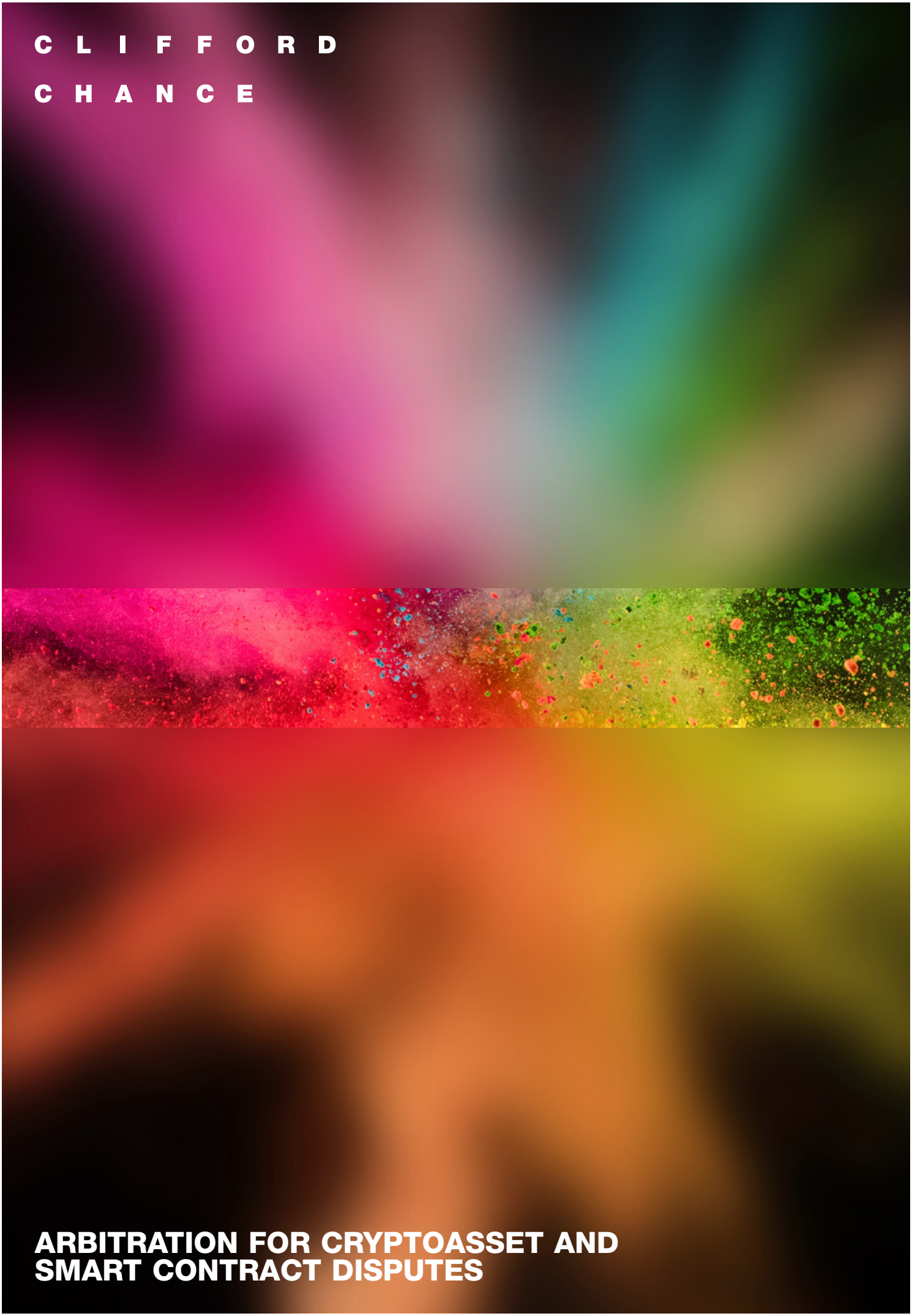
CLIFFORD

CHANCE



ARBITRATION FOR CRYPTOASSET AND SMART CONTRACT DISPUTES

ARBITRATION FOR CRYPTOASSET AND SMART CONTRACT DISPUTES

The cryptosphere is booming. New cryptoassets are issued on a daily basis and other applications utilising distributed ledger technology (DLT) are receiving substantial investment from established players and disruptive start-ups. With growth comes a rise in potential and actual disputes. It is therefore timely for this sector to give careful thought as to whether projects, transactions and investments make suitable provision for dispute resolution.

