

# BLOCKCHAIN: "THE EVOLUTION"



# INTRODUCTION

The aim of this article is to outline the development of blockchain – the cryptographically secure method of recording and validating information and transactions – from obscure idea to mainstream technology, and specifically the implementation of the blockchain in the context of cryptocurrency. This article considers in particular the issuance of cryptocurrency through Initial Coin Offerings (ICOs), the current (largely uncertain) regulatory environment and how this is likely to develop the use of blockchain technology to execute and secure transactions.

# PART 1 - THE BASICS

Blockchain technology enables the creation of highly secure transaction records (blocks) which are recorded on an electronic distributed ledger.

The nature of the blockchain is that crytography renders each block an immutable object and therefore a high degree of trust can be placed in a transaction recorded on a block.

A potential real world implementation of blockchain technology is a property registry, where the inherent obstacles of a centralised property registry could be overcome with a distributed property registry. All documents of title could be recorded on a blockchain, enabling swift and accurate transfer of property with details of all transactions (including mortgages and other charges) being recorded indelibly on the relevant block – validation and certification of title would become irrelevant because the blockchain would contain all relevant information and its very existence would be proof of title and ownership.

With this in mind, creating blocks of value in ideas and concepts has become possible and one of the most innovative implementations of blockchain has been the token sale or ICO using cryptocurrency.



Cryptocurrency is an expression of digital money that is trusted and secured by reference to complex cryptography in the blockchain, which protects transactions from alteration and fraud by the public and third parties.

Cryptocurrency (sometimes shortened to **Crypto**) is distinct from its more established and older sibling, **Fiat** currency (i.e. government-backed currency such as US dollars, Euro etc.) and the great-granddaddy of them all: commodity based currency (such as the gold standard).

Neither Crypto nor Fiat has intrinsic value, Crypto relies on trust and cryptography, whilst Fiat relies on trust and governments. As the 2007 financial crisis shows, sometimes even Fiat cannot be entirely trusted. It is no surprise that the first Crypto currency – Bitcoin – was created shortly after the 2007 crisis, with the publication of "Satoshi Nakatomi's" white paper: "Bitcoin: A Peer-to-Peer Electronic Cash System".

MINING - Mining is open to anyone (a miner) and involves solving increasingly complex computational problems to validate transactions in blocks. Miners use algorithms to verify and approve the block before adding new blocks to the blockchain. Miners are rewarded in the relevant Crypto for their efforts

BLOCK - This is simply a record of a transaction that gets approved by miners before being added to the blockchain

IRREVERSIBLE - After a

confirmation of a transaction the

block is written it is an immutable

object (i.e. it cannot generally be

reversed or changed)

**ANONYMOUS** - Transactions and accounts are not necessarily connected to real world identities.

TRANSACTION TIME - A

blockchain transaction is distributed across the network within minutes and processed at any time of the day or night

3

Block B C

Block D E

Block E F

2

ΑB

В

А

DISTRIBUTED LEDGER - A fundamental aspect of Crypto is the decentralised nature of the ledger. There is no central repository of transactions or records, rendering it theoretically immune to interference and manipulation

BLOCKCHAIN - An electronic decentralised public (sometimes called distributed) ledger on which the entire history of a Crypto and all transactions are recorded. It enables a transaction to be stored in a trustworthy way that once "mined" can be checked as valid using some relatively simple maths

**DIGITAL** - All information that is stored on the Blockchain is digitised. Therefore, there is no need for manual documentation

# ICO BASICS

Innovative and speculative start-up tech enterprises require funding, but conventional means of accessing finance are frequently limited, highly regulated and governance orientated. An ICO enables these businesses to create a currency, coin or token representing their idea and ask people to buy into this idea by acquiring the token. Blockchain technology enables that token to be bought or sold with the consideration being calculated by reference to people's perception of the the value of the underlying idea – provided of course someone else is willing to be the transactional counterparty i.e. if two people want to trade then there is a market in the cryptocurrency and therefore a value.

An ICO (or Token Sale) is a process by which funds can be raised for a venture by the sale of tokens representing the idea. Investors buy the tokens linked to the idea in exchange for fiat currency or other Crypto. Typically an ICO is undertaken by start-ups who want to bypass the rigorous and regulated process required by governments, regulators, venture capitalists, PE houses and banks and rely on the immediacy and 'genius' of the idea behind the venture.

