulation could in turn foster responsible innovation and improve institutional adoption.

In this context, we support the early work of international standards setters to explore and address existing regulatory gaps. Further consideration is needed on whether effective DeFi regulation could be achieved by applying existing rules to DeFi platforms or would necessitate a new set of rules tailored to the borderless and transnational nature of the technology.

Bridging the gap between DeFi and traditional finance

DeFi is a technological evolution that is still in progress. While traditional financial institutions and DeFi are currently portrayed as competitors, in the future the two models will co-exist.

To get to this end state, policymakers and market participants should work together and have an ongoing dialogue on the opportunities and address the challenges to support a proportionate regulatory framework that promotes responsible innovation.

At Standard Chartered, leveraging on our experience and capabilities operating as a traditional bank, we could help bridge the gap between traditional finance and the emerging DeFi ecosystem by contributing to policy and regulatory conversations and enabling digital asset service providers with access, services and tools to connect to our network through a wide range of solutions.