Feature

KEY POINTS

- It is clear from the text of the EU proposal that only permissioned networks will be permitted within the remit of the regulation.
- Under the proposal, both legal and computer codes will need to be considered by both the member state regulator and ESMA in the approval process – but do they have the skill and capacity to assess computer code?
- The regulator may require an assessment of reliability of the IT and cyber arrangements by an independent auditor but there are no criteria against which these arrangements are to be assessed.

Author Richard Nowinski

Regulating the distributed ledger: the EU's attempt

In this article, barrister Richard Nowinski considers some of the shortcomings of the EU's attempt to regulate distributed ledgers.

Benoît Cœuré, head of the Bank for International Settlements' Innovation Hub, recently expressed a view of what is now clearly evident that "while no one (really) knows if distributed ledger technology (DLT) is the future the technology is now mature enough that the private sector is looking to put it into production".

> "… The technologies driving the crypto revolution, including digitally-distributed ledgers of transactions known as blockchains, are becoming more disruptive to a financial industry that has remained for too long relatively inefficient and a source of excessive profits. The big question now is whether crypto disrupters and regulators in the West will succeed in converging on a more unified approach." Mohamed El-Erian (*Financial Times* 29 July 2021).

The European Commission has taken the first steps in seeking to regulate crypto disrupters, publishing in November 2020, its Digital Finance Strategy. This makes several proposed directives and regulations with the imperative that the EU financial regulatory framework encourages innovation, does not impede the application of new technologies and at the same time provides consumer and investor protection, and ensures legal certainty for crypto assets and their ecosystem.

One of the proposals, and the subject of this article, will permit and regulate the market infrastructure based on distributed ledger technology (COM(2020) 594 final, 24.9.2020) (Proposal). The Proposal reveals uncertainty on the part of the European Commission as to whether what is being proposed will at the same time encourage innovation while providing investor protection. The Proposal is described as establishing a "pilot regime" with a review after five years.

The Proposal is limited to permitting either an authorised investment firm, an operator of a regulated market or central securities depository (Operators) to operate a multilateral trading facility using distributed ledger technology (DLT MTF). This article will be limited to this aspect of the Proposal.

Before turning to the Proposal it is important to note that there are two important limitations:

- permission is limited only to persons who are authorised under the existing EU financial regulatory regime (under Directive 2014/65/EU and Regulation (EU) No 909/2014); and
- the DLT MTF is limited to a narrow set of securities.

The Proposal itself fails to make any meaningful definitions or explanations of what it is that it wishes to regulate, that is, a distributed ledger. The Proposal defines distributed ledger technology (DLT) as a class of technologies which support the distributed recording of encrypted data, a definition that could apply to most databases. Although this approach does not constraint the technology to be applied, regulators in each member state will require guidance as to what is a distributed ledger and in doing so will rely on a "market" explanation. A good example of this can be found in a 2016 report by the UK Government Chief Scientific Adviser, *Distributed Ledger Technology: beyond block chain*.

DISTRIBUTED LEDGER

A distributed ledger is a database, developed by the creators of Bitcoin, which is shared across a network and has three main characteristics.

- The first is that there are numerous copies of the database, the ledger. Each participant in the network has a copy and each copy of the ledger is identical.
- Second, any changes to the ledger are made according to the rules of the network and once made all copies on the network are changed so that at any one time all the copies of the ledger are coherent and consistent.
- Third, the coherence and consistency derives from the use of cryptography and is at the core of distributed ledgers. In the case of Bitcoin the ledger is the block chain but it does not necessarily have to be the case.

A distributed ledger is either "permissioned", which is a closed network where the participants in the network are selected by the operator network or "unpermissioned" where the network, the ledger, is open to anyone who wishes to participate in the network. Bitcoin is an unpermissioned network.

There are also important operational differences that arise from permissioned and unpermissioned networks and from the rules of the network that ensure all the ledgers are coherent and consistent. In the case of a permissioned network there will be a

Biog box
Richard Nowinski is a member of 3 Stone Buildings, a leading chancery and commercial set in Lincoln's Inn, London. Richard is a specialist in banking, finance and derivative law dealing with both transactional disputes and regulatory issues.
Email: rnowinski@threestone.law ; www.threestone.law

trusted party or network operator who will maintain the coherence and consistency of the ledger.

