

Lex Situs v Lex Digitalis: Predictions on the Jurisdiction Problem of Digital Asset Transactions

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ABSTRACT

Digital assets represent a market which, though still nascent, has grown to a value of \$2.6 trillion USD.¹ This article approaches the market from a private international law perspective to demonstrate firstly that claimants to a digital asset transaction will often struggle in proving that a court has jurisdiction to hear their dispute, and secondly that the most likely solution to this issue is a choice of court clause. As the scholarship on this matter is still burgeoning, the field surrounding digital assets and jurisdiction is generally limited to variations of these first two issues; the literature is characterised by identifying the problem and proposing solutions.² This article takes the field a step further, looking not only at how the solution can fix the problem, but what problems might arise as a result of the solution. The third, and most novel, prediction of this article is that one long-term problem stemming from a choice of court solution will be the curtailment of stay applications on the grounds of *forum (non) conveniens*. Ultimately, the article serves to demonstrate that, although Dickinson is right that ‘there is no need to panic and throw the existing toolbox away’,³ reform of private international law is still necessary to accommodate digital asset disputes in the long-term.

Keywords: digital asset, blockchain, distributed ledger technology, smart contract, jurisdiction, conflict of laws, private international law

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¹ Mallika Mitra, ‘The Total Value of the Crypto Market More Than Doubled in One Year. What Happens Next?’ (*Money*, 8 April 2022) <<https://money.com/crypto-market-doubled-value-whats-next/#:~:text=In%202021%2C%20the%20crypto%20market's,nov%20sits%20around%20%242.1%20trillion>> accessed 20 January 2023.

² For the leading text see Andrew Dickinson, ‘Cryptocurrencies and the Conflict of Laws’ in David Fox and Sarah Green (eds), *Cryptocurrencies in Public and Private Law* (Oxford University Press 2019).

³ Dickinson (n 2) para 5.121.

I. INTRODUCTION

A. WHAT ARE DIGITAL ASSETS AND WHAT PROBLEMS DO THEIR TRANSACTIONS RAISE?

Digital assets are information, stored electronically, that is uniquely owned and can be transferred by individuals.⁴ They do not necessarily represent anything in the real world but have monetary value nonetheless, which is determined by the market. At present, they are most common in the form of cryptocurrencies⁵ and NFTs,⁶ but new categories are emerging.⁷ The technology they are founded on is called ‘blockchain’, which is a type of distributed ledger technology. Blockchain is a system of recording information in a way that makes it impossible to change by duplicating and distributing data across all computers on the network.⁸ The data is held in blocks that are recorded and communicated to network-computers (called ‘nodes’⁹) that create a timeline of data history.

The main advantage of this distributed ledger technology is that the data cannot be altered: blockchain provides an immutable way of recording transactions, tracking assets, and transferring ownership, all of which generate trust in the security of digital assets.¹⁰ Digital assets are increasingly traded using ‘smart contracts’, which use this same blockchain technology to automate the performance of digital transactions without requiring any manual engagement from the parties.¹¹ Smart contracts move the enforcement of conventional legal contracts outside the scope of the judiciary and into the realm of ‘enforcement through software’.¹²

⁴ Matthew Vincent, ‘What are Digital Assets and How Does Blockchain Work?’ *Financial Times* (London, 21 October 2021) <www.ft.com/content/2691366f-d381-40cd-a769-6559779151c2> accessed 20 January 2023.

⁵ These are digital currencies where transactions are verified and recorded in a decentralised system. The most popular examples are Bitcoin, Ethereum, and Binance Coin.

⁶ ‘Non-fungible tokens’. These are digital records that represent an immutable digital contract conferring ownership of an asset. The most popular example is digital artwork. See LawtechUK, ‘Smarter Contracts’ (LawtechUK February 2022) 103 <https://resources.lawtechuk.io/files/report_smarter_contracts.pdf> accessed 25 February 2023.

⁷ For example, Central Bank Digital Currencies are being introduced in the UK. These are digital currencies issued by a central bank. See Economic Affairs Committee, *Central Bank Digital Currencies: A Solution in Search of a Problem?* (Cm 131, 2022) ch 1.

⁸ LawtechUK (n 6) 9.

⁹ These are computers on the transaction network. A Bitcoin node, for instance, is a computer in the Bitcoin peer-to-peer network that hosts and synchronises a copy of the blockchain.

¹⁰ LawtechUK (n 6) 9.

¹¹ *ibid* 8.

¹² Shinobi, ‘Yes, Bitcoin is a Smart Contract Platform’ (*Bitcoin Magazine*, 29 November 2021) <<https://bitcoinmagazine.com/technical/why-bitcoin-smart-contract-platform#:~:text=Many%20think%20that%20smart%20contracts,smart%20contract%20platform%20by%20definition.&text=Nov%2029%2C%202021-,Many%20think%20that%20smart%20contracts%20are%20only%20executable%20on%20overly,smart%20contract%20platform%20by%20definition>> accessed 20 January 2023. See also Nick Szabo, ‘Formalizing and Securing Relationships on Public Networks’ (1997) 2 *First Monday* 9.

The immutable and automated nature of digital assets transacted on smart contracts led to the view, first introduced by Lessig, that ‘code is law’; in other words, that blockchain technology is self-enforcing and thus exists outside the boundaries of the law.¹³ However, blockchain’s power of enforcement is limited to performance. As Lehmann highlights, it does not provide any mechanism for remedy or reversing faulty transfers.¹⁴ This is because, as a piece of code, it does not know whether an enforceable legal obligation has been validly created.¹⁵ Therefore, digital asset transactions still fall within the judicial remit when disputes arise.

