October 2020

ISDA® Linklaters r3

Private International Law Aspects of Smart Derivatives Contracts Utilizing Distributed Ledger Technology: Japanese Law

CONTENTS

INTRODUCTION

This paper considers the private international law, or conflict-of-law, aspects of derivatives contracts governed by the laws of Japan involving distributed ledger technology (DLT), commonly known as blockchain technology.

The development and implementation of new technologies such as DLT within the derivatives industry have the potential to create a more robust financial markets infrastructure, achieve operational efficiencies through increased automation and reduce costs for market participants.

As these technologies mature, it is important to understand the evolving legal treatment of derivatives traded on DLT platforms. Given the novel complications over where data, assets and even counterparties are located in a DLT environment, it is useful to examine key questions on how to determine which law applies and how to evaluate conflicts of governing law. While some jurisdictions[1] have produced analysis on areas of perceived legal uncertainty, these issues remain untested in many of the jurisdictions and cross-border environments important to the derivatives industry.

In January 2020, ISDA, R3, Clifford Chance and the Singapore Academy of Law jointly published *Private International Law Aspects of Smart Derivatives Contracts Utilizing Distributed Ledger Technology*[2]. That paper considered the private international law, or conflict-of-law, aspects of derivatives contracts governed by the laws of England and Wales or Singapore involving DLT.

These issues include:

- Whether the introduction of DLT or a DLT platform provider to a traditional trading relationship might create additional legal rights and obligations for the trading parties. These may be governed by different laws to those governing the trading documentation, which could have implications for the resolution of contractual disputes.

- How to identify the legal *situs* of digital assets for effecting payments or exchanging collateral on certain DLT platforms.

These issues are critically important for derivatives market participants that want to ensure the legal enforceability of their contracts and the associated netting and collateral arrangements are not undermined by an unexpected change in governing law or by an inability to enforce judgements. As derivatives are often traded on a cross-border basis, it is important these issues are examined and understood from the perspective of the governing laws and jurisdictions typically used in ISDA documentation.

As a result, ISDA (in association with R3 and local counsel) has published additional papers that consider these issues from French, Irish, Japanese and New York law perspectives[3,4].

[1] See the UK Jurisdiction Taskforce (UKJT) Legal Statement on Cryptoassets and Smart Contracts: https://35z8e83m1ih83drye280o9d1-wpengine.netdna-ssl.com/wp-content/uploads/2019/11/6.6056_JO_Cryptocurrencies_Statement_FINAL_WEB_111119-1.pdf

[2] https://www.isda.org/a/4RJTE/Private-International-Law-Aspects-of-Smart-Derivatives-Contracts-Utilizing-DLT.pdf

[3] ISDA has published forms of ISDA Master Agreement and associated collateral documentation governed by the laws of England and Wales, New York, Ireland, France and Japan

[4] These papers can be accessed here: https://www.isda.org/2019/10/16/isda-smart-contracts/

Through this analysis, ISDA hopes to support the work of international standard-setting bodies, regulators, judiciaries, market participants and other key stakeholders examining these issues. The papers are also intended to provide greater certainty to participants incorporating DLT into derivatives transactions, strengthening the industry's ability to realize the operational and cost efficiencies that greater automation will provide.

While the focus of this paper is on potential private international law issues arising from the use of smart derivatives contracts utilizing DLT, there may be other questions that need to be considered from a Japanese law perspective when determining the legal status or characterization of a smart derivatives contract. These might include whether certain types of smart contract are capable of satisfying contract formation requirements under Japanese law, or whether certain types of digital asset are capable of being treated as property under Japanese law. Such discussions are beyond the scope of this paper[5].