Disputes arising from DLT applications share many similarities with those in other fields of commercial activity. National courts are hearing disputes concerning parties' failure to perform contracts involving cryptoassets, ownership disputes, IP rights and frauds. On the other hand, aspects of these disputes are novel and may create barriers to securing effective redress. The intangible nature of cryptoassets, the lack of physically established exchanges, potential anonymity (or pseudonymity) of counterparties and immutability of distributed networks all create obstacles to obtaining and enforcing remedies from national courts.

This article explains how arbitration agreements can (and have) been used in the cryptoasset and smart contract contexts to provide effective dispute resolution and provides an overview of some of the many options that creators, users and investors select.

Governing Law and Jurisdiction Agreements

National legal systems have rules to determine whether the courts of that country have jurisdiction to hear claims and what law must be applied to disputes. The answer can obviously have a major impact on the outcome of any dispute as it will dictate, amongst other things, whether a contract exists at all, the nature of parties' obligations and what remedies are available. While there has been some effort to establish transnational rules (particularly within the EU) the answer will not always be the same in every country. Where parties to a contract or its place of performance are not located in a single country, this can give rise to substantial satellite litigation and increase the complexity of a dispute.

This is potentially an acute issue in the DLT context. There is a global market in cryptoassets with parties commonly located in different jurisdictions and they may remain anonymous from one another. Smart contracts may be entered into by computer programs rather than people. A distributed network will not (or is very unlikely to) exist in one country. The location of exchanges on which cryptoassets are "stored" and traded, or platforms on which smart contracts created and performed, may be more readily identifiable but this is not always the case.

Choice of law and jurisdiction (or choice of court) agreements have long been used to reduce these types of uncertainties. What choice should be made is a complex question and parties must give careful thought to, amongst other things, the laws that may best protect their interests and the jurisdictions that will provide a fair and efficient forum for the resolution of disputes. Issues particular to cryptoassets will need to be considered, including whether regulation (or outright bans) in certain jurisdictions would make it an unsuitable venue for a cryptoasset-related dispute and undermine the process.

Arbitration and arbitration agreements

Arbitration is a form of dispute resolution in which claims are decided by private individuals (arbitrators) rather than national courts. The process is governed by rules agreed by the parties.

Arbitration provides many benefits as a system for resolving disputes arising from cryptocurrencies and smart contracts. It provides certainty as to jurisdiction, a neutral forum and, in principle, widely enforceable awards.

It is generally a confidential process, which makes it an attractive route for disputes involving commercially sensitive information. In highly technical disputes, such as those relating to erroneous coding, arbitrators with specialist knowledge can be appointed to both decide the dispute and craft an appropriate remedy. That is particularly the case if "on chain" arbitration is employed (see below).

The arbitration agreement between the relevant parties, which provides the basis of the arbitral tribunal's jurisdiction and prevents the parties from referring disputes to domestic courts, is itself a contract and must fulfil the normal rules for the formation of a binding contract. The use of arbitration agreements therefore creates particular challenges when it comes to digital assets where a traditional "wet ink" contract is unlikely to exist between parties.

Smart Contracts: Smart contracts in many cases will come in two parts – the coded and truly "smart" part and a traditional written part (often referred to the "wrapper" contract). The arbitration agreement can be inserted easily into the wrapper. In principle, it could be incorporated into the code[1] but that would be most effective if the intention is for some form of "on chain" dispute resolution is envisaged (discussed below).

Cryptocurrencies and Cryptoassets: Arbitration agreements cannot be embedded in property (assuming for now that cryptoassets are recognised as property) so as to bind all those in possession, claiming ownership or otherwise having some relationship to it. Arbitrating property-related disputes requires relevant parties to have entered into separate agreements. These can be bilateral agreements (e.g., between buyer and seller) or multi-party framework agreements (where all current, future or potential

1 There may be a question over its effectiveness as a matter of contract law. The UK Law Commission has recently opined that contracts written entirely in computer code can be legally binding but remained doubtful that express choice of law agreements can be embedded in computer code ('Smart legal contracts: advice to Government' (Law Commission Advice on Smart Contracts (November 2021), para. 7.74). The Law Commission did not address the same issue in respect of arbitration agreements but may do so soon as part of its further work on conflicts of laws issues relating to smart contracts.

owners/users of an asset regulate their conduct). Some sectors seek to give arbitration a broad reach by compelling members/participants to include arbitration agreements in contracts with relevant third parties.