The problem that this article exposes will transpire in any digital asset dispute, posing an obstacle for any party seeking a judicial remedy for a digital wrong. That problem is jurisdiction. Blockchain technology is borderless: transferring digital assets via smart contracts is an entirely intangible process, involving pseudonymous¹⁶ parties acting on a mechanism with no connection to any particular state.¹⁷ The decentralised and distributed nature of the technology on which these intangible assets are recorded, combined with the permission-less chain,¹⁸ means that digital assets are ‘located everywhere and yet nowhere’.¹⁹

The problem is that the law governing jurisdiction (private international law) is rooted firmly in geography: for a court to have jurisdiction to hear a dispute, it must first be shown that the dispute bears a physical relation to the state in which the court is based.²⁰ As will be discussed, digital assets do not fit neatly into private international law principles, making jurisdiction very difficult for many claimants to satisfy. The Law Commission, in advising that smart contracts are legally enforceable without legislative incorporation, identified two issues as the

¹³ Lawrence Lessig, *Code and Other Laws of Cyberspace* (Basic Books 1999) 6. See also Alexander Saveliev, ‘Contract Law 2.0: “Smart” Contracts as the Beginning of the End of Classic Contract Law’ (2017) 26 *Information and Communications Technology Law* 116, 132.

¹⁴ Matthias Lehmann, ‘Who Owns Bitcoin? Private (International) Law Facing the Blockchain’ (*Oxford Business Law Blog*, 18 October 2019) <www.law.ox.ac.uk/business-law-blog/blog/2019/10/who-owns-bitcoin-private-international-law-facing-blockchain> accessed 20 January 2023.

¹⁵ Giesela Rühl, ‘Smart (Legal) Contracts, or: Which (Contract) Law for Smart Contracts?’ in Bernadetta Cappelletto and Gherardo Carullo (eds), *Blockchain Law and Governance* (Springer 2020) 4.

¹⁶ Parties to a digital transaction rarely use their real names on blockchain systems.

¹⁷ Matthias Lehmann, ‘Who Owns Bitcoin? Private Law Facing the Blockchain’ (2019) 21 *Minnesota Journal of Law, Science & Technology* 93, 111; Clifford Chance, R3, and Singapore Academy of Law, ‘Private International Law Aspects of Smart Derivatives Contracts Utilizing Distributed Ledger Technology’ (ISDA, January 2020) <<https://www.sal.org.sg/sites/default/files/SAL-LawReform-Pdf/2020-08/2020-Private-International-Law-Aspects-of-Smart-Derivatives-Contracts-Utilizing-DLT.pdf>> accessed 25 February 2023.

¹⁸ This means that blockchain networks are openly accessible to any member of the public. Permissioned networks also exist but are not the focus of this article.

¹⁹ Chloë Bell and Joshua Cainer, ‘Decrypting the *Situs*: Conflicts of Laws Challenges in Cryptoasset Litigation’ (*Outer Temple Chambers*, 20 October 2020) <<https://www.outertemple.com/decrypting-the-situs-conflicts-of-laws-challenges-in-cryptoasset-litigation/>> accessed 20 January 2023. See also Florence Guillaume, ‘Aspects of Private International Law Related to Blockchain Transactions’ in Daniel Krauss, Thierry Obrist and Olivier Hari (eds), *Blockchain, Smart Contracts, Decentralised Autonomous Organisations and the Law* (Edward Elgar Publishing 2019) 70.

²⁰ Adrian Briggs, *Private International Law in the English Courts* (Oxford University Press 2014) para 1.10.

most challenging for their project: first, how to determine the location of a digital asset; and second, how to determine the location of actions that ‘take place’ on a distributed ledger.²¹ The Commission is currently in its pre-consultation stage of a further project, seeking to advise specifically on the issue of digital assets and jurisdiction.²²

This article will suggest that the most likely and sensible solution to this problem is to encourage choice of court clauses for the transaction of digital assets. Doing so will bypass the private international law problems that are inherent in blockchain technology and allow digital disputes to be protected by law. However, by approaching the solution through a broader, more holistic lens, the article reveals that this solution is appropriate only as a short-term measure until more fundamental reform materialises. This is because the choice of court solution will ultimately have a detrimental impact on defendants seeking to stay proceedings on the grounds of *forum (non) conveniens*: enforcing a choice of court clause will not solve the problem of jurisdiction outright, it will only shift it onto the defendants.

B. STRUCTURE AND METHODOLOGY

The article is structured into three substantive sections. Section II details the exact problem facing digital asset transactions and jurisdiction. This will first determine that digital assets are likely to be held as property, before demonstrating that the four suggested ways of ascertaining jurisdiction will be inappropriate in most cases. These are: (a) the *lex situs*;²³ (b) the parties’ domicile; (c) the location of formation or performance; and (d) the locations of actions on the ledger or agents involved. Section III will then illustrate how a choice of court clause is the most likely solution to this problem. Section IV will finally look at the impact that this will have on stay applications on the ground of *forum (non) conveniens*.

With regard to primary research, the article is based predominantly on the common law rules relating to private international law. This is for two reasons. First, the common law rules are more flexible and provide discretion for the courts, making them the focus of most litigation.²⁴ Second, following Brexit, only

²¹ Law Commission, *Smart Legal Contracts* (Law Com No 401, 2021) paras 7.135–7.137.

²² Law Commission, ‘Digital Assets: Which Law, Which Court?’ (*Law Commission*) <<https://www.law-com.gov.uk/project/digital-assets-which-law-which-court/>> accessed 20 January 2023.

