C/M/S/
Law.Tax

In Practice

Author Charles Kerrigan

Tokenisation and digital assets: blockchain in capital raising

Charles Kerrigan explains digital assets and how they are used in financial markets transactions, a new development in fintech.

CONTEXT

Building on ten years of work, excitement and some exaggerated statements by the crypto community, tokenisation and digital assets are attracting the serious attention of major financial institutions, central banks, exchanges and technology companies. Why should this be?

The parallel development of artificial intelligence technologies and use cases provides an analogy. In that case, as is well known, access to more data and computing power enables improved predictive models. In the case of digital assets, developments in cryptography and distributed ledger and blockchain technologies enable digitalisation of processes (including fundraising transactions) in financial markets. Generally, the common aims of projects in each of these areas are similar, namely automation and commoditisation. This In Practice article is written for lawyers who are interested in but new to these developments, particularly those who work on traditional fundraising transactions. It is not a technical note on UK law and regulation in the area; it uses simplifications and illustrations to explain to non-regulatory lawyers the issues raised using the new techniques. Regulatory lawyers – don't write in!

CRYPTO-, TOKENS AND DIGITAL ASSETS: THE DIFFERENCE?

We should start with some definitions and distinctions. Some of the terminology is confusing but this is in large part because different communities are working on related projects and each using their own jargon. The main terms in use are "crypto[-currencies]", "tokens" and "digital assets". There is little essential difference between them so far as an outsider need be concerned. Technologists, cryptographers, evangelists and anarchists, especially anyone with a background in Bitcoin, generally talk about "crypto". They are interested in creating new value and alternative financial systems. The start-up community generally talks about "tokens". These include the "tokens" issued in an ICO (Initial Coin Offering), an STO (Security Token Offering), an IEO (Initial Exchange Offering) and new variants. Financial institutions, central bankers and policymakers generally talk about "digital assets". These are digital versions of traditional products such as equity and debt, as explained below, and essentially the same as tokens. The term "digital assets" is used to avoid, in the mainstream financial markets, negative connotations of crypto-currencies and ICOs.

The terms themselves are not informative in relation to the rights attaching to the thing that is issued. For that it is necessary to peruse the document (in the case of digital assets or tokens) or code (in the case of crypto currencies) establishing the asset.

BaFin, the German Federal Financial Supervisory Authority, gives a clear definition: "a token is a digitised representation of assets stored decentrally on a blockchain".

IN THE BEGINNING: ICOs AND STOs

First, we should cover ICOs and STOs. Most readers will have heard of them but will not have worked on them. Both types of transaction raise funds through the issue of a "token" in exchange for proceeds. They have traditionally used similar documentation to explain the offering (a "white paper" to set out the details of the project, risk factors, subscription terms, terms and conditions of the token) and to effect the offering (subscription documents, articles and debt or equity instruments that look like adapted venture capital documents). The key distinction between the transactions, however, is that an ICO is an unregulated transaction and an STO is a regulated transaction. In the past it was not always clear where the border lay between them. The FCA Guidance on Cryptoassets (July 2019) has been welcomed both because it provides clarification on this question and because the clarification is consistent with advice that lawyers in the UK had previously been giving.

There are grey areas for regulatory lawyers but for transactional lawyers the distinction can be easily illustrated. An ICO funds a technology project that the funders will benefit from. It does not involve the issue of securities and it is therefore unregulated, outside the "regulatory perimeter" that regulatory lawyers consider. If you raise money to fund the development of digital cats on a platform and the people who invest in your project get to use their token to get a cat to play with, this can be an ICO. Access to the benefit of the project is the "utility" behind the ICO's "utility token".

An STO involves the issuance of securities. It is regulated in the same way as any other offer of securities. Most STOs in the UK so far, have been issued under the crowdfunding regulations, permitting the raise of up to €8m to specified classes of self-certified investors without the requirement for a prospectus approved by the FCA. An STO that does not benefit from the exemption requires a conventional prospectus.