REGULATION OF DISTRIBUTED LEDGERS

Distributed ledger systems differ from the conventional financial system in that they are ruled by technical code rather than legal code. Distributed ledger systems such as Bitcoin have shown that they can function without legal rules. Instead, the rules that each participant must follow are defined and enforced only by technical code. There is no central authority and their regulation is challenging.

In permissioned distributed ledger systems, there is a central authority that has legal and technical authority over the network's code. Permissioned distributed ledger systems have, in certain respects, a familiar resemblance to conventional private financial networks such as Visa. It therefore follows that permissioned distributed ledger systems are more amenable to regulation.

In regulating distributed ledgers it is necessary to address the interaction of legal and digital rules. Lawrence Lessig has argued that in a digital environment both laws (legal code) and software/hardware (computer code) regulate activity, and that the impact of both needs to be considered when constructing a theory of regulation (*Code and other laws of cyberspace*, New York, Basic Books 2006).

PROPOSAL

Although the terms "permissioned" and "unpermissioned" are not used in the Proposal it is clear from the text of the Proposal that only permissioned networks will be permitted.

The Proposal, essentially, falls into two parts, the first concerns how the Operator may be permitted to operate the DLT MTF and the second, what is required by the Operator for the network to be granted permission. There is a two-step approval mechanism involving both the member state financial services regulator (regulator) but also the European Securities and Markets Authority (ESMA). As noted above, both legal and computer codes will need to be considered by both the regulator and ESMA in the approval process. Therefore, granting permission to operate a DLT MTF will certainly be a challenge for the regulators.

Under the Proposal Operators, seeking to be permitted to operate a DLT MTF, must first be authorised by a regulator. The DLT MTF may only admit securities that have been issued, recorded, transferred, and stored using DLT (Art (5), the articles cited are those of the Proposal) and fall into one of two categories: shares that have a market capitalisation of less than €200m (Art 3(1)(a)) or bonds with issue size of less than €500m (Art 3(1)(b)) (together Securities). There is a further limitation in that for each DLT MTF the total market value of Securities that the Operator may record is €2.5bn.

There are a number of important exemptions available to an Operator under the Proposal. The exemptions relate to the removal of regulatory constraints and functions.

An Operator of a DLT MTF may be permitted to admit to trading Securities which are not recorded in a central securities depository (as required under Art 3(2) of Regulation (EU) 909/2014) but may instead be recorded with the DLT MTF. There are a number of conditions that have to be satisfied if the exemption is granted, amongst which are guaranteeing the safe keeping of the DLT securities and funds for such securities, settling transactions in real time or interday, and ensuring payments are to be made through central bank money, commercial bank money or e-money tokens (defined in the proposed EU regulation on crypto-assets).

When it comes to seeking a grant of permission the Operator must submit to the regulator a detailed business plan including information on the type of DLT used, the legal framework for the DLT market infrastructure as well as that of members, participants and issuers.

The regulator may require an assessment of reliability of the IT and cyber arrangements by an independent auditor. The difficulty that the Operator and the regulator have here is that there are no criteria against which these arrangements are to be assessed.

Under the dual approval mechanism the regulator, having considered the application from the Operator, is required to pass the application to ESMA with the regulator being required to explain any proposed exemptions, their justification and any compensatory measures proposed by the Operator or the regulator.

ESMA will then have to provide a non-binding opinion on the application including the exemptions and recommendations on investor protection, market integrity and financial stability. ESMA will have to assess the code, not only the legal aspects of the DLT MTF. As with the regulator does ESMA have the skill and capacity to perform such a function?

There are extensive reporting requirements on the Operators, which are required to report both to the regulator but also to ESMA including information on cyber-attacks and operational difficulties, and difficulties in applying EU financial services law and national law. ESMA is cast in the role of co-ordinator.

Finally, after five years of entry into force of the Proposal, ESMA will present a report to the Commission on the functioning of the DLT market infrastructure, and then, based upon this report, the Commission will report to the European Parliament and Council on whether to extend the pilot to other financial instruments, or further amend EU law on financial services to facilitate the use of DLT or terminate.

Given the speed at which these technologies are developing it shall remain to be seen whether the proposed pilot regime survives for five years without change and whether or not the pace of regulation will keep up with developments. ■

Further Reading:

- The proposal for a regulation on markets in crypto-assets: disjuncts between regulatory and private law (2021) 1 JIBFL 38.
- The European Commission's Digital Finance package from the perspective of private law (2021) 2 JIBFL 126.
- LexisPSL: Banking & Finance: Practice Note: EU and supranational regulation of financial innovations and Fintech.