²³ ‘The law where the property is situated’. Although the term is sometimes used to mean the whole body of jurisdiction principles, it is used here only to mean the physical location of property that is subject to a dispute.

²⁴ ‘Discretion’, here, refers to the doctrine of *forum (non) conveniens* (‘inappropriate forum’). See Law Commission, ‘Smart Contracts: Call for Evidence’ (Law Commission December 2020) para 7.81 <<https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-1/ljsxou24uy7q/uploads/2020/12/201216-Smart-contracts-call-for-evidence.pdf>> accessed 24 March 2023.

the Rome I and II Regulations²⁵ and the Hague Convention²⁶ apply in the UK, and the statutory rules are currently in a state of flux—as Green describes, ‘private international law has become a free-for-all’.²⁷ In the interest of practicality and certainty, the common law rules provide a more valuable basis on which the predictions of this article can be based.

Ultimately, the jurisdiction problem facing digital assets is a live issue that is yet to be settled; there is at present no precedentially binding authority on which to rely. What is known, however, is that because of the international nature of this market, private international law will surface in almost every digital asset dispute. It is the first obstacle in any such litigation, and the rules are rapidly changing to accommodate this necessity. It is hoped that this article will serve as an indication of the forethought that is required as this reform unfolds.

II. THE PROBLEM: ‘LOCATION’ ON A LEDGER

The name of the game is location, location, location: location of events, things, persons... we have an inherent imperfection that is beyond the capability of conflicts to redress.²⁸

Digital assets present a ‘formidable’ challenge for private international law.²⁹ As Kozyris indicates in the above quotation, this is because the rules of jurisdiction and applicable law are situated on territorial connecting factors designed for a physical world. Guillaume concurs, arguing ‘only conflict-of-law rules that are independent of any location criterion are able to provide a satisfactory connection’ for on-chain transactions,³⁰ which Lehmann supports by arguing that for such agreements ‘it is impossible to determine the state with the closest connection’.³¹ Section II of this article expands on these concerns, explaining the exact issue faced by the parties to a cross-border digital transaction.

²⁵ Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the Law Applicable to Contractual Obligations (Rome I); Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the Law Applicable to Non-Contractual Obligations (Rome II). Both were transposed by section 8(1) and schedule 7, para 21(b) of the European Union (Withdrawal) Act 2019.

²⁶ Hague Choice of Court Agreements Convention 2005.

²⁷ Sarah Green, ‘The Future of Legal Practice: The Law Commission: Smart Contracts and Digital Assets’ (*Law Commission*, 25 January 2022) <<https://www.lawcom.gov.uk/the-law-of-england-and-wales-can-accommodate-smart-legal-contracts-concludes-law-commission/>> accessed 25 February 2023. See also Nick Pointon and Natasha Dzameh, ‘Brexit and What it Means for the Conflict of Laws’ (*St John’s Chambers*, 29 March 2021) <<https://www.stjohnschambers.co.uk/wp-content/uploads/2021/03/Brexit-and-what-it-means-for-the-conflict-of-laws-.pdf>> accessed 20 January 2023.

²⁸ Phaedon Kozyris, ‘Conflicts Theory for Dummies: Après le Deluge, Where Are We on Producers Liability?’ (2000) 60 *Louisiana Law Review* 1161, 1164.

²⁹ Guillaume (n 19).

³⁰ This means transactions that occur on a blockchain.

³¹ Lehmann (n 17) 112; Guillaume (n 19) 70.

A. APPLICABLE LAW

Determining how subject matter is held ‘is the natural and necessary starting point for the analysis of any conflicts case’.³² This is because the jurisdiction rules will differ depending on whether digital assets are considered money or property.³³ Although Demchenko considers on-chain assets to be money, and thus governed by the *lex monetae*,³⁴ this is not supported by case law.³⁵ Although there is an increasing tendency to view digital assets as property, Bryan J reveals the difficulty in doing so: ‘they are neither chose in possession nor are they chose in action’.³⁶ This blurs Fry LJ’s once black-letter dichotomy that ‘all personal things are either in possession or action. The law knows no *tertium quid* between the two’.³⁷

Nevertheless, the judicial direction has firmly been towards treating digital assets as property. Bryan J in *AA v Persons Unknown*, despite the ‘*prima facie* difficulties’ outlined above, stated that ‘crypto assets such as Bitcoin are property’.³⁸ Indeed, digital assets meet Lord Wilberforce’s definition of property in *National Provincial Bank*, being definable, identifiable by third parties, capable in their nature of assumption by third parties, and having some degree of permanence.³⁹ This reasoning has been expressly applied in at least seven other cases.⁴⁰ Indeed, Green, the Law Commissioner for Commercial and Common Law, suggests that the Commission’s current position on this question is to decouple possessability from tangibility, enabling digital assets to constitute a third category of property.⁴¹ Having established that digital assets are most likely to be held as property, the article will now discuss the substantive issues this poses for determining their jurisdiction.

³² Peter Hay, Patrick Borchers, and Symeon Symeonides, *Conflict of Laws* (5th edn, West Academic 2010) 147–149.

³³ Lehmann (n 17) 112.

³⁴ ‘The law of the country in whose currency the debt is expressed’. See Dickinson (n 2) para 5.73.

³⁵ Compare Olena Demchenko, ‘Bitcoin: Legal Definition and its Place in Legal Framework’ (2017) 3 *Journal of International Trade, Logistics and Law* 23, 23 with Johan David Michels and Christopher Milard, ‘The New Things: Property Rights in Digital Files?’ (2022) 81 *Cambridge Law Journal* 323.