THE BUSINESS CASE FOR DIGITAL ASSETS

In this article, given its likely readership, I use the term digital assets as a catch-all (but most of the analysis is applicable to crypto or tokens likewise). For our purposes, the term "digital asset" simply refers to a representation of a traditional asset (a security, other financial instrument, or asset of another type) onto a digital ledger or blockchain. The participants on the digital ledger or blockchain are responsible for recording and retaining the real time status of asset ownership. In practice the technology is provided by a tokenisation or digital platform. Some of these are new businesses and some of them are new business divisions of traditional or financial markets businesses. The platforms offer different services, but their core role is to maintain the register.

This is not the same as a crypto-currency such as Bitcoin. The Bitcoin protocol created value from electricity and mathematics. There is no issuer and value in bitcoin is not asset-backed.

The case for digital assets comes from the ongoing digitalisation of financial services. The front office of financial institutions is now, by and large, digitalised. Customers use apps and mobile devices. A retail customer now benefits from 24/7 service, personalisation, lower costs and innovation in products. The bank benefits from increased market share and

In Practice

(possibly) the type of network effects enjoyed by technology companies.

The back office of financial institutions has not yet completed the process of digitalisation. Once it does, the theory goes, commercial customers will obtain the same benefits as retail customers, including in capital raising transactions, and the bank will benefit from an increased market share in the capital markets. Digital assets are the route to this.

If new technologies can improve the issuance process of equity and debt, that will give the developers of the technologies a market advantage. There are two related arguments for the technologies. First, that there are inherent features of the market that are suitable for improvement by digitalisation. Second, that digitalisation offers solutions that can be applied to similar problems arising at different stages in the process.

DIGITALISATION IN FINANCIAL MARKETS

The impetus for adoption of the new technologies comes from features of the market:

- **Compliance**: The compliance burden in financial markets has increased through regulatory reform initiatives since 2008. There are more rules, more market participants and more information in relation to each of them. Compliance rules are international and not consistent. All of these elements lead to a search for more streamlining in processes.
- **KYC**: "know your customer" diligence is an aspect of compliance that is both burdensome and business critical. The 5th Money Laundering Directive (5MLD) is in force from January 2020 imposing requirements for enhanced checks on financial institutions. The text of the Directive itself notes the potential for technology: "The latest technical developments in the digitalisation of transactions and payments enable a secure remote or electronic identification."
- **ID services**: Since market participants are concerned that traditional analogue processes of taking and retaining physical identity documents will be tested by 5MLD, product developers are launching ID services. Blockchain technology, with features including immutability, time-stamping and tamper-resistance, allows ID checks to be made digitally. Original documents are copied onto a private blockchain. The blockchain stores confirmation of the identity of a natural or corporate entity. An interested but unrelated party can "claim" on the identity of the entity. The blockchain can validate that the identity has been checked to a compliant standard without the original documents being produced.
- **Tax**: Tax authorities are "making tax digital". This imposes obligations on service providers to taxpayers to support the new requirements. Reporting of taxable events and information for periodic returns requires faster, cheaper access to relevant databases. Digital and blockchain systems allow real time access to information relating to asset ownership and transactions, without the need for a third party to perform manual reconciliations or make available extracts of its records.
- **Clawback**: Famously, the original Bitcoin white paper from January 2009 emphasised the benefits of irreversibility to improve speed and efficiency in currency transactions. It took the position that the costs of clawback in payments introduce disproportionate friction. While the conventional financial system will not cease to be subject to insolvency and settlement finality rules in the short term, digitalisation reduces some of the risks associated with clawback because it enables reduction of settlement times and increases information about counterparties to transactions.
- **Secondary trading**: Markets are driven by liquidity. Liquidity is a function of volumes of accessible capital, confidence in available information and ease of trading. Digitalisation enables democratisation. More investors of different types can participate in markets that have been digitalised. Trading hours are not limited to the working hours of human brokers. Developers aim to remove friction from secondary trading to benefit both issuers and traders.
- **Custody and payment services**: Traditional assets require professional nominees and custodians to provide safe storage and distribution services. Digital assets may in theory be held direct by customers in their personal wallets. This could disintermediate part of the transaction team although in practice few institutional or HNW investors have been prepared to adopt this approach. This has given rise to a market for custodians of digital assets comprised of both traditional custodians offering a new product and new businesses specialising in this product. There are new technical questions. How does the role of a custodian change? Can digital asset custodians work with central securities depositories (CSD)? Where there is no requirement for a CSD, is the "custodian" a bookkeeper rather than a secure holder for digital assets? There are new business questions. Will market share go to the service provider with the most-trusted brand or most-trusted cryptography? How will providers of custody services work together and with brokers and exchanges? For digital assets, access and control via private keys replace traditional safe storage systems.
- **Data protection**: Protection of customer data and compliance with GDPR are important in financial markets. Blockchain technologies are somewhat in conflict with the aims of the data protection rules to the extent that immutability and decentralisation of information are inconsistent with a "right to be forgotten". In practice, digitalisation has improved compliance because of improvements to access to data held within organisations. Conflicts are addressed through privacy-by-design features, for example, distinguishing between information that is "on-chain" and "off-chain".
- **Exchanges**: Digitalisation follows the logic of previous developments in exchanges. Screen-based trading, algorithmic trading and private ownership of exchanges has transformed markets. Many existing exchanges now see trading of digital assets as the next market opportunity for them and are developing their business models and technology accordingly. Exchanges do not want the services that they supply to become misaligned with the demand from issuers and investors.
- **Decentralised exchanges**: Alongside the development of existing exchanges, new decentralised exchanges have been launched. Bitcoin, a decentralised currency, opened the door to decentralisation in other areas. Decentralised exchanges have no central authority and therefore rely on smart contracts to provide operating functionality but no more. Decentralised finance is a rapidly expanding topic, outside the mainstream of the markets, but providing services to customers that prioritise automation and product innovation.

