Cryptoassets, DLT and smart contracts – UK Jurisdiction Taskforce consultation Fox Williams LLP response

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Chambers UK, 2019

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Our award-winning FinTech team comprises lawyers with deep expertise and experience in blockchain and digital assets. We understand and advise on the legal and regulatory issues that arise in this rapidly-evolving area, providing legal solutions from an informed perspective and with an unrivalled technical understanding.

Our lawyers are active commentators in this space, presenting at conferences, publishing articles in industry publications, staying at the cutting edge of developments in blockchain/distributed ledger technology and digital assets, and in some cases undertaking their own blockchain development projects to deepen their technical knowledge.

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Consultation response

Question 1

"Do consultees agree that the questions in Annex 1 (Questions to be addressed in the Legal Statement) to this consultation paper cover the principal issues as to the legal status of cryptoassets and smart contracts under English private law?"

We agree that, broadly, the questions in Annex 1 cover the principal issues as to the legal status of cryptoassets and smart contracts under English private law.

However, we consider that there are additional legal issues to be considered in order to prepare a comprehensive and integrated legal statement. We have set out these additional proposed questions in our response to Question 2 below, together with a rationale for each question or set of questions and a wider context informing the basis on which we have submitted these additional proposed questions.

Question 2

"If you disagree, what alternative questions or issues relating to the legal status of cryptoassets and smart contracts do you think need to be addressed?"

We propose the following additional questions:

1. Legal status of cryptoassets

- New question 1.3, under a new section:

Contractual rights attaching to cryptoassets

1.3. Where a cryptoasset is programmed with contractual rights, should such rights be clearly set out in a discrete contract so as to be given legal effect?

Rationale for inclusion: Cryptoassets can be flexibly programmed to grant contractual rights to the holder of the wallet in which they reside. However, it is not always clear what these rights are and when and how they can be exercised.

In some cases, these rights are set out, to varying levels of explanation and certainty, in promotional documentation around a cryptoasset-based or referenced project as part of the capital-raising process. However, the contractual status of such promotional documentation, and whether it constitutes an enforceable contract governing the rights programmed into the cryptoasset, is uncertain. Further, as the project to which such cryptoassets relate evolves, the initial rights may change or be varied, leading to uncertainty as to the rights programmed in or associated with a cryptoasset. Additionally, cryptoassets are likely to be created and used in a far broader range of scenarios than capital-raising.

We envisage that litigation in relation to cryptoassets is likely, at least initially, to be in relation to conventional civil law claims brought by disgruntled investors in a project, rather than requiring specific determination as to the legal status of purported contractual rights programmed into a cryptoasset. Including this question in the legal statement may therefore help token issuers consider and develop market practice on this point which may not immediately come before the courts to be determined.

2. Enforceability of smart contracts

Ancillary questions

2.2.6. Could a statutory signature requirement be met by using a cryptoasset?

2.2.7. Could statutory execution formalities be met by using distributed ledger technology, cryptoassets and/or smart contracts [with or without other technologies (such as geofencing)]?

Rationale for inclusion: These questions relate to the ability of cryptoassets, distributed ledger technology and smart contracts to fulfil statutory execution requirements. Combining these technologies with others such as QR codes and geofencing could allow for statutory execution formalities, particularly in relation to deeds and their attestation, to be satisfied and evidenced without recourse to any hard copy documents, using multiple data points.

Inclusion of these questions, combined with existing questions 2.2.4 ("Could a statutory signature requirement be met by using a private key") and 2.2.5 ("Could a statutory "in writing" requirement be met in the case of a smart contract composed partly or wholly of computer code?") is intended to prompt consideration of issues relating to evidence of contract formation, due execution and (in the case of deeds) delivery, and whether the technology in question can yield technically feasible and legally sound approaches.

If so, any type of contract could be concluded, and any document validly executed, by or through this technology. This will result in a far wider scope of application of this technology to include most types of transactions, faster transaction and completion processes, a beneficial environmental impact due to reduced paper usage, a reduction in disputes concerning the valid execution of deeds, which surprisingly still occur, and significant economic consequences. This will also result in not insignificant ancillary cost and time savings for transacting parties where, for instance, deeds will not have to be notarised and sometimes also apostilled to be recognised internationally.

New section

Dispute resolution

2.2.8. Could a court recognise and give effect to dispute resolution processes and mechanics coded into a smart contract?

2.2.9. What is the position of a claimant, defendant and a court where the nature of a court-ordered remedy or action is technically incapable of being effected by a party due to the technical limitations of a deployed smart contract?