[5] The UKJT recently published its *Legal Statement on crypto-assets and smart contracts*, which provides a view on these and other issues from an English law perspective. While not having the force of law, the UKJT's statement has been cited in at least one case in the English courts where these or similar issues have been raised. There are various discussions made by legal practitioners and/or academics – for example, *Kasou Tsuuka ni Kansuru Shihou jou Kantokuhou jou no Shomondai no Kentou* [Examination of private laws and supervisory laws issues related to crypto currencies] (Tokyo: Kinyu Houmu Kenkyu Kai [Financial Law Practice Study Group], 2019) (https://www.zenginkyo.or.jp/fileadmin/res/news/news310339.pdf), which consists of several leading academics' research papers. However, there has been no statement or publication issued by the appropriate Japanese national authorities. If such publication or statement is available, it could assist in creating a more robust legal and regulatory environment for the development of smart derivatives contracts under Japanese law

UNCOLLATERALIZED DLT TRANSACTIONS

These papers set out two different examples in order to illustrate the relevant issues – an uncollateralized interest rate swap transaction and a collateralized interest rate swap. Both use ISDA documentation and are implemented on Corda, an open-source blockchain and smart contract platform developed by R3 that operates as a private, permissioned ledger (ie, one that only authorized parties may view and use). Types of issues that might arise when entering into derivatives transactions using DLT platforms that have different characteristics from Corda – for example, permissionless ledgers[6] – are also covered.

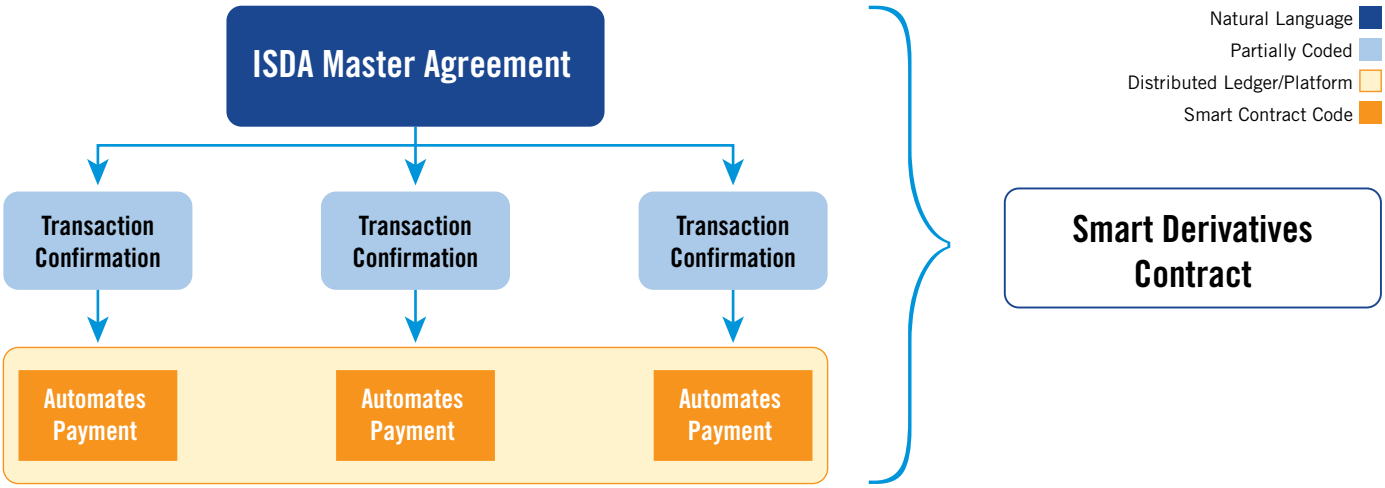
Smart Derivatives Contracts

ISDA has published a series of legal guidelines for smart derivatives contracts[7], which are intended to explain the core principles of ISDA documentation and raise awareness of important legal terms that should be maintained when a technology solution is applied to derivatives trading.

These guidelines establish the concept of a smart derivatives contract. This is a derivatives contract in which some terms are capable of being automatically performed, either by expressing those provisions using some formal representation that enables their automation, or by referring to the operation of smart contract code that is external to the contract[8].