Naturally, regulators have some concerns.

From these points it is possible to see in theory the shape of the developments in the markets.

In practice, how does this change a process map of a capital markets or lending transaction? This is usually broken down into three parts. Tokenisation aims to address each of these parts:

- **Onboarding**: Digital and blockchain systems make it easier and quicker to establish relations between parties to a transaction. Information sharing, ID acceptance and other diligence workflows can be effected simultaneously between multiple parties.
- **Transaction documents**: Issuances still require the usual private contracts and public offering documents to be produced and negotiated. This part of the process remains relatively unchanged. It is likely, however, that smart contracts, clause libraries, and data showing the "true value" of each negotiated provision will drive commoditisation and some network effects (including for lawyers).
- **Secondary trading**: Once an issue has taken place, trading is improved in a number of ways. Easier onboarding means there are more market participants. Programmable exchanges improve efficiency because only parties which meet each other's criteria to trade with will be visible to each other on the platform. 24/7 trading means more liquidity.

In each case, the digitalisation of traditional back office services enables automation and consequent time and cost reduction. For an issuer these are the benchmarks against which to judge new processes.

BENEFITS OF DIGITALISATION

The benefits of digital assets are widely reported but this is often in the context of blockchain technology applications and therefore not always widely seen by traditional market participants. Accountability and transparency are well-known. In addition, each of the following (interrelated) benefits have, in my experience, been the subject of technical work and use cases in the last two to three years:

- **Enhanced liquidity:** from increased access to both investors (through lower minimum investments) and exchanges (through blockchain systems that are inter-operable with those of many exchanges).
- **Reconciliation:** from automation through smart contracts directly effecting settlement and recording changes in asset ownership on a shared reporting system.
- **Provenance, reducing counterfeiting:** from individual asset recordal on an immutable, decentralised ledger.
- **Standards:** from increased use of platforms and data to enable democratisation of issuers, including SMEs.
- **Efficiency in asset management:** from streamlined transaction processing and automated payments, reporting and capital calls.
- **Reduction of settlement time:** from use of a shared database and direct settlement between counterparties, not requiring intermediaries.
- **Reduction in costs:** from automation, commoditisation and disintermediation.
- **Automation**: from smart contracts that automatically create, cancel, transfer (or restrict the transfer of) digital assets.
- **Flexibility in transactions:** from "fractionalisation", that is, the ability to split one expensive asset (for example a building or artwork) into many, less expensive shares of that asset and to trade parts of an asset (for example the revenue derived from a building or a floor of a building) rather than just the building itself.
- **Deployment of frontier technologies:** from access to real time and customised data to enable the real time operation of artificial intelligence and data analytics software.