³⁶ *AA v Persons Unknown* [2019] EWHC 3556 (Comm), [2020] 4 WLR 35 [55].

³⁷ *Colonial Bank v Whinney* (1885) 30 ChD 261, 285 (Fry LJ).

³⁸ *AA* (n 36) [55], [59].

³⁹ *National Provincial Bank v Ainsworth* [1965] 1 AC 1175 (HL) 1248A (Lord Wilberforce).

⁴⁰ *Vorotyntseva v Money-4 Ltd (t/a Nebeus.com)* [2018] EWHC 2596 (Ch); *Robertson v Persons Unknown* (Com Ct, 15 July 2019); *B2C2 Ltd v Quoine Pte Ltd* [2019] SCHC(I) 3; *Ruscoe v Cryptoppia Ltd* [2020] NZHC 728, [2020] 2 NZLR 809; *Ion Sciences Ltd v Persons Unknown* (Com Ct, 21 December 2020); *Fetch.ai Ltd v Persons Unknown* [2021] EWHC 2254 (Comm); *Lavinia Deborah Osbourne v Persons Unknown and Ozone Networks* [2022] EWHC 1021 (Comm).

⁴¹ Green (n 27).

B. APPLYING THE PRINCIPLES

The traditional principle for determining jurisdiction for property subject to a dispute is the *lex situs*, which dictates that the dispute should be governed by the law of the place in which the property is situated.⁴² This applies to tangible movable property,⁴³ tangible immovable property,⁴⁴ and intangible property of all forms, including debts,⁴⁵ shares,⁴⁶ and intellectual property.⁴⁷ This article will now discuss why neither this conventional approach, nor the three other suggested ways of locating the jurisdiction of a digital asset transaction, are appropriate, calling into question Lord Clarke's assumption that 'all property, whether tangible or intangible, has a *situs* for legal purposes'.⁴⁸

(i) *Lex Situs*

The general reason why jurisdiction cannot be based on the location of the asset has already been outlined: blockchain technology does not operate in a territorial or bordered way. There are, however, specific reasons why the *lex situs* rule relating to other kinds of intangible property (debts, shares, intellectual property, as listed at n 45–47) do not apply by analogy.

First, digital assets are not analogous to debt. This is because they do not represent rights against any particular person: as Ng highlights, 'there is no debtor or obligor'.⁴⁹ The difference is further exposed by the fact that there is no third-party intermediary (such as a bank) in blockchain transactions, which are decentralised. Rather than a debtor or obligor relationship, Bell and Cainer argue that the transfer of digital assets is more akin to moving property between safety deposit boxes.⁵⁰

Second, digital assets are not analogous to shares. The *lex situs* of a share is determined either by the location of the corporation issuing it or where the share register is located (there is no definitive authority as to which).⁵¹ This analogy is equally inapposite, as there is no corporation that 'issues' a digital asset, meaning

⁴² Lord Collins and Jonathan Harris (eds), *Dicey, Morris & Collins on the Conflict of Laws* (15th edn, Sweet & Maxwell 2017) para 22-025.

⁴³ *ibid.*

⁴⁴ *ibid.*

⁴⁵ *ibid* para 22-026.

⁴⁶ *ibid* para 22-044.

⁴⁷ *ibid* para 22-051.

⁴⁸ *Taurus Petroleum Ltd v State Oil Marketing Company of the Ministry of Oil, Republic of Iraq* [2017] UKSC 64, [2017] 3 AC 690 [29] (Lord Clarke).

⁴⁹ Michael Ng, 'Choice of Law for Property Issues Regarding Bitcoin under English Law' (2019) 15 *Journal of Private International Law* 315, 327.

⁵⁰ Bell and Cainer (n 19) 15.

⁵¹ Compare *Macmillan Inc v Bishopgate Investment Trust plc (No 3)* [1996] 1 WLR 387 (CA) with *Re Harvard Securities Ltd (In Liquidation)* [1998] 2 BCC 567 (Ch).

there is no entity that agrees to take on any rights or obligations.⁵² Similarly, there is no register as such, but rather transactions are recorded on a distributed ledger which creates authentic copies for each party, a system which Ng defines as ‘markedly different from having a branch and main registers’.⁵³

Third, digital assets are not analogous to intellectual property. These are exclusive rights (in the form of patents, trademarks, and copyright) conferred by a state that operates only within that state’s territory.⁵⁴ Digital assets do not resemble this structure at all; there is no legal system conferring monopoly protection over an asset transferred on a blockchain.⁵⁵

Evidently, the traditional *lex situs* principle that governs other kinds of intangible property does not apply by analogy to digital assets, meaning jurisdiction cannot be ascertained by any artificial ‘location’ that might be assigned to the asset itself. This is confirmed by Dickinson, who asked how one ‘ascribes a location to a thing which exists only in law... and which may be communicated instantaneously across the globe?’.⁵⁶

(ii) *Defendant’s Domicile*

Traditionally, where parties have not included a choice-of-court agreement, the applicable jurisdiction can be determined by the defendant’s domicile.⁵⁷ The first practical issue with this is the pseudonymous⁵⁸ nature of blockchain transactions, which means the identity and location of the defendant will often not be readily available. This was noted by Bryan J, stating that ‘because [the defendants] are persons unknown it is not as yet known what jurisdiction they are in’.⁵⁹ Given that pseudonymity is a large attraction of blockchain technology, in most cases, the identity and jurisdiction of the defendant will not be known, meaning domicile will generally be unhelpful on its own to determine the jurisdiction of a digital dispute.