While the guidelines are agnostic about the types of technology that could be used to implement smart derivatives contracts, they provide an illustration of a potential smart derivatives contract construct utilizing a DLT platform, where payments under a series of transactions are automated.

Figure 1



[6] A distributed ledger that is public can be viewed by members of the public, while a permissionless ledger is one that members of the public can make and verify changes to. *Distributed Ledger Technology and Governing Law: Issues of Legal Uncertainty* (London: Financial Markets Law Committee, 2018) at 8, [3.3(a)], http://fmlc.org/wp-content/uploads/2018/05/dlt_paper.pdf (FMLC paper)

[7] ISDA *Legal Guidelines for Smart Derivatives Contracts: Introduction* (January 2019), https://www.isda.org/a/MhgME/Legal-Guidelines-for-Smart-Derivatives-Contracts-Introduction.pdf, and ISDA *Legal Guidelines for Smart Derivatives Contracts: The ISDA Master Agreement* (February 2019), https://www.isda.org/a/23iME/Legal-Guidelines-for-Smart-Derivatives-Contracts-ISDA-Master-Agreement.pdf

[8] For further discussion on these smart derivatives contracts and which provisions might be well suited to automation, see ISDA and Linklaters LLP, *Smart Contracts and Distributed Ledger – A Legal Perspective* (August 2017), www.isda.org/a/6EKDE/smart-contractsanddistributed-ledger-a-legal-perspective.pdf; ISDA and King & Wood Mallesons LLP, *Smart Derivatives Contracts: From Concept to Construction* (October 2018), https://www.isda.org/a/cHvEE/Smart-Derivatives-Contracts-From-Concept-to-Construction-Oct-2018.pdf; and Christopher D Clack and Ciáran McGonagle, *Smart Derivatives Contracts: The ISDA Master Agreement and the Automation of Payments and Deliveries, Artificial Intelligence and Law* (forthcoming)

In Figure 1, the parties enter into an ISDA Master Agreement as normal. Commercial terms relating to the transaction continue to be contained in a transaction confirmation. This example assumes none of the transactions will be collateralized.

While those provisions that are automated (ie, those relating to payment obligations) could be represented in code, so that it actually forms part of the legal contract, this is not necessarily required to implement the transactions on a DLT platform.

The Uncollateralized DLT Transaction

Corda is a blockchain platform for recording and processing financial agreements. It is a private permissioned ledger – only authorized parties may view and use it. The system supports smart contracts, which R3 has defined as[9]:

> *[…] an agreement whose execution is both automatable by computer code working with human input and control, and whose rights and obligations, as expressed in legal prose, are legally enforceable. The smart contract links business logic and business data to associated legal prose in order to ensure that the financial agreements on the platform are rooted firmly in law and can be enforced […]*

In this example, the parties to the uncollateralized DLT transaction have negotiated the terms of their relationship under an ISDA Master Agreement and have documented the economic terms relating to the interest rate swap under a transaction confirmation.

The parties would also be required to enter into an agreement with a platform provider as the operator[10] of the business network that deploys applications that utilize Corda (each application is called a 'CorDapp'). This agreement requires the parties to accept a business network rule book[11]. This agreement is governed by the laws of the jurisdiction the parties agree upon.

When implementing the uncollateralized DLT transaction on Corda, the parties would become 'nodes' on the Corda distributed ledger or blockchain, and would use a derivatives CorDapp to execute the transaction.

A CorDapp has a smart legal contract template library, with each smart contract consisting of the following elements:

- **A state object:** This is a digital representation of a real-world fact on the distributed ledger. For example, the ISDA Master Agreement and transaction confirmation entered into between the parties would be a state object.
- **A Corda contract:** This is an element setting out various rules that govern state objects – for example, 'the trade date must be after today's date', 'the fixed rate amount must be above [a specified percentage]', and 'the floating rate amount spread must be [a specified figure]'.
- **A portable document format (PDF) file with parameters:** This is a file containing parameters (for example, the parties' names, dates and amounts of money) that need to be filled in by the parties. The PDF is inextricably linked to the Corda contract for purposes that are explained later.