There are also potential barriers to enforcement of awards concerning cryptoassets in jurisdictions that have tight regulations on their use and transfer. For example, the Chinese courts recently set aside an arbitral award (issued in China) that ordered the respondent to pay damages in respect of a failure to transfer a certain sum of Bitcoin. The damages were in the Chinese Yuan equivalent value but the award was set aside on the public policy ground that its enforcement would otherwise facilitate circulation of cryptocurrency and its exchange with fiat currency contrary to current Chinese law.[2]

"Off chain" arbitration in a digital context

The role of existing commercial arbitration rules

There is a wide variety of arbitration rules available from which parties can select. Some of the most well-used have been produced by UN agencies (UNCITRAL, WIPO). There are independent arbitral institutions that both produce rules and administer cases (ICC, LCIA, AAA, SIAC etc.). Arbitration rules are also produced by trade organisations to handle disputes arising in particular sectors or industries (LMAA for shipping, PRIME for finance, CAS for sport).

These existing rules are, in principle, suitable for disputes relating to cryptoassets and smart contracts. They have the advantage of being tried and tested, while still retaining flexibility to provide a procedure suited to the more novel features of new technology. However, they are of general application and lack any specific focus on the particular challenges arising from DLT-related disputes. As discussed below, there have been moves recently to created dedicated sets of rules for digital disputes and there will no doubt be further initiatives in this space soon.

Arbitration agreements in T&Cs

Arbitration agreements are often included in terms and conditions that users accept when they use a platform or service (e.g., in a Cryptocurrency exchange user agreement). Token and coin issuers also often host terms and conditions on their websites.[3] Some recent high-profile examples of how such agreements have worked in practice are set out below.

Careful analysis of the location and make-up of a user base is required before deciding whether to include insert an arbitration agreement (or a choice of court agreement) into T&Cs for a mass market product. Consumer arbitration is relatively common in the US (and several US arbitral institutions have created consumer-appropriate rules for low value disputes) but is subject to restrictions in other jurisdictions.

2 http://arbitrationblog.kluwerarbitration.com/2021/04/02/award-concerning-bitcoin-exchange-bit-too-risky-to-enforce/

3 Meshel, Tamar and Yahya, Moin A., Crypto Dispute Resolution: An Empirical Study (October 5, 2021). Journal of Law, Technology and Policy, Vol. 2021, No. 2, 2021

Recent examples of T&Cs requiring arbitration

- Entities behind the MakerDAO platform requested (successfully) a US Federal Court to stay a class action in respect of the "Black Thursday" crash based on the arbitration agreement in the platform's T&Cs.[4]
- Entities behind the Tezo ICO requested (unsuccessfully) a US Federal Court to stay claims by token holders based the agreement to arbitrate in the ICO's "contribution agreement" hosted on a website.[5] The court held the terms were a "browsetrap" agreement and the website did not put a reasonably prudent user on inquiry.
- An NFT auction house (Nifty Gateway) is pursuing a customer in JAMS arbitration in New York (as per its T&Cs) for the unpaid price of an allegedly successful bid and froze the customer's accounts containing other valuable NFTs.[6] The bidder responded with claims in New York and English courts and, amongst other things, argues the arbitration agreement is a breach of UK consumer rights legislation.
- A group of Binance users have reportedly initiated arbitration under Hong Kong International Arbitration Centre (HKIAC) rules (as required by the relevant Binance T&Cs) to recover losses suffered during an outage of the platform during which time cryptocurrency values fell sharply.[7]

Dedicated digital arbitration rules

There have been some recent attempts to craft arbitration rules specifically for digital disputes.

JAMS: In 2018, JAMS published a draft set of rules for disputes arising from smart contracts.[8] The rules (influenced by US civil procedure) are tailored in a number of ways. Discovery is limited to the deposition of an expert witness on the meaning of the code. The arbitrator's review of evidence is limited to that deposition, the code, any wrapper contract and witness evidence. The rules also make provision for how a smart contract written in code should be interpreted. The code is king under the rules and any 'translation' of that code into English is to be considered by the arbitrator only if there is ambiguity or logic contradiction in the code. The whole process is extremely quick, with the arbitrator being required to issue an award within 30 days of their appointment.

DDRR: In 2021, the UK Jurisdiction Taskforce of LawtechUK published the Digital Dispute Resolution Rules for use in digital disputes. The DDRR are in some ways more ambitious than the JAMS rules. They are not quite an "off the shelf product" at present and should be adopted only with careful consideration as to whether the procedure is suitable (with or without modification).[9] However, they are a clear demonstration that the London legal community is serious about fostering a safe environment for developing, marketing and investing in new technology.