Nevertheless, Butcher J in *Ion Sciences* determined that the jurisdiction ‘of a cryptoasset is the place where the person or company who owns it is domiciled’.⁶⁰ On top of the practical shortfalls already discussed, this is logically unsound. The judgment received judicial criticism from Falk J in *Tulip Trading*,⁶¹ who summarily dismissed a service out of jurisdiction application in rejection of Butcher J’s

⁵² Ng (n 49) 328.

⁵³ *ibid* 329.

⁵⁴ Collins and Harris (n 42) para 22-051.

⁵⁵ Ng (n 49) 331.

⁵⁶ Dickinson (n 2) para 5.08.

⁵⁷ This was provided by article 4 of Brussels I, Regulation (EU) No 1215/2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters, but following Brexit this is now a principle of the common law. See Law Commission, *Call for Evidence* (n 24) para 7.14.

⁵⁸ Parties to a digital transaction rarely use their real names on blockchain systems.

⁵⁹ *AA* (n 36) [73].

⁶⁰ *Ion Sciences* (n 40) [13]. See also *Fetch.ai* (n 40); *Sally Jayne Davidz v Persons Unknown and Huobi* [2022] EWHC 280 (QB).

⁶¹ *Tulip Trading v Bitcoin* [2022] EWHC 667 (Ch).

reasoning. Falk J referred to Dickinson's analysis in finding that Butcher J had misinterpreted 'residency' to mean 'domicile'.⁶² This is an important distinction because residency is taken to mean 'central management and control', a concept that directly contradicts the fundamental attribute of blockchain transactions: they are decentralised and distributed.⁶³ The Digital Law Association (DLA) make this very criticism, arguing that Butcher J 'disregards the distributed nature of DLT [distributed ledger technology]...which is problematic for multi-signatories, autonomous or anonymous parties to a contract'.⁶⁴ To tie down a digital asset transaction to one central location would undermine a core feature that makes the market so unique.

Hence, the domicile cannot be adopted as the means to determine jurisdiction. It would rarely be of any utility, as most parties contract in a pseudonymous way, meaning equitable instruments such as interim injunctions to reveal identity would have to become a mainstay of these disputes.⁶⁵ It would also defeat the decentralised and distributed appeal of on-chain transactions by imputing a centralised, singular location. Domicile, therefore, provides neither a practical nor logical solution to the jurisdiction problem.

(iii) Location of Formation or Performance

The Law Commission raised (and then rejected) the suggestion to apply the principle that jurisdiction to hear a dispute may be based on the fact that a contract was formed within a specific country.⁶⁶ The issue for digital asset transactions is that they are increasingly based on smart contracts, where the contract is formed by the autonomous interactions of two or more computer programs rather than individuals manually forming an agreement.⁶⁷ There are three reasons why it would be difficult to assert jurisdiction using formation or performance.

First, the coded nature of transactions means that the parties are not themselves involved in the formation or performance, which can lead to arbitrary results. If, for instance, a person receiving a digital asset is on holiday at the relevant time, it seems illogical to hold the holiday destination as the jurisdiction.⁶⁸ This criticism reflects Lord Sumption's comments in *Brownlie*, warning of the 'serious practical difficulties' of such a rule, as well as Lord Leggatt's in *Nile Plaza*,

⁶² *ibid* [144]. See also Dickinson (n 2) para 5.108.

⁶³ *Tulip Trading* (n 61) [149].

⁶⁴ Law Commission, 'Smart Legal Contracts: Responses to Call for Evidence' (Law Commission December 2020) 226 <<https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11jxou24uy7q/uploads/2021/12/211208-Smart-Contracts-Compiled-Responses-redacted-final.pdf>> accessed 24 March 2023.

⁶⁵ Bell and Cainer (n 19) 9.

⁶⁶ CPR 6B PD 6B 3.1(6)(a); Law Commission (n 21) para 7.18. See also *James Miller & Partners Ltd v Whitworth Street Estates (Manchester) Ltd* [1969] 1 WLR 377 (CA).

⁶⁷ Law Commission (n 24) para 7.23.

⁶⁸ *ibid* para 7.70.

who suggested that ‘the bare fact that one of the parties was in England when the contract was made is... a tenuous connection with the jurisdiction.’⁶⁹

Second, communication of the transaction does not go to the participants as individuals, but rather each of the nodes⁷⁰ on the network, which means jurisdiction could be grounded in a very large number of countries without any being of convenience.⁷¹

Third, the performance of a digital asset transaction does not occur in any physical location and thus does not avoid the issue of arbitrarily treating an intangible process as if it were physical. The DLA note that for the purchase of digital art, the ownership exists only in the blockchain technology and the art itself, the NFT can only ever be accessed digitally, it is never physically delivered to the buyer.⁷² As Wang argues, the place of download could not be considered the place of performance, neither could the place of the receiving server because they are only fragments of the digital product.⁷³

It is clear that the location of the formation or performance of a transaction for digital assets does not provide a solution to the issue of jurisdiction. To do so would not only be practically very arduous, but it would also create many jurisdictions that bear no logical connection to the dispute in question.

(iv) Location of Actions on the Ledger or Agents Involved

Finally, the Law Commission also raised (and again rejected) the suggestion that the location of the nodes or agents participating in the ledger could be used to determine jurisdiction.⁷⁴ There are three reasons why this would be unhelpful.