USE CASES IN FINANCIAL MARKETS

The technology can be deployed broadly across multiple use cases. Generally, the use cases are technology agnostic in any event because any software performing a similar job will be viewed the same way by customers and regulators:

- **Bond issuance**: This is obvious. The purpose of the bond markets is to efficiently allocate capital and the benefits of digital assets centre on efficiency. Many financial institutions are working on digital asset projects, often in consortia and with technology companies. There are some technical difficulties, for example, where there is a regulatory requirement to settle through a third party such as a CSD it is not possible to disintermediate that party. This issue of "settlement finality" is one of the most actively worked on currently.
- **Private debt**: The same regulatory restrictions that apply to listed bonds are not applicable here so the process of tokenisation is straightforward.
- **Equity**: In England equity is tokenised using a nominee structure that splits legal and beneficial title in a conventional way, with legal title being registered in the share register of the company and beneficial title being tokenised on a digital ledger or blockchain. Under the Delaware General Corporation Law, electronic corporate records are specifically recognised so both legal and beneficial title may be tokenised.
- **Funds**: Funds are adopting digital shares either through the creation of a new "digitised" share class of the fund vehicle that is then registered on a digital ledger or through the creation of a "digital feeder" that owns traditional shares in the fund vehicle but all of its shares are "digitised" and registered on a digital ledger or blockchain.
- **Real estate**: Digitalisation in the real estate industry is either through the digitalisation of a fund, as above, or the use of a nominee structure with legal title registered at the local registry (in the UK the Land Registry) and beneficial title tokenised. The UK Land Registry has a "Digital Street" project working on various digitalisation initiatives.

INDUSTRIES THAT HAVE ADOPTED BLOCKCHAIN AND DIGITALISATION

Most industries now use this technology somewhere. Recently publicised examples include:

- **Capital markets:** Société Générale and Santander have both issued bonds on blockchains.
- **Oil and gas**: Shell's venture fund has invested in a blockchain technology platform for energy trading.
- **Retail**: Coca Cola uses blockchain technology in its supply chain to reduce time between receiving and fulfilling orders, Walmart is using blockchain technology to create a food traceability system.

In Practice

Biog box
Charles Kerrigan is a partner in the Banking & Finance group at CMS London. Email: charles.kerrigan@cms-cmno.com

- **Luxury goods**: LVMH has produced and promoted open source blockchain software to help track goods and reduce counterfeiting.
- **ESG**: The World Wildlife Foundation is using blockchain technology for sustainability projects.
- **Real estate, fund formation:** Leaseum Partners has tokenised real estate, both directly (the buildings) and indirectly (interests in real estate funds).

CHECKLIST FOR TRANSACTIONAL LAWYERS

Structuring individual transactions is fun as there is no market standard. Clients present ideas to lawyers wishing them to be "tokenised" but without necessarily even a basic structure. We need to work out where the issuer should be incorporated, where the issuance should be located, and what technology (provider) is most relevant. The answers to these questions depend on the location of the business, its customers, likely investors, tax advice, local regulations, the size and nature of the transaction.