4 https://www.coindesk.com/28m-makerdao-class-action-lawsuit-arbitration
5 *In Re Tezos Securities Litigation*, Order on Defendants' Motion to Dismiss (7 August 2018).
6 https://www.artnews.com/art-news/news/nifty-gateway-legal-battle-beeple-1234605528/
7 http://arbitrationblog.kluwerarbitration.com/2021/10/13/the-impending-binance-arbitration-a-primer-on-the-world-of-cryptocurrencies-derivatives-trading-and-decentralised-finance-on-the-blockchain/
8 https://www.jamsadr.com/rules-smart-contracts
9 One continued omission is that, under the DDRR, the Society of Computers and Law (SCL) is the appointing authority for the Tribunal but the SCL has still not published any detail on its appointment procedures, fees or pool of arbitrators and it is unclear whether it intends to use the same scheme as used for its existing Society for Computers and Law Adjudication Scheme (SCLA).

Key features of the DDRR:

- A simple procedure with gaps that are intended to be filled by the English Arbitration Act and/or by the parties and a default rapid 30-days process. It is akin to non-binding processes, such as statutory construction adjudication or emergency arbitrator proceedings – very intense procedures, the speed of which seems difficult to reconcile with a binding decision on complex issues (e.g., coding errors).
- The DDRR envisage parties engaging in "on chain" arbitration (referred to as an "automatic dispute resolution process") and give such a process primacy. Any "on chain" process is stated to be binding and the rest of the rules are, therefore, applicable only to disputes that have not already been handled in an automatic dispute resolution process. However, the accompanying Guidance envisages the DDRR being used for disputes concerning the automatic dispute resolution process itself, which offers a potential route of appeal for "on chain" arbitration.
- The parties can, by agreement, remain anonymous from one another. They disclose their identities to the arbitrator and there is a carve-out available to the arbitrator where disclosure is necessary in certain circumstances.
- The arbitrator is empowered to modify digital assets directly (albeit it remains for the parties to give it the tools to do so if they wish). The arbitrators have this power "at any time" and so there is also scope for it to be used for interim relief.

"On chain" arbitration

This term covers a multitude of procedures and concepts. These range from simply enhancing current "off chain" procedures (and rules) by providing for communication and storage of case documents on blockchains to radical departures from traditional forms of adjudication and enforcement. While its potential has been much discussed, it remains highly experimental.[10]

A shared characteristic is that a third party is given the power to make changes directly to the blockchain and without the need for any enforcement of a decision in the "real world". In principle, that results in gains in efficiency and resolves the difficult issue of how domestic courts enforce change to distributed ledgers. However, on the other hand, immense power is handed to arbitrators (or other third parties) with very little regulation or oversight.

Multi-signature transaction: One of the simplest but most widespread forms of on chain adjudication is the "multi-signature transaction" involving cryptocurrencies. This is typically set up when the coins are envisaged as a form of payment and centres on the binary question of whether the coins should be transferred or not. In its most basic form, the coins being used for payment are stored in a wallet accessible by three keys (one for each party and one for a pre-selected, neutral third party) and two keys are

10 "On chain" arbitration, for the purposes of this discussion, is to be distinguished from consumer-focused online dispute resolution systems that provide dispute resolution services within certain online "ecosystems" or marketplaces, such as eBay's Dispute Resolution Centre, that resolve simple disputes without any reference to domestic courts. That is a potential model for "on chain" dispute resolution systems for large platforms or exchanges, albeit a highly centralised and resource-intensive approach. It is also likely that there will be significant overlap between the two in the relatively near future as marketplaces like eBay start to accept or facilitate payments in cryptocurrencies.

required to transfer the coins. The parties can make the transfer where there is no dispute. Where there is a dispute, the neutral third party will side with one of the parties to either make or deny the transfer with their key. There is some debate as to whether this is truly arbitration, or some new form of dispute resolution.

Collective agreement: An approach that can be used to resolve any issues arising across a distributed network, rather than individual transactions, is for users to agree that certain of them are empowered to modify the blockchain at the order of an arbitrator. This is a more sophisticated and (in principle) controlled version of "forking" a blockchain in order to modify or reverse a transaction. A fork takes practical effect by general consensus of a significant majority of users (who chose to use the new version of the blockchain) rather than at the direction of a neutral third party. Some attempts have been made to create such a system under the control of a subset of users (e.g., EOS Core Arbitration Forum) but these have faced practical and philosophical challenges and have not yet become widespread.