[9] Richard Gendal Brown, James Carlyle, Ian Grigg and Mike Hearn, 'Corda' in *Corda: An Introduction* (New York, NY: R3, 2016), https://docs.corda.net/_static/corda-introductory-whitepaper.pdf, at 7, [4] (original emphasis)

[10] Although there is most likely only one platform provider contracting with the parties, it is possible for there to be multiple entities operating the CorDapp

[11] A business network rule book is an agreement between the parties governing use of the CorDapps, analogous to agreements that users currently enter into to use electronic trading platforms and financial transaction platforms such as SWIFT

To structure, set up and execute the uncollateralized DLT transaction, the following steps are taken:

1) Party A obtains a smart legal contract appropriate to the transaction from the smart legal contract template library on the distributed ledger, and fills in the parameters of the PDF with the information relating to the transactions.

2) The CorDapp 'scrapes' or obtains the transaction information from the PDF and inputs this into the state object.

3) Party A runs a verify function of the Corda contract to ensure the state object does not break any of the Corda contract's predetermined rules.

4) Once the state object has been determined not to break any of the Corda contract's rules, Party A sends the transaction to Party B.

5) Party B reviews the details of the smart legal contract. When Party B has confirmed that the PDF and state object accurately reflect the transaction, Party B runs a verify function of the Corda contract to ensure the state object does not break any of the Corda contract's rules.

6) Once the state object has been determined not to break any of the Corda contract's rules, Party B digitally signs the transaction and sends it back to Party A.

7) Party A digitally signs the transaction and sends it to the notary, which is a server on the distributed ledger operated by one or more entities that execute what is known as the 'notary function'[12]. The notary checks the cryptographic hash of the state object against its record of hashes[13]. When it confirms that the state object is unique, it digitally signs the transaction and sends it back to both parties.

8) The parties record a copy of the transaction in their respective vaults on the distributed ledger.

After the uncollateralized DLT transaction has been executed in accordance with these steps, subsequent lifecycle events in respect of the transaction, such as a periodic payment, would be managed as follows:

1) On an agreed date, an oracle[14] feeds interest rate data into the smart legal contract that is in Party A and B's vaults.

2) Party A then initiates a new transaction, repeating steps (3) to (8). This leads to the smart legal contract being recorded in Party A and Party B's vaults with an updated record of the transaction (that is, the net amount payable by Party A to Party B or vice versa). The actual payment takes place off the distributed ledger.

[12] The 'notary function' can be performed by a collection of servers known as a 'notary cluster'

[13] A cryptographic hash is an electronic signature uniquely identifying a state object that is created by running the contents of the state object through a complex mathematical formula

[14] A service provided by a third party that feeds real-world information into a distributed ledger, which can then be used to initiate the execution of smart contracts

In this scenario, it is not envisaged that any intermediaries, such as brokers, central banks, clearing houses or custodians, would be represented on Corda. Where involved in a transaction, they would continue to operate off-ledger. However, it is possible that an intermediary like a central counterparty could operate as a node on the distributed ledger. This could be as a party to a derivatives transaction or as an 'observer node' that is able to receive information relating to a transaction in order to clear but is otherwise unable to participate in the transaction.

While the objective of the DLT platform is often to eliminate the need for some or all of these intermediaries, their complete removal is unlikely to be feasible or desirable. Beyond the transacting parties, there are likely to be numerous other entities that act as nodes in the ledger, including the operator(s) of (parts of) the platform and parties that facilitate communication and record maintenance[15]. For a collateralized transaction, this would also include custodians, which are required to hold and segregate collateral under initial margin requirements for non-cleared derivatives transactions[16].

The issues arising from such a use of a DLT platform are outside the scope of this paper.