The main point of interest here for transactional lawyers is that they will in future need to be somewhat familiar with the regulation of capital raising transactions. Transactional lawyers should consider these questions that commonly arise in practice:

- **Is it an offer to the public?** Most fundraising transactions involving digital assets involve analysis of the usual question of whether a prospectus is required, or an exemption is available (Financial Services and Markets Act 2000 "FSMA", Companies Act 1985).
- **Is it a security?** The key features of a security for transactional lawyers are recourse to an issuing entity, asset-backing, or expectation of appreciation in value. A securities issue will generally require a prospectus or use of an exemption (FSMA, Markets in Financial Instruments Directive "MIFID II").
- **Is it a fund?** Funds are pooled investment vehicles often in the form of a limited partnership. There are various types and the determination of whether and how they are regulated depends on their legal form and their marketing strategy (companies, partnership, alternative investment rules and regulations).
- **Is it a collective investment scheme?** A collective investment scheme is an arrangement that enables participation in returns from property of any kind (FSMA).
- **Is it e-money?** Electronic money is electronically (or magnetically) stored value that can be used to make payments. Where value is stored on a server, a card, a virtual card or otherwise it will be subject to the regulations (FSMA, Electronic Money Regulations).
- **Is it a currency?** In unusual circumstances it is necessary to consider whether a transaction involves the creation of a currency. The English law definition of money is generally considered to involve the: "unit of account, store of value, medium of exchange" test. The question arises usually in high profile cases (for example, Bitcoin) and it raises technical difficulties, such as the fact that a regulator may consider that an asset passes the test if it is freely accepted as a method of payment but a tax authority may wish to tax transactions in the asset and therefore disagree.
- **Is it a commodity?** Commodities are any goods of a fungible nature that are capable of being delivered. The FCA regulates commodity derivatives, but not the underlying physical markets. Tokenisation in sectors such as oil and gas requires analysis of this point (FSMA).
- **Are regulated activities carried out?** The usual list is applicable equally to digital assets where they are regulated investments, that is: advising on investments, dealing in investments as agent, dealing in investments as principal, managing investments etc (Regulated Activities Order 2001).
- **Are market infrastructure questions involved?** Where projects involve settlement, they must be tested against market infrastructure rules. Settlement finality involves protections from interference from insolvency rules (Settlement Finality Regulations, Companies Act 1989 Part VI). Exchanges are deeply engaged in the topic of digital assets. The London Stock Exchange plc has invested in Nivaura. Euronext in Luxembourg has invested in Tokeny.
- **Is it an asset?** Under English law we have an apparent lacuna that draws much attention now. The generally accepted definition of an asset under English law still relies on the case of *Colonial Bank v Whinney* [CA 1885]. This provides that assets are either choses in possession or choses in action. Nothing else. Bitcoin is neither tangible nor contractual so on this test it is not an asset. Clearly, this position requires updating and criminal and civil cases at this stage mainly involving bitcoin are coming before the English courts. There are various working groups supporting the updating of English law in this and related areas. This includes, on theoretical points, for example, the legal nature of blockchain technologies. And on practical points, for example, recognition of electronic signatures, recognition of digital assets, enforceability of smart contracts. The UK Jurisdiction Taskforce (a taskforce of the Law Society's LawTech Delivery Panel) published in November 2019 a legal statement on the status of cryptoassets and smart contracts, following a public consultation. The statement hits the bullseye. It is helpful on a range of issues, recognising digital assets and smart contracts under English law. The statement will have persuasive authority which will be good enough for most fintechs (they have been operating on this basis anyway). Banks, however, generally require a legal opinion for transactions, and certainly for innovations. To issue a clean legal opinion we still need cases and legislation. This is just one illustration of how fintech can be easier for new entrants than legacy businesses, where culture and systems have been set for a long time.
- **What countries' regulations are relevant?** The rules in developed markets are all different. In particular, the US has a range of federal and state rules and regulations. In structuring transactions selling restrictions must be included. Helpfully most platforms include these as a feature.

WHAT'S NEXT ...?

Transactions and projects in all these areas are very active. In the community that spends time on those transactions the main topic of discussion is: when (and how) will we see broad adoption? The answer to this is partly commercial as new and old participants enter into transactions. It is partly also a policy question relating to the evolving regulatory environment in the UK and elsewhere. Policymakers in the UK are eager for the UK to be a world leader. But other jurisdictions have ambitions too. ■