A token can represent an interest in a wide variety of assets such as properties, shares, intellectual property, new Crypto classes, loyalty programmes or simply rights to use certain software. Issuers may tell investors that the capital raised from the sale of these tokens will be used to fund the development of a digital platform, software, or other projects and that the virtual tokens may be used to access the platform, use the software, or otherwise participate in the project. Some tokens may confer rights on investors to share in the future income or capital generated by the project. The rights in the token are locked into by so called smart contracts (mini software programs) which then operate independently of the original promoters with the intention of delivering value to the token and the token holder.

By contrast, whether the tokens issued in an ICO can be resold to others in a secondary market on virtual currency exchanges for Fiat currency or other forms of virtual currency, depends on the structure of the ICO, which will usually be explained in a presentation to prospective investors known as a "White Paper".

The White Paper should set out whether investors can resell their token and, if so, whether there are any limitations on their ability to do so. Even if they can resell, investors should be mindful that the contents of the White Paper and these virtual currency exchanges are not themselves regulated. Accordingly, investors do not have the same protections that would apply in the case of shares listed on regulated (or stock market regulated) exchanges, making ICOs a potentially risky investment.



## Advantages

- Limited paperwork
- Enables exposure to promising projects at an early stage of development
- Potentially cheaper and faster than other ways of raising money e.g. VC and/or PE investment, IPOs
- Flexibility
- Access to Crypto markets and liquidity pools

# Disadvantages

- Potential for scams and fraud
- Price can be highly volatile and can move significantly based on pure speculation
- Uncertain regulatory environment
- Rights to transfer tokens may be restricted and no market may develop in the tokens

## PROCESS FOR AN ICO

Stage 1 - White Paper

- Announcement of a forthcoming ICO is usually made through a White Paper, which sets out details of the project. White papers have commonly been made available on the online communities of Crypto investors, such as Bitcoin Talk, Reddit and others
- ► The White Paper will contain an executive summary of the essence and purpose of the ICO project as well as the technical details of the token and the underlying project. The usage, transferability and transformability of the token will be discussed and the timetable for the ICO will usually be set out
- ► The ultimate aim of the White Paper is to encourage interest of prospective investors in the ICO by explaining why the token(s) they buy may gain value through the ICO project

Stage 2 - Offer

- Once announced, the ICO project team will set out the terms of the ICO, namely a description of the transaction, life cycle, target investment amount and project deadlines
- ► The offer will also confirm the token name that is to be traded and what currencies (Crypto or Fiat) are accepted

Stage 3 - Marketing the ICO campaign (Announcement)

- fundamental to the success of an ICO



- project team:
- process
- investors proportionally.

► This is the stage where those conducting an ICO actively seek out investors. Taken further than what was disclosed in the pre-announcement stage, the marketing of an ICO project is

► This stage is so crucial to the success of an ICO that there are now specialised marketing agencies in the Crypto universe which help companies market their token to target investors

► The ICO completes upon the actual sale of the tokens

Currently, there are two popular sale channels: a) Crypto exchanges; or b) special project sites organised by the ICO

► Crypto exchanges: share similarities with the traditional IPO

► Special project sites: collect a minimum amount of money and then release the tokens and divide them among

# PART 2 - CURRENT LEGAL/REGULATORY ENVIRONMENT

The legal position regarding the treatment of ICOs is far from simple, and, as such the regulatory environment is currently largely uncertain.

There is no current legal definition of ICOs and how they are treated from a legal perspective is still to be determined. In particular, determining whether a particular token maybe a "security" or a unit in a "collective investment scheme" involves careful analysis and the answer is likely to change depending on the structure of each individual ICO. This uncertainty is coupled with a regulatory position that is ever changing and with a number of jurisdictions taking conflicting stances. This section does not attempt to define what the legal/regulatory position of ICOs is, instead it speculates as to how ICOs may potentially fit in the current UK regulatory space.

