

Distributed ledger technology and derivatives

Is the FCA looking to regulate innovation?

Distributed ledger technology – The FCA discussion paper

The Financial Conduct Authority (FCA) in the UK published a discussion paper¹ (the **FCA Discussion Paper**) on 10 April 2017 to gauge market participants' views on how the future development of distributed ledger technology (DLT) should be regulated by the FCA in FCA-regulated markets.

Background

What is DLT?

The FCA Discussion Paper describes DLT as:

“a set of technological solutions that enables a single, sequenced, standardised and cryptographically-secured record of activity to be safely distributed to, and acted upon by, a network of varied participants. This record could contain for example, transactions, asset holdings or identity data.”

There is therefore no need for a central trusted authority or intermediaries and the technology is “immutable” so records cannot be amended except through agreed protocols by the participants (or a subset of the participants) with this being known as the consensus protocol.

The record itself is either private or public (i.e. only available to be viewed by certain parties or anyone) and permissioned (i.e. where only participants with specific rights can add or change the record or unpermissioned (i.e. where anyone can make such additions or changes). We believe that a permissioned system of DLT with authorised participants only is most likely to be used in financial markets.

A commonly known form of DLT is Blockchain. Blockchain, in simple terms, is a technology that enables a shared ledger to be maintained by multiple parties and updated simultaneously. The ledger stored on the blockchain is shared amongst a distributed network of computers. New transactions are entered in blocks into the shared ledger once validated in accordance with the consensus protocol, without the need for a central authority and are protected by encryption. These entries generate a time-stamped record of history and audit trail, with the possibility of automatic identity verification.

Why is it important to derivatives transactions?

Cost savings

Applying DLT to derivatives transactions could result in huge benefits, including large scale savings on back office functions, greater certainty, reduction in counterparty risk, faster execution and verification of information, reduction in duplicative record-keeping and compliance benefits.

Given its potential to create significant efficiencies in the derivatives markets, DLT has generated attention around the globe as market participants collaborate or explore their own initiatives.

Smart contracts

A potential further application of this technology in the derivatives market would be the use of “smart contracts”, which are computer programmes that allow agreements to be executed when certain conditions are met. For example, a smart contract could be created to execute a straightforward option between two contracting parties and then could deal with the ongoing payments or the margin requirements. However, while a smart contract could conceivably be created on the basis that the industry

¹ Discussion Paper on distributed ledger technology – DP17/3 – April 2017

standard documentation is incorporated by reference, the parties would need to agree on what would happen where an event occurred which required a degree of analysis or discretion. It is also not clear how disputes would be resolved or indeed who would be responsible for the coding. It is also not certain whether the technology could facilitate close-out netting. However, given the benefits, the FCA is of the view that there will no doubt be situations where smart contracts may be a useful option.

Central clearing

The European Market Infrastructure Regulation (**EMIR**) requires certain standardised OTC derivative contracts to be cleared through a central counterparty (**CCP**). If market participants were to set up a DLT network to clear these transactions, the DLT network would need to comply with the requirements in EMIR. However, the European Securities and Markets Authority (**ESMA**) is of the view that the clearing of some spot transactions with DLT as the underlying seems the more likely near term scenario. Spot transactions are not within the scope of the clearing obligation under EMIR.

In the longer term, the development of DLT might see the disintermediation of CCPs if it could facilitate the immediate execution and settlement of transactions (although this is currently not viewed as a priority by many market participants). It would then be acting as the definitive record of title to the traded derivatives. However, the removal of CCPs could introduce new systemic risk and is likely to require amendments to EMIR.

Regulatory reporting

EMIR, the Securities Financing Transactions Regulation (**SFTR**) and the Markets in Financial Instruments Directive II (**MiFID II**) impose significant requirements on derivative counterparties to reconcile their trades, keep records and report trades to trade

repositories, which require huge back office costs. DLT could significantly ease derivatives counterparties' burdens in reconciling and reporting trades as there would just be one record on the DLT, which the regulator could also be given access to, so there would be no need to report trades to a trade repository, for example. This would clearly require amendments to these regulations.

The use of DLT could obviate the need for trade confirmations, given that all participants to the DLT should see the details of the trade immediately. The requirement to produce trade confirmations under EMIR may then need to be amended.

Overview of the FCA discussion paper

Whilst the FCA is committed to fostering innovation that advances its objectives, it also recognises that as a regulator it needs to strike a balance between supporting innovation and ensuring customers are adequately protected. The FCA sees DLT as an example of rapidly developing technology which offers exciting potential to support the needs of consumers and the market, although it may present new challenges and risks.

The FCA is of the view that the benefits are likely to emerge in sectors where multiple participants need to share data and/or processes safely, especially where firms are still reliant on paper-based records.

Although the FCA generally takes a 'technology neutral' approach to regulating financial services, it is considering whether there is anything distinctive about DLT which would require a different approach as there may be regulatory barriers to the development of DLT which are currently unknown. DLT's potential and processing speed suggest that aspects of existing rules may need to be reviewed.