First, as Phillips details, the location of nodes, the computers that engage in the ‘actions’, have no relation to the location of the parties, nor anything substantively involved in the transaction.⁷⁵ Nodes do not signify a real connection with any jurisdiction, as they are spread in various locations across the globe, operating across many borders.⁷⁶

Second, there is a practical difficulty in being able to identify that a specific node was responsible for a transaction over any other node, meaning location would *de facto* be found anywhere that a blockchain node is located, regardless of its interaction with the transaction.⁷⁷

⁶⁹ *Brownlie v Four Seasons Holdings Inc* [2017] UKSC 80, [2018] 1 WLR 192 [16] (Lord Sumption); *FS Cairo (Nile Plaza) v Lady Brownlie* [2021] UKSC 45, [2021] 3 WLR 1011 [211]–[213] (Lord Leggatt).

⁷⁰ These are computers on the transaction network. See n 10.

⁷¹ Law Commission (n 24) para 7.70.

⁷² Law Commission (n 64) 225.

⁷³ Faye Fangfei Wang, ‘Obstacles and Solutions to Internet Jurisdiction: A Comparative Analysis of the EU and US Laws’ (2008) 4 *Journal of International Commercial Law and Technology* 233, 235.

⁷⁴ Law Commission (n 24) para 7.82.

⁷⁵ Law Commission (n 64) 62.

⁷⁶ *ibid* 91.

⁷⁷ *ibid*.

Third, the decentralised nature of blockchain technology means that there are no agents involved in the transactions on which jurisdiction could be based. Allen & Overy's response to the Law Commission firmly held that 'two computer programs who autonomously reach an agreement could not be said to have acted as the parties' agents', a view that was confirmed in the Commission's final report.⁷⁸

Section II of this article has therefore demonstrated the jurisdiction problem facing digital asset transactions. Parties will struggle to situate disputes in relation to the digital property itself, the domicile of the intended defendant, the location of formation or performance of the agreement, or any actions on the ledger or agents involved. Section III will respond to this analysis with the most likely and pragmatic solution.

III. THE SOLUTION: *ELECTIVE SITUS*

The most likely solution to this problem is to encourage a choice of court clause in any cross-border digital asset transaction. This is the conclusion reached by the Law Commission, which predicts that 'such a choice is likely to provide parties with clarity as to the content of their obligations, and the consequences of any wrongdoing'.⁷⁹

There are concerns, however, if such a choice of court clause is even possible for contracts that take place on-chain. These concerns can be broadly divided into two categories. First, the notion that a choice of court cannot be expressed via code. Second, the notion that the existence of such an express clause is counter to the fundamental advantage of these transactions: flexibility. These concerns are rebutted in turn.

A. A CODED CHOICE?

Rühl and DLA Piper assume that clauses expressing jurisdiction 'can hardly be represented in algorithmic fashion', making them 'incompatible with smart contracts'.⁸⁰ The basis for this assumption is that the choice must be legible to the parties, though there is reason to challenge this.

In *L'Estrange*, Scrutton J expressed that 'it is wholly immaterial whether [a party] has read the document or not', in relation to a signed agreement, and in *Schwartz*, it was similarly held that illiteracy was no justification for avoiding a contractual obligation.⁸¹ More recently, and more directly persuasive, is the case of *Pugliese*.⁸² There, a contract formed in the English language contained an exclusive

⁷⁸ Law Commission (n 64) 48; Law Commission (n 21) para 7.115.

⁷⁹ Law Commission (n 21) para 7.77.

⁸⁰ Rühl (n 15) 12; Law Commission (n 64) 241.

⁸¹ *L'Estrange v Graucob* [1934] 2 KB 394 (KB) 403 (Scrutton J); *Barclays Bank Plc v Schwartz* The Times, 2 August 1995 (CA).

⁸² *Coys of Kensington Automobiles Ltd v Pugliese* [2011] EWHC 655 (QB), [2011] 2 All ER (Comm) 664.

jurisdiction clause which the defendant, an Italian, claimed she could not interpret. It was held that this was not relevant, and the court gave effect to the choice of court clause. By analogy, the suggestion that because code is not easily interpretable means that jurisdiction clauses cannot be incorporated into smart contracts is not necessarily absolute. This is corroborated by Allen & Overy, who ‘do not see that an inability to understand the code should be a bar to the code being the source of a contractual obligation’.⁸³

There are, however, limits to the analogy. First, in *L'Estrange*, the contract was formed upon the signing of the document. This distinguishes on-chain contracting, where there are no agents involved: it is the computers that reach an agreement. Consequently, freedom of contract is not necessarily upheld by applying the *L'Estrange* line of case law to smart contracts. Second, even if the legibility of the contract is not of concern, it is unclear whether the statutory protections provided by the Unfair Contract Terms Act 1977 and the Consumer Rights Act 2015 will be satisfied by smart contracts. Binding terms must be fair or reasonable, which will be difficult to decipher from an entirely coded contract.

These limits may be resolved by a particular kind of contract. A Ricardian contract is a contract for a transaction that takes place using blockchain technology but where the terms are readable both by the contracting parties and the machines designed to automate performance.⁸⁴ Lowe and Kerrigan argue that structuring digital transactions in this way ‘can flexibly allow for separate jurisdictions conditional upon events, actions or triggers’, meaning not only is the clause legible to the parties, it also forms part of the algorithmic constitution that Rühl and DLA Piper suggest is not possible.⁸⁵ The result is that parties will know the body of law that applies to their contract, and so can easily determine the validity of any term in their agreement.⁸⁶ Therefore, not only can a choice of court clause be incorporated into ‘on chain’ contracts in a pragmatic way, but parties will also know the terms that bind them, making unfair terms less challenging to decipher.⁸⁷

B. FLEXIBILITY

The second concern is that including a choice of law clause reduces the flexibility of transactions using blockchain technology. The Financial Markets Law

⁸³ Law Commission (n 64) 48.