Smart contracts:

- ***Reference to oracles:*** A basic form of resolving disputes in a smart contract context is to obtain an objective answer to a disputed fact from an external data source (referred to as an "oracle"). In the case of a likely dispute, an objective source could be preselected to determine the issue. For example, if a party to a sales contract complains that goods were not delivered, the smart contract could be coded to access the database of the nominated courier company to check the status of the items. In some ways this is an extension of the operation of the smart contract, rather than adjudication.
- ***Reference to arbitration:*** A smart contract can be coded to trigger arbitration, either when certain conditions are satisfied or (probably more likely) at the option of one of the parties. This may be coupled with a function that "pauses" performance to protect the status quo. It would be open to the parties to decide what form of arbitration should be used. An existing set of rules could be used or something entirely new and experimental could be adopted (see below). The "smart" element of the arbitration could end with the reference, with the outcome of the arbitration being a traditional award that orders the parties to act. But absent voluntary compliance, that award would have to be enforced against a recalcitrant counterparty in the real world. Alternatively, the process could be made self-contained and the arbitrator given the power to modify the smart contract or its outcomes.
- ***"On Chain" enforcement:*** An arbitrator may be granted a limited power to make a binary decision (release funds or do not release funds) or select from a range of outcomes. More ambitiously, the arbitrator may be given the power to amend the code of the smart contract (i.e., the power is coded into the contract itself and the arbitration given access). This could be used to fix an error or achieve a just outcome in the circumstances by reversing or continuing a transaction. Such powers would need an expert in code, as well as law. There is a myriad of legal and policy issues associated with "on chain" enforcement of this kind (discussed below). Any such procedure would need to be carefully considered and designed at the creation of any new smart contract, although standard systems and tools may emerge as the technology matures and use cases expand.

The new oracles

There are a large and ever-changing number of initiatives to create on chain arbitration systems. Below is a selection (by no means comprehensive) of interesting examples.

- **Hedera Hashgraph** platform permits arbitration to be incorporated in smart contracts on its blockchain; predesignated arbitrators are permitted to amend the code to fix it or even to reverse a transaction.[11] This is coded and arbitrators are given the keys at the outset.[12]
- **Datarella's CodeLegit** project provides template code that incorporates its own "Blockchain Arbitration Rules" (based on the UNCITRAL rules) that can be used in smart contracts.[13] While the arbitrator issues the award it is CodeLegit itself (in its capacity as "appointing authority") which has the power to restart or modify the smart contract.
- **Kleros/Coti Arbitration System**[14] provides for large "juries" and voting amongst large pools of blockchain users. Parties are incentivised (financially) to appear in the majority. While a fascinating social and technological experiment, it is very unlikely to be appropriate for commercial or consumer applications.
- **Mattereum** promotes itself as something of a one-stop shop for blockchain transactions, with a particular focus on NFT trading. It has expressed ambitions to build its own arbitral institution for contracts created on its platform.[15] Mattereum's CEO is quoted in the DDRR as saying that Mattereum will adopt the DDRR within its ecosystem.
- **Jur** has expressed ambitions not just to create new arbitration mechanisms for smart contracts but a new network of on chain arbitral institutions and an autonomous legal system with its own substantive rules of contract formation and interpretation.[16]

The future of arbitration in the cryptosphere?

Permitting arbitrators to enforce their decisions directly gives rise to a number of questions. Firstly, has the arbitrator made an award? Arbitral awards are widely recognised under the auspices of an international treaty – the New York Convention. But the Convention creates certain requirements that must be satisfied before a domestic court will recognise and enforce it and it is not clear that those requirements would always be met in an "on chain" context. Careful thought would need to be given to the design of such processes to ensure compliance with the Convention (assuming that the designers and users had any interest in "off chain" enforcement).

The potentially ambiguous status of the decision gives rise to further issues. Does an "on chain" decision prevent future off chain litigation on the same issue? Is the

11 https://hedera.com/blog/code-is-law-but-what-if-the-law-needs-to-change
12 In contrast, any dispute between users of the technology and HH itself is subject to a separate (traditional) arbitration agreement: AAA arbitration seated in Collin County, Texas, USA (https://hedera.com/terms)
13 http://codelegit.com/2017/07/16/codelegit-conducts-first-blockchain-based-blockchain-arbitration-proceeding/ [Alterative: https://datarella.com/codelegit-conducts-first-blockchain-based-smart-contract-arbitration-proceeding/]
14 https://medium.com/cotinetwork/cotis-arbitration-system-2d1df3f732d9
15 https://medium.com/humanizing-the-singularity/the-first-mattereum-briefing-11a67c75d840
16 https://jur.io/wp-content/uploads/2019/05/jur-whitepaper-v.2.0.2.pdf. See Section 5.

arbitrator required to explain their decision, as they are under many domestic arbitration rules? Can an arbitrator's decision be challenged? Is the arbitrator bound by domestic arbitration rules and, if so, which ones?