The FCA Discussion Paper states that there may be specific areas where DLT does not fit within its regulatory requirements but still achieves its desired outcomes, and the FCA will consider whether any rules prevent or restrict sensible development that would benefit consumers. However, at this stage, the FCA does not see a clear need to consider changes to its regulatory framework for DLT solutions to be implemented. Instead, the FCA is keen to explore emerging business models and the FCA Discussion Paper therefore invites responses on the risk and opportunities that DLT presents as well as thoughts as to whether any of DLT's characteristics make it challenging to fit within the existing regulatory framework.

The FCA recognizes that there are certain legal questions that are beyond the remit of the FCA Discussion Paper, such as the conflict of laws issues regarding contracts executed on a DLT platform across multiple jurisdictions simultaneously, which would be a matter for the courts to decide and changes to primary and secondary legislation which would require the involvement of HM Treasury.

Given the cross-border applications of DLT, the FCA views regulatory collaboration as important to ensure that disproportionate barriers to innovation can be identified and is actively working with other regulators including the ESMA and the International Organization of Securities Commissions (**IOSCO**).

The FCA acknowledges that although there have been many successful Proof of Concepts, DLT may face challenges before widespread use, as it will need to interact with non-DLT legacy systems, so the likely breadth and depth of market adoption of DLT is still uncertain.

In order to stimulate this discussion, it has asked market participants to respond to a series of questions which are set out in the FCA Discussion Paper.

Approach from other regulators

Regulators across the globe have been monitoring the development of DLT and many have published reports which strike a similar tone on their current approach of monitoring developments. The shared view is that any changes and related efficiency gains are likely to be incremental rather than revolutionary.

ESMA

In its recent report dated 7 February 2017, ESMA says that it has adopted a “wait and see” approach towards DLT so it can monitor developments rather than regulate activity that could hamper the growth of the technology. ESMA believes that the technology could bring a number of benefits, including more efficient trade processes, enhanced reporting and supervisory functions, greater security and availability, reduced counterparty risk, enhanced collateral management and reduced costs. However, the report accepts that these benefits are conditional upon a number of challenges being met including that if DLT deployment is gradual, DLT-systems will need to co-exist with legacy systems and it will need to facilitate Delivery versus Payment (DvP) and netting if it is to be widely adopted. Users would need to put in place an appropriate governance framework and other risks such as cyber and operational risks would need to be carefully managed. ESMA also believes that, under certain market circumstances, DLT may contribute to increase market volatility, because of the embedded automated triggers, although this would be relatively low in the short term but could increase as the technology develops.

ESMA is of the view that DLT is most likely to be used for post-trading activities such as clearing and settlement and considers that the current EU regulatory framework does not represent an obstacle to the emergence of DLT in the short term, although some requirements may become less relevant over time whilst new rules may be needed.

BIS

In its recent report on DLT (published on 27 February 2017), the Bank of International Settlements (**BIS**) states that DLT has promise but that there is still a long way to go before that promise may be fully realised. BIS warns that DLT may pose new or different risks including potential uncertainty about operational and security issues arising from the technology and the absence of an effective legal and governance framework. It stresses that much work is needed to ensure that the legal underpinnings of DLT arrangements are sound, governance structures are robust, technology solutions meet industry needs and that appropriate data controls are in place and satisfy regulatory requirements.

FINRA

In its report on DLT in the securities industry, issued on 18 January, 2017, the Financial Industry Regulatory Authority (**FINRA**) provided a detailed look at DLT and requested comments on how DLT would interact with the securities industry. The report recognizes that there are some great potential synergies in DLT and the securities industry, especially in clearing and settlement, but that DLT's activities in the highly regulated US financial sector requires more review and research. The report goes into considerable depth on potential applications of DLT to the securities industry, including applications in the equity, debt and derivatives markets, as well as for use cases involving industry utilities such as product reference data and customer identity management.

The report also considers potential impacts of DLT on the securities industry, such as reducing market inefficiencies, improving transparency, clarifying roles of intermediaries, and addressing operational risk. In addition, FINRA also identifies factors in the report that it believes should be considered

when implementing DLT-based solutions, including governance, operational structure, and network security. Finally, FINRA concludes with consideration of a variety of regulatory issues in the US relevant to the adoption of DLT solutions in the context of the capital markets, including the handling of customer funds and securities, broker-dealer net capital rules, anti-money laundering requirements, books and records maintenance requirements and customer data privacy.

Next steps

As industry efforts to use DLT continue, the FCA expects that in the second half of 2017 and into 2018 there will be more movement from the “Proof of Concept” stage to “real-world” deployments. No doubt the regulators around the world will continue to monitor these developments. For its part, the FCA is interested in exploring where the balance of risk and opportunities may lie in relation to DLT, and will accept comments on the discussion paper until 17 July 2017. After the comment period concludes, the FCA will issue either a Summary of Responses or a Consultation Paper.

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