⁸⁴ See ‘How are Ricardian Contracts Different from Smart Contracts?’ (*Bybit Learn*, 3 December 2021) <<https://learn.bybit.com/defi/how-are-ricardian-contracts-different-from-smart-contracts/>> accessed 20 January 2023.

⁸⁵ Law Commission (n 64) 497. cf Rühl (n 15) 12; Law Commission (n 64) 241.

⁸⁶ Rühl (n 15) 11.

⁸⁷ cf Symeon Symeonides, *Codifying Choice of law Around the World: An International Comparative Analysis* (Oxford University Press 2014) ch 1.

Committee, for instance, worry that a choice of law rule ‘will be time consuming and costly to apply’.⁸⁸ This concern is overstated.

This is because the mechanism for adopting a choice of court clause has been assumed to mean that parties will be orally discussing the most optimal court to hear any future disputes. This is not an accurate depiction of how a digital choice of court clause would work. As Lehmann and Clifford Chance argue, the clause could simply be embedded as a central choice of law, framed as a ‘law of the platform’; a uniform choice that all parties agree will govern any on-ledger transactions.⁸⁹ The additional requirements for this would simply be for parties to ‘opt-in’ to a pre-determined general rule that governs the jurisdiction for digital asset transactions. Such a method of ascertaining jurisdiction has been coined the ‘*lex digitalis*’;⁹⁰ the traditional mechanism of agreement need not apply to such contracts and so party-flexibility can be maintained.⁹¹

In fact, the opposite problem has been raised: allowing parties unfettered choice of governing law may prove undesirable for national authorities and regulators.⁹² A response would be to restrict the number of jurisdictions available for parties to ‘opt into’, limiting the options to a set number of forums depending on the circumstances of the transaction or to a choice approved by regulators.⁹³

Therefore, it is possible to express a choice of court clause in a transaction that takes place on blockchain technology in a way that only minimally encroaches on the flexibility of contracting parties. In exchange for this small loss of flexibility, parties gain security and certainty. In the short-term at least, it is highly likely that these clauses will be encouraged to resolve the jurisdiction problem facing digital asset transactions in a pragmatic and logical way.

IV. BEYOND THE SOLUTION: DIGITAL ASSETS AND THE *FORUM NON CONVENIENS* PROBLEM

The solution of elective *situs*, although useful, is no panacea. The literature surrounding *elective situs* concentrates on the logical and practical difficulties of the solution, discussed in Section III, in narrow terms. The question that defines the field is: ‘how can the solution fix the problem?’. The lacuna that this leaves behind is an appreciation of the wider implications. It is in considering the impact of a

⁸⁸ Financial Markets Law Committee, ‘Distributed Ledger Technology and Governing Law: Issues of Legal Uncertainty’ (Financial Markets Law Committee March 2018) para 6.22 <http://fmcl.org/wp-content/uploads/2018/05/dlt_paper.pdf> accessed 25 February 2023.

⁸⁹ Lehmann (n 17) 113; Clifford Chance (n 17) 28. cf Maisie Ooi, *Shares and Other Securities in the Conflict of Laws* (Oxford University Press 2003) para 7.80.

⁹⁰ See also Aaron Wright and Primavera De Filippi, ‘Decentralized Blockchain Technology and the Rise of *Lex Cryptographia*’ (SSRN 2015) 4 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2580664> accessed 25 February 2023.

⁹¹ Lehmann (n 17) 94.

⁹² Clifford Chance (n 17) 30.

⁹³ Clifford Chance (n 17) 30; Guillaume (n 19); Financial Markets Law Committee (n 88) 16.

choice of court solution that this article extends existing scholarship's understanding of digital assets and the jurisdiction problem. One question that remains both unasked and unanswered is: 'what problem does the solution raise?'

The answer that this article provides is that stay applications in favour of alternative jurisdictions will necessarily curtail. This is because the choice of court clause will invariably be upheld by courts in the face of tenuous and strained connections to alternative jurisdictions. In conventional disputes based on real-world transactions, choice of court clauses are not necessarily determinative; defendants can apply for the dispute to be heard in an alternative jurisdiction.⁹⁴ Comparatively, defendants to a digital asset dispute will struggle to stay proceedings because they will face the same problems outlined in Section II. The choice of court solution does not abolish the jurisdiction problem, it merely shifts it onto the defendants.

The doctrine underlying claims to hear a dispute outside of the expressed jurisdiction is called *forum (non) conveniens*, meaning '(in)convenient forum'.⁹⁵ Such claims must pass the two-stage test refined by Lord Goff in *Spiliada*.⁹⁶ The first stage requires defendants to prove that there is an available forum 'which is clearly or distinctly more appropriate', which Lord Sumption explained in *Brownlie* requires a 'plausible evidential basis'.⁹⁷ Although the second stage asks claimants to prove whether justice requires that a stay should not be granted, applications are unlikely to reach this point.⁹⁸ This is because the 'plausible evidential bases' on which these applications must be placed are the very same factors that are discussed at Section II.B.(i) to II.B.(iv). Just as without a choice of court clause a claimant will often struggle to prove jurisdiction to hear a dispute, with a choice of court clause a defendant will often struggle to stay one.