These are highly pertinent questions in circumstances where, because of the potential anonymity of not only the parties but the arbitrator(s), the infancy of the concepts and the potential lack of experience of users and arbitrator(s), due process and outright corruption risks loom large. Nevertheless, the potential of "on chain" arbitration is clear. Furthermore, a robust, effective, transparent and, above all, trusted system of dispute resolution is arguably vital in ensuring that DLT applicants can move into the commercial mainstream and expand the potential use cases.

In traditional written contracts dispute resolution is often an afterthought. This rarely causes an issue because most dispute resolution options are tried and tested and can be dropped into the boilerplate of agreements once some fairly straightforward questions and preferences are considered by the parties. Indeed, in many industries, there are long-standing "defaults".

That is not an option for DLT applications. For them to be effective, dispute resolution must be considered at the outset of any new project. The earlier it is considered, the easier it will be to incorporate into the architecture of a new platform or application.

AUTHORS

Kate Scott
Partner
London
T: +44 207006 4442
E: kate.scott@cliffordchance.com

Sam Brown
Senior Associate
London
T: +44 207006 2295
E: sam.brown@cliffordchance.com

Rita Flakoll
Senior Associate
Knowledge Lawyer
London
T: +44 207006 1826
E: rita.flakoll@cliffordchance.com

Diego Ballon Ossio
Senior Associate
London
T: +44 207006 3425
E: diego.ballonossio@cliffordchance.com

CONTACTS

David Adams
Associate
Washington DC
T: +1 202 912 5067
E: davidg.adams@cliffordchance.com

Marie Berard
Partner
London
T: +44 207006 2435
E: marie.berard@cliffordchance.com

Anthony Candido
Partner
New York
T: +1 212 878 3140
E: anthony.candido@cliffordchance.com

John Friel
Partner
New York
T: +1 212 878 3386
E: john.friel@cliffordchance.com

Steven Gatti
Partner
Washington DC
T: +1 202 912 5095
E: steven.gatti@cliffordchance.com

Angelina Gomez
Counsel
Perth
T: +61 8 9262 5521
E: angelina.gomez@cliffordchance.com

Ling Ho
Partner
Hong Kong
T: +852 2826 3479
E: ling.ho@cliffordchance.com

Juliette Luycks
Counsel
Amsterdam
T: +31 20 711 9118
E: juliette.luycks@cliffordchance.com

Rocky Mui
Partner
Hong Kong
T: +852 2826 3481
E: rocky.mui@cliffordchance.com

Tim Schreiber
Partner
Munich
T: +49 89 21632 8710
E: tim.schreiber@cliffordchance.com

Robert Tang
Counsel
Sydney
T: +61 2 8922 8502
E: robert.tang@cliffordchance.com

CLIFFORD

CHANCE

www.cliffordchance.com

Clifford Chance, 10 Upper Bank Street, London, E14 5JJ

Clifford Chance LLP is a limited liability partnership registered in England and Wales under number OC323571

Registered office: 10 Upper Bank Street, London, E14 5JJ

We use the word 'partner' to refer to a member of Clifford Chance LLP, or an employee or consultant with equivalent standing and qualifications

If you do not wish to receive further information from Clifford Chance about events or legal developments which we believe may be of interest to you, please either send an email to nomorecontact@cliffordchance.com or by post at Clifford Chance LLP, 10 Upper Bank Street, Canary Wharf, London E14 5JJ

Abu Dhabi • Amsterdam • Barcelona • Beijing • Brussels • Bucharest • Casablanca • Delhi • Dubai • Düsseldorf • Frankfurt • Hong Kong • Istanbul • London • Luxembourg • Madrid • Milan • Moscow • Munich • Newcastle • New York • Paris • Perth • Prague • Rome • São Paulo • Shanghai • Singapore • Sydney • Tokyo • Warsaw • Washington, D.C.

Clifford Chance has a co-operation agreement with Abuhimed Alsheikh Alhagbani Law Firm in Riyadh.

Clifford Chance has a best friends relationship with Redcliffe Partners in Ukraine.

2201-000902