## Global stance on ICOs

Many ICOs are based overseas and therefore, before we look at them from a UK standpoint, it is worth considering their regulatory treatment in other jurisdictions. Regulatory reactions to ICOs have ranged from permissive to prohibitory. In Hong Kong tokens that do not constitute securities can be offered as an investment with minimal regulatory oversight. On the

other hand, the People's Republic of China has banned ICO fundraising and the launch of digital currencies, saying that the practice constitutes illegal fundraising. The US takes a middle ground approach to their regulations, assessing tokens on a case by case basis. The US Securities and Exchanage Commission (the SEC) has said that some tokens may constitute securities from a US securities perspective, and as a result they may not be lawfully sold without registration with the SEC, or may only be sold pursuant to an exemption from registration.

## **UK Regulatory Regime**

Many of the activities conducted by an issuer of shares (or their advisers) in a traditional IPO will constitute regulated activities or otherwise be reglated by UK securities legislation and accordingly such activities are governed by UK law and the rules and guidance of the UK Financial Conduct Authority. By contrast, the FCA has warned that most ICOs are not likely to be regulated by it, although each ICO will be looked at on a case by case basis. The FCA has identified the following risks:

#### 1. Unregulated space

In terms of the regulatory issues, the FCA has said that:

"whether an ICO falls within the FCA's regulatory boundaries or not can only be decided case by case. Many ICOs will fall outside the regulated space. However, depending on how they are structured, some ICOs may involve regulated investments and firms involved in an ICO may be conducting regulated activities. Some ICOs feature parallels with Initial Public Offerings (IPOs), private placement of securities, crowdfunding or even collective investment schemes. Some tokens may also constitute transferable securities and therefore may fall within the prospectus regime.

Businesses involved in an ICO should carefully consider if their activities could mean they are arranging, dealing or advising on regulated financial investments. Each promoter needs to consider whether their activities amount to regulated activities under the relevant law. In addition, digital currency exchanges that facilitate the exchange of certain tokens should consider if they need to be authorised by the FCA to be able to deliver their services."

Below are some of the general regulatory issues that will need to be considered where the regulatory treatment of an ICO under the current UK regime can be determined. Among the variables which will impact the regulatory analysis are: the location of the issuer and its advisers and service providers, the

nature of the issuer's business other than issuing ICO tokens and the level of decentralisation. It will also be important to consider what rights are associated with the ICO (monetary return/profit, voting rights etc.) and whether the token could be classified as a payment instrument.

Public offer issues: The key initial question is to determine whether a token is a "transferable security" under the Financial Services and Markets Act 2000 (FSMA). Most tokens seem unlikely to be transferable securities. The definition of transferable securities is in section 102A(3) of FSMA and effectively imports the definition from the second Markets in Financial Instruments Directive (2014/65/EU) (MiFIDII). In MiFIDII, "transferable securities" means those classes of securities which are negotiable on the capital market, except instruments of payment, and includes: shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares; bonds or other forms of securitised debt, including depositary receipts in respect of such securities; and any other securities giving the right to acquire or sell any such transferable securities etc.

If the particular tokens were considered to be "securities equivalent to shares in companies" (which would require analysis of the characteristics of the particular token), then focus would turn to whether they would be negotiable on the capital market which would depend on the extent of actual restrictions on the transferability of the token.

The public offer in the UK (and elsewhere in the EEA) of

transferable securities would often require the publication of a full form prospectus which has been pre-approved by the relevant competent regulator (in the UK, the FCA). Publicly offering securities without the publication of an approved prospectus (where one is required) is a criminal offence.

- Collective investment scheme (CIS) regulation: There are a number of regulated activities relating to CIS which, if carried on in the UK, would require FCA authorisation, including the "establishment" and "operation" of a CIS. There are also significant restrictions on the marketing of any CIS in the UK. Section 235 of FSMA defines a CIS as a scheme comprising arrangements:
  - with respect to property of any description, including money, the purpose or effect of which is to enable persons taking part in the arrangements (whether by becoming owners of the property or any part of it or otherwise) to participate in or receive profits or income arising from the acquisition, holding, management or disposal of the property or sums paid out of such profits or income
  - where the participants do not have day-to-day control over the management of the property, whether or not they have the right to be consulted or to give directions
  - that have either, or both of, the following characteristics:
    - pooling of investors' contributions and profits or income;
    - the property is managed as a whole by or on behalf of the operator of the scheme.