If choice of court clauses are implemented in this market, it will ultimately become a balancing exercise for judges when hearing stay applications. The judicial impartiality of this balancing exercise, however, is complicated by the new and complex technicalities of blockchain technology. Giving effect to an express choice of court is a simpler route to take when the alternative is to grapple with the logical disconnection between on-chain digital transfers and location-centric private international law principles. As Chesterman reminds us, attempting to apply rules designed for the 20th century to the technology of the 21st is a laboursome task.⁹⁹ Although simplicity is partly a strength of the choice of court solution, it could turn out to be a weakness too; it tempts judges to follow it at the expense of defendants'

⁹⁴ CPR 11.

⁹⁵ Eleanor Yuen, 'Available Forum in the *Spiliada* Test: The Ambiguity in Meaning and Practice' (2014) 5 *Journal of the Philosophy of International Law* 72, 72.

⁹⁶ *Spiliada Maritime Corp v Cansulex Ltd* [1987] AC 460 (HL) 477E (Lord Goff).

⁹⁷ *ibid* 477E; *Brownlie* (n 69) [7] (Lord Sumption).

⁹⁸ *Spiliada* (n 96) 478C.

⁹⁹ Simon Chesterman, 'Move Fast and Break Things: Law, Technology, and the Problem of Speed' (2021) 33 *Singapore Academy of Law Journal* 5, 8.

right to challenge jurisdiction. If the solution predicted by the article is taken up, jurisdiction could cease to be a point of litigation at all in digital asset disputes.

V. CONCLUSION

Private international law has long been asked to do the impossible and to reconcile the 'national' with the 'global', yet the surreal nature of that task has been exposed, as never before, by cyberspace.¹⁰⁰

This article has made three fundamental predictions. First, that claimants to a digital asset transaction will struggle to prove jurisdiction for a court to hear their dispute. The problems are intrinsic to the mechanism of blockchain technology: in a system designed for the borderless transfer of intangible data, rules fixated on territory and location do not apply. Taking the four most relevant connecting factors in turn, the article has demonstrated that often none of them will be available to claimants.

Second, the most likely and logical solution to this problem is a choice of court clause. This is so in response to the two main concerns regarding the solution, having demonstrated that it is not only possible in a coded contract but also that its limitation on party-flexibility can be kept minimal.

Third, the impact of this solution will necessarily reduce a defendant's ability to stay proceedings in favour of alternative jurisdictions. This is because the choice of court solution does not confront the problem of jurisdiction head-on, it merely bypasses it, redirecting the burden of digital jurisdiction onto defending parties. It is in this final prediction that the article contributes most to the field, demonstrating that the simple solutions to this complicated issue can be deceiving and require thorough consideration if they are to be implemented permanently.

There is certainly a need to bring digital transactions within the protection of the law, bringing the market into the now trite maxim that 'where there is a wrong there is a remedy'. But it must be remembered that a dispute is a two-party engagement: just as the law should equip claimants with the ability to bring claims, it should also equip defendants with the ability to properly defend them.

Ultimately, applying private international law to digital assets is a live and dynamic issue. At the time of writing, the Law Commission are in the pre-consultation stage of its project on digital assets and the jurisdiction problem, which is expected to provide a framework for adapting the law to incorporate digital transactions.¹⁰¹ Similarly, Sir Geoffrey Vos MR and the Deputy Head of Civil Justice have recently created a sub-committee of the Civil Procedure Rules Committee to explore amending the grounds on which jurisdiction is based, with a vision to lift

¹⁰⁰ Uta Kohl, 'Conflict of Laws and the Internet' in Roger Brownsword, Eloise Scotford, and Karen Yeung (eds), *The Oxford Handbook of Law, Regulation and Technology* (Oxford University Press 2017) 289.

¹⁰¹ Law Commission (n 22).

the very obstacles outlined by Section II.¹⁰² Further still, in its legal statement, the UK Jurisdiction Taskforce quoted Mance LJ in expressing that the law:

may require redefinition or modification, or new categories may have to be recognised accompanied by new rules..., if this is necessary to achieve the overall aim of identifying the most appropriate law.¹⁰³

Until this reform agenda materialises, however, it is hoped that this article will serve to broaden the understanding of digital asset transactions and the jurisdiction problem. Although a choice of court clause provides the most simple and logical solution, it is no panacea. The benefits of a choice of court clause swing heavily in favour of claimants; if it is to remain a long-term and sustainable solution, it must be partnered with accompanying reform. One immediate suggestion is to create a new *forum (non) conveniens* test specific to digital asset cases to reduce the threshold from 'clearly or distinctly more appropriate' to simply 'more appropriate'. Doing so will help balance the scales of procedural fairness by equipping defendants with the means to properly defend digital asset claims made against them.

¹⁰² Sir Geoffrey Vos MR, 'Keynote Speech' (LawtechUK Launch of Smarter Contracts Report, London, 24 February 2022) <www.judiciary.uk/wp-content/uploads/2022/02/Speech-MR-to-Smarter-Contracts-Report-Launch-Lawtech-UK-UKJT-Blockchain-Smart-Contracts.pdf> accessed 20 January 2023.

¹⁰³ UK Jurisdiction Taskforce, 'Legal Statement on Cryptoassets and Smart Contracts' (The LawTech Delivery Panel November 2019) 24 <<https://resources.lawtechuk.io/files/4.%20Cryptoasset%20and%20Smart%20Contract%20Statement.pdf>> accessed 19 March 2023; *Raiffeisen Zentralbank Österreich v Five Star Trading* [2001] EWCA Civ 68, [2001] QB 825 [27] (Mance LJ).