[15] See Thomas Keijser & Charles W Mooney, Jr, *Intermediated Securities Holding Systems Revisited: A View through the Prism of Transparency* (Institute for Law and Economics Research Paper No. 19-13), https://ssrn.com/abstract=3376873, at 17-18 (forthcoming in Louise Gullifer & Jennifer Payne (eds), Intermediation and Beyond (Oxford: Hart Publishing, 2019))

[16] Further discussion of these regulatory requirements can be found in the ISDA *Legal Guidelines for Smart Derivatives Contracts: Collateral*, https://www.isda.org/a/VTkTE/Legal-Guidelines-for-Smart-Derivatives-Contracts-Collateral.pdf

Private International Law Rules Relating to Contracts

Based on numerous cases of derivatives transactions that have come before the courts globally, it is clear they often involve parties that are based in different jurisdictions. This paper therefore begins with a general explanation of the applicable rules of private international law that would apply to determine the governing law of the contract between the parties, the forum for deciding disputes and the applicable rules of evidence. How these rules would apply in the context of the uncollateralized DLT transaction will then be considered.

How a Court Determines the Governing Law of a Contract

The Act on General Rules for the Application of Laws (*hou no tekiyou ni kansuru tsuusoku hou*)[17] (the Conflict of Laws Act) provides the principle rules for determining the laws governing a contract. A Japanese court would take the following steps:

- Under Article 7 of the Conflict of Laws Act, it is a principle rule that the governing law of a contract shall be the law chosen by the parties – ie, the agreement to choose a specific governing law (regardless of its format[18]) would generally be upheld.

- If there is no clear choice expressed, but the parties to the contract had an implicit agreement for the choice of the governing law, then Article 7 of the Conflict of Laws Act would still apply, and the chosen law would govern the contract[19].

- If no agreement for the choice of the governing law has been made, the law of the jurisdiction where the contract is most closely connected will govern the contract[20]. The Conflict of Laws Act sets out certain presumptions for when a contract involves a unilateral obligation(s) of a party or is related to real estate[21]. However, no presumption is provided for contracts related to bilateral obligations (including, but not limited to, obligations under an ISDA Master Agreement and credit support document), and a case-by-case analysis would be required to determine a jurisdiction where that contract is most closely connected.

- Further certain special provisions for a contract between an individual consumer and a business operator (B-to-C contract) are provided in Article 11 of the Conflict of Laws Act.

Under Article 42 of the Conflict of Laws Act, if a foreign law (ie, a non-Japanese law) would otherwise govern but application of that law is counter to public policy or good morals in Japan, then the relevant provisions will not apply. Therefore, although the parties' choice of law would generally be respected, it could be subject to certain restrictions. The Conflict of Laws Act is silent on what law should apply if use of certain foreign law provisions is rejected under Article 42. There some academic argument on this issue[22].

[17] Act No. 78 of 2006, as amended

[18] Such agreement can be in writing, orally or in any other means

[19] Kunio Koide et al., *Chikujou Kaisetsu Hou no Tekiyou ni Kansuru Tsuusoku Hou* [Commentary on the Act on General Rules for the Application of Laws] 81-82 (2009)

[20] Article 8, paragraph 1 of the Conflict of Laws Act

[21] Article 8, paragraphs 2 and 3 of the Conflict of Laws Act

[22] Koide, *supra* note 19, at 374-75

How a Court Determines the Appropriate Jurisdiction for a Dispute Regarding Contractual Obligations

Whether a Japanese court has jurisdiction over a case is determined by certain rules set out in the Code of Civil Procedures (*minji soshou hou*)[23]. These are summarized as follows:

- A Japanese court has jurisdiction over a case involving a person domiciled in Japan (or who resides in Japan) and an entity that has its principal office or business office in Japan, regardless of the type of case[24]. This jurisdiction is established by the domicile/location of a relevant defendant, and a court has jurisdiction over any and all cases/actions filed against this defendant. This type of jurisdiction is called a 'general jurisdiction' (*ippan kankatsu*).