Whilst the CIS definition is wide-ranging, many ICO offerings may not involve a pooling of investors' contributions and profits or income; and the property may not be managed as a whole by or on behalf of an operator of the scheme.

However, if the ICO arrangements would constitute a CIS. they would require a regulated operator if there was a sufficient UK nexus and there would be severe restrictions on marketing to retail investors. An ICO may also constitute an Alternative Investment Fund pursuant to the Alternative Investment Fund Managers Directive which would give rise to its own regulatory regime and marketing restrictions.

- Financial promotions: Any communications made to potential investors to promote or offer an investment opportunity, may be a financial promotion under section 21 of FSMA if such promotion relates to a controlled investment, and must comply with the FCA's rules relating to financial promotions in the FCA's Conduct of Business Sourcebook, unless an exemption applies. There are additional rules relating to the promotion of 'non-readily realisable securities' including as part of a crowdfunding. To the extent that a token has characteristics which make it a share or unit in a CIS, it would come within the definition of controlled investment and the financial promotions rules would apply.
- AML: UK businesses which are caught by the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 and which are involved in ICO offers would have responsibilities to carry out customer due diligence, while unregulated businesses would have responsibilities not to facilitate money laundering

pursuant to the Proceeds of Crime Act 2002. As more jurisdictions ban ICO offerings, AML risk in respect of investors for those jurisdictions may increase.

Exchanges: Whether any exchange for tokens could be caught by regulation such that it might be a multilateral trading facility (MTF) requiring authorisation will also turn on whether the token constitutes a relevant specified investment e.g. a share or a unit in a CIS.

#### 2. No investor protection

The FCA has warned investors that they are extremely unlikely to have access to UK regulatory protections like the Financial Services Compensation Scheme or the Financial Ombudsman Service. Unless this is resolved, this is a fundamental risk that an investor will have to take.

#### 3. Price Volatility

With Crypto being still in its development and with the future unclear, the value of a token issued in an ICO is subject to huge swings in value.

We have seen in recent months how volatile the Crypto market can be, with a sharp downturn in January effectively wiping off around \$400 billion from the total Crypto market capitalisation.

#### 4. Potential for fraud

The anonymity of Crypto can offer a platform to fraudsters to use the blockchain technology to create a scam ICO in which the token(s) may be worthless or the money raised used in a

different way to what was described in the White Paper. As above, given the lack of regulatory framework, it is hard to address this problem at the moment in the context of an ICO.

### 5. Inadequate documentation

As stated above, the White Paper is the ICO equivalent to the prospectus which is published in a traditional IPO. However, one of the difficulties of a White Paper is that there is no standard, universal structure, or best practice when it comes to its contents. Therefore, whilst the FCA alludes to White Papers being potentially unbalanced, incomplete or misleading, this generalisation is misleading. Investors who do not have an understanding of the tokens' characteristics and risks should take care when investing in an ICO. If investors do not have the requisite knowledge or understanding of the product they are investing in, then they do so at their own risk.

### 6. Early stage projects

This is a risk that accompanies any early stage investment. Investors should understand the associated risks in early stage investments with the high risk offering potentially high reward. This risk is not limited to ICOs.

## Conclusion

This article tries to give the reader a general overview of blockchain, Crypto and ICOs. The subject matter is very much an unexplored dynamic landscape – subject to change on a daily basis.

The decentralised characteristics of the blockchain and its application to Crypto means regulation of these new instruments is uncertain, not only in the UK but globally. The FCA, amongst others, has expressed its current view on certain aspects of blockchain, Cryptos and ICOs; however how regulation and regulatory oversight or intervention will develop is unknown.

South Korea have taken the mantel and introduced new Crypto regulations to tackle anonymity and to ensure compliance with AML and KYC. It will be fascinating to see if other countries follow suit, implement stricter regulations or whether Crypto remains an unregulated space.

What is known is that many of the advantages that make blockchain and its application so attractive will continue to exist. Their compliance with KYC and AML regulations will potentially become more embedded in their structure and their perceived appearance as an unknown and unregulated instrument will potentially improve and, if so, bring them into the mainstream.

We hope, with this article, and the upcoming editions, that we will be able to share our understanding of this new platform, provide insight on the relevant issues and explore the possibilities of ICOs, Crypto and, the glue that holds them together, blockchain.

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