2.2.10. What is the position of a claimant, defendant and a court where the operation of a smart contract, the exercise of rights, discharge of obligations and enforcement of court remedies or orders is paused, halted or rendered impossible due to matters beyond the control of the parties?

2.2.11. What is the position of a claimant, defendant and a court where a claim is brought in relation to a matter in which the smart contract, application or organisation involves an element of decentralisation, and is therefore out of the direct control of the original deployer?

Rationale for inclusion:

2.2.8: Technical protocols governing the operation of distributed ledgers can allow for compliant smart contracts to contain or be subject to "on-chain" (i.e. occurring entirely by or through the distributed ledger) dispute resolution mechanisms, to varying degrees of automation. Further, smart contracts may also be programmed to be arbitrable through an arbitrator smart contract. Can a court recognise and give effect to these dispute resolution mechanisms? This question may also prompt a discussion around smart contract standards (which the British Standards Institution is working on), the status of such alternative dispute resolution mechanisms and whether, even if they are given effect, the outcomes are appealable.

2.2.9: Smart contracts, when deployed, can largely only operate within the code with which they were created, absent changes at the protocol level or protocol flexibility for updating such a smart contract. This could lead to practical unenforceability of court orders or remedies in respect of a smart contract, which in some cases may not be able to be easily altered without creating wider issues on the blockchain itself or the operation to which that smart contract relates.

This question is intended to prompt consideration of issues around ultimate accountability, the scope of a court's options when presented with this position and the implications, alternative methods of enforcement of court orders and effects of possible solutions, on the parties, the smart contract and the wider blockchain on which such a smart contract operates, as well as other participants on such a blockchain not directly involved in the dispute.

2.2.10: A smart contract, when deployed, operates in accordance with the provisions and parameters with which it is coded. In addition, smart contracts operate on a protocol, which is subject to the technical processes that are amendable only by a protocol change (and there are different models of protocol governance). A protocol change, whether authorised or unauthorised, may fundamentally affect the operation of the smart contract, which may be outside the control of both the original deployer and the parties interacting with or through the smart contract, and could frustrate the contract enshrined in the smart contract.

This question is intended to prompt discussion of the legal issues that may arise in such circumstances and the positions of the parties and the court and possible solutions.

2.2.11: Smart contracts, whilst deployed by an identifiable party, may, once deployed, operate alone or in combination with other smart contracts (whether deployed by the same party or others).

Subject to the protocol on which the smart contract is deployed, an initial deployer may not have any subsequent control over the interactions of a deployed smart contract, or the unintended consequences of its interactions with others, particularly if the protocol changes or the smart contract is hacked.

Further, some smart contracts are initially deployed but intended to subsequently be wholly or partly decentralised, without any further input or control of the initial deployer. Could, or should, such a deployer be ultimately accountable under English law, even if they have had no contact or involvement whatsoever with claimants or defendants using the smart contract/network of smart contracts in question?

This question is intended to prompt consideration as to issues of the identifiability and accountability of a party under English law and their capacity in relation to smart contracts, the legal status of a smart contract and a discussion on the concept of decentralisation and its effect on contractual relationships.

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> **Chambers UK, 2019**

New section

Evidence

2.2.12. In what circumstances could the records of a distributed ledger in general, or a wallet or smart contract in particular, be capable of evidence of formation of a contract, its terms and performance or otherwise of contractual obligations?

Rationale for inclusion: This question is intended to prompt consideration as to the extent to which the records of a distributed ledger, or a wallet or smart contact in particular, could be admissible evidence in a transaction, or in relation to civil or criminal proceedings, taking into account the rules of evidence. There is a distinction between the raw, unparsed records themselves and such records when parsed through a third party site or service which interrogates, analyses and interprets such records (and the reliability of, and reliance which can or should be placed upon, such third party sites or services).

New section 3 - Legal status of smart contracts

3.1. Principal question

3.1.1. Under what circumstances, if any, would the following be characterised as personal property:

(i) a smart contract; and

(ii) a network of interacting or otherwise connected smart contracts, all deployed by the same or connected originators.

3.1.2. Could a smart contract be recognised as having some form of legal personality and capacity to contract in its own right?

Rationale for inclusion: This question is intended to prompt consideration of the status of smart contracts. The two questions are not necessarily mutually exclusive – a smart contract may be a form of property which itself is capable of entering into contractual arrangements, for its own account, on behalf of the deployer and/or on behalf of the parties interacting with or through it.

Question 3.1.1 in particular is intended to prompt consideration as to how to treat smart contracts in a scenario where such smart contracts form a critical component of a business or operation, and that business or operation is sold, dissolved, becomes insolvent or it and/or its assets are otherwise disposed of.

In the absence of consideration of these issues, such businesses or operations may face a legal vacuum on a disposal or insolvency. This could arise where smart contracts – which may hold and deal with a large volume of high-value assets - are not recognised as property, the title to which is capable of transfer, and which may contribute significant value to or underpin a business or operation. In addition, there is a risk of potential continued liability of the deployer or (if an individual) their estate for the activities of such smart contracts, after they have disposed of the business or operation or are otherwise no longer actively involved in the smart contract or the business or operation to which they relate.

Question 3.1.2 is intended to prompt consideration as to whether and, if so, to what extent, a smart contract can be capable of being deemed to have the capacity to contract in its own right. In practice, most smart contracts are likely to act as a mere (yet complex) vehicle by which a contract is formed and performed. However, as the technology evolves, such smart contracts may have the ability to utilise internal logic and/or external "real world" data to identify and contract with third parties, including other smart contracts. Such actions may be independent and beyond the control of parties interacting by or through a smart contract, and/or the original deployer.

This in turn is likely to prompt consideration as to the threshold, if any, beyond which an original deployer (who may no longer have an interest in the smart contract or otherwise be alive or traceable, see above) will not be liable for the actions of a smart contract. Whilst a smart contract cannot represent itself, it could theoretically be programmed to instruct a human to represent it in a dispute, in the same way that a company does, and act according to the outcome of such a dispute (if such parameters are provided for in the coding of the smart contract). The practical implications of this, and any mandatory requirements a smart contract must have in order for it to be recognised under English law as having the capacity to contract, may also need to be considered.

3.2. Ancillary questions

General law

3.2.1. If a smart contract is capable of being property:

(i) is that as a chose in possession, a chose in action or another form of personal property?

(ii) how is title to that property capable of being transferred?

Security

3.3. Can security be granted over a smart contract and/or the cryptoassets therein?

3.4. Could security be constituted by way of assets held in a smart contract?

Insolvency

3.5. Can a smart contract be characterised as "property" for the purposes of the Insolvency Act 1986?

Rationale for inclusion: These questions are intended to prompt consideration of similar issues to those raised in the formulation of these questions as applied to cryptoassets. In particular, given the capacity of a smart contract to hold and deal with assets in accordance with its code (at its most basic level, as a form of digital escrow), smart contracts could, if programmed with appropriate parameters, constitute a method of holding assets that are secured, enforcing security and returning such assets at the end of the security period.

In addition, subject to positions reached on the other questions in relation to smart contracts, a smart contract could (to varying degrees of human input) itself grant security over the assets held in it by way of a pledge, by transferring such assets to another appropriate smart contract or wallet, if it were to enter into a financing agreement, either of its own accord or on behalf of a party.

As smart contracts are capable of holding assets in and of themselves, and access to such assets may be limited, there could be consideration as to whether security could be granted over a smart contract and/or the assets in it, such as by giving the private key to a wallet that interacts with or can

otherwise instruct that smart contract. This dovetails with question 1.1 as to whether a cryptoasset and/or private key constitutes property. If it is determined that a private key constitutes property, the question then becomes whether, in the above scenario, security is being granted over the smart contract and/or the assets therein, or the private key which allows control over the controlling or instructing wallet to the smart contract.

Context to the submission of the proposed additional questions

We have submitted the proposed additional questions to be considered and addressed in the legal statement in anticipation of the technology and processes that are the subject of this consultation being widely adopted within the next five to ten years, working alongside, and in some cases replacing, existing systems and methods for transacting.

Whilst the technology is currently at an early stage of development and use, it offers infrastructure for transactions to occur faster, cheaper and with greater certainty and audit history than was previously possible. These factors are likely to drive a high demand for, and rapid adoption of, the technology as it evolves, as businesses that do not skilfully adopt the technology may be at a competitive disadvantage.

The English legal system must therefore be able to recognise and set out a comprehensive yet flexible framework for the validity of all aspects of a transaction conducted by or through this technology, in whole or in part, against a backdrop of uncertainty and theoretical use cases as the technology evolves. This includes recognising appropriate on-chain dispute resolution mechanisms and resolving disputes brought in more traditional fora arising from transactions using this technology, including in relation to disputes relating to the technology itself, all of which requires an appropriate legal framework. Accordingly, our questions lend to a comprehensive and integrated legal statement, prepared with this likely vision of widespread use of the technology in mind.

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