- A court in Japan also has jurisdiction over cases that have a certain connection with Japan. The exact circumstances are set out in Articles 3-3 through to 3-6 of the Code of Civil Procedures. For instance, with respect to an action on a claim for the performance of a contractual obligation, if the contractually specified place for the performance of the obligation is within Japan, a Japanese court has jurisdiction[25]. Depending on the type of dispute, the location of the asset(s) or place of tort would also be among the factors determining the jurisdiction. The jurisdiction that is established per specific type of case is called a 'special jurisdiction' (*tokubetsu kankatsu*).

- If the parties have agreed in writing (including by electronic means) in which country courts shall have jurisdiction over a case arising from a certain contract/transaction, this agreement would be recognized[26].

Therefore, if a counterparty is an entity in Japan, then the rule of the general jurisdiction applies and a Japanese court will have jurisdiction over any and all cases that are filed against the counterparty. However, if a counterparty is a non-Japanese entity and its principle place of business is located outside Japan, then the general jurisdiction is not recognized and it is necessary to examine whether any special jurisdiction can be established.

Regardless of whether the general or special jurisdiction is recognized, if the parties to a contract have agreed that a court in Japan shall have jurisdiction over any cases arising from that contract, then the agreement would be recognized and the Japanese courts would have jurisdiction. This analysis is common for any cross-border dispute (including cases related to transactions or acts made over the internet[27]).

Professor Tetsuo Morishita of Sophia University argues that the following approaches would apply for determining jurisdiction over civil suits related to cryptoassets like Bitcoin[28]:

- Factors in determining jurisdiction for cross-border cases can vary depending on the identity of the parties and the specific issues being argued in the case. However, it should be sufficient to consider this pursuant to the existing rules for determining jurisdiction over other cross-border cases.

[23] Act No. 109 of 1996, as amended

[24] Article 3-2 of the Code of Civil Procedures

[25] Article 3-3, item 1 of the Code of Civil Procedures

[26] Article 3-7, paragraphs 1 through 3 of the Code of Civil Procedures

[27] See Masato Dogauchi, *Cyber-space To Kokusai Shihou* [Cyber-space and private international law] 1117 Jurist 60, 65 (1997)

[28] See Tetsuo Morishita, *Kasou Tsuuka ni Kansuru Kokusaiteki na Houteki Mondai ni Kansuru Kousatsu* [Consideration of international legal issues related to crypto currencies] (https://www.zenginkyo.or.jp/fileadmin/res/abstract/affiliate/kinpo/kinpo2016_1_4.pdf) 67

- While it might be difficult to determine the place of the performance, location of the asset or place of the tort for cryptoassets based on DLT, the jurisdiction should be determined based on purposes of the relevant rules and upon consideration of the substance and economics of a relevant transaction.

- Under Japanese rules for determining the jurisdiction of cross-border cases, a case may be dismissed even if a jurisdiction has been established if the court finds 'special circumstances' that mean holding a trial in Japan is inappropriate in terms of equity between the relevant parties and/or a fair and speedy trial (Article 3-9 of the Code of Civil Procedures). Accordingly, it is desirable to achieve a well-balanced outcome through the combination of the following approaches: (i) being less strict in determining whether the 'place for the performance', 'location of the asset' or 'place of the act' is based or located in Japan; and (ii) the use of the 'special circumstances' doctrine.

Professor Morishita's argument could be used in situations where the parties have not chosen any jurisdiction (including situations where anonymous or pseudonymous parties are transacting with each other on a DLT platform and there is no agreement on the choice of jurisdiction) in order to understand how a Japanese court could consider whether it should have jurisdiction over a specific case filed by either of the parties.

Admissibility of Evidence in Electronic Form

Once the governing law of a contract has been determined, together with the courts that will have jurisdiction to hear any dispute, the ability of one of the parties to enforce the terms of that contract will depend on a number of factors. For a derivatives transaction on a DLT platform, this will include: 1) whether the contract in electronic form is enforceable under the governing law of the contract; and 2) whether the contract in electronic form will be admissible as evidence in the relevant courts.

Civil procedures in Japan apply the principle of freedom of a judge's personal conviction (*jiyuu shinshou shugi*). This means a judge, in order to render a judgement, may base a finding on his or her free evaluation of submitted evidence[29]. Based on this fundamental principle, anything can be submitted as evidence to a court, and a relevant judge will then evaluate its value.

The Code of Civil Procedures sets out rules for the examination of evidence[30], and it is currently uncertain how electronic data that is not readable (without some type of conversion) is treated. However, evidence in electronic form is accepted for civil procedures in Japan. In accordance with the principle of freedom of a judge's personal conviction, all evidence must be submitted in a format that allows the judge to read/recognize the contents. Therefore, consideration should be given to how records on a DLT platform could be submitted to a court.

On June 15, 2018, the Japanese government introduced a new strategy for IT technologies to be introduced into civil procedures[31], and for documentary evidence to capable of being examined by browsing the relevant digital data on a relevant case management system[32]. Although this new system has not yet been implemented, it is nonetheless clear that evidence in electronic form is admissible.

[29] Article 247 of the Code of Civil Procedures

[30] This is in accordance with the five categories of evidence – namely, examination of a witness, examination of a party to a case (eg, plaintiff or defendant), expert testimony, documentary evidence and inspection of evidence

[31] https://www.kantei.go.jp/jp/singi/keizaisaisei/saiban/index.html

[32] Ministry of Justice, *Minji Saiban Tetsuzuki no IT-ka ni tsuite* [Re Enhancement of IT technologies to Civil Procedures] (https://www.kantei.go.jp/jp/singi/keizaisaisei/saiban/index.html) 1

Disputes Involving the Parties to the Uncollateralized DLT Transaction

The ISDA Master Agreement provides an explicit choice of governing law by the contracting parties, and the implementation and execution of the uncollateralized DLT transaction on Corda is premised on the existence of this agreement.

In addition, the Corda platform is premised on the legal identity of the parties being tied to the nodes transacting on a trading platform. Based on the explanation of the applicable private international law rules, there is no reason to think that a court in Japan would not give effect to the parties' express choice of law under the ISDA Master Agreement if any disagreement arose between them over a transaction.

In Japan, a court would uphold the parties' agreement on the choice of Japanese law in accordance with Article 7 of the Conflict of Laws Act. Given it is unlikely that any consumers are included as parties to the uncollateralized DLT transaction, there are no grounds to apply Article 11 of the Conflict of Laws Act (which sets out certain special rules for B-to-C contracts). Whether the agreement is counter to public policy or good morals in Japan would not be an issue, as Article 42 of the Conflict of Laws Act applies only to cases involving the application of foreign law (ie, when Japanese law has been chosen, there are no grounds to apply the provision of Article 42).

Subject to the above-mentioned assumption on Article 11 of the Conflict of Laws Act, parties to a derivatives transaction may choose a governing law freely – eg, a derivatives transaction may be executed and implemented on a CorDapp, which may be governed by the law of a jurisdiction to which both parties have no connection[33]. Even if a non-Japanese law is chosen, there is no particular reason for the parties' choice of law to be disregarded based on Article 42 of the Conflict of Laws Act (although the application of Article 42 requires a case-by-case analysis).

There could be a greater degree of uncertainty over the governing law of a transaction on a permissionless distributed ledger, especially if the transaction is not backed by an off-ledger agreement and the parties are domiciled in different jurisdictions. Depending on how the system is set up, there may even be doubts about the real-world identities of the participants. Given these issues, it seems unlikely this type of DLT model would be suitable for the trading of derivatives on a cross-border basis without greater certainty among all participants over which governing law should apply.

Disputes Involving Parties to the Uncollateralized DLT Transaction and the Platform Provider

Another category of disputes might arise from the functioning of the platform used for the derivatives transaction. Corda, like other DLT platforms, sits at the 'bottom of the stack'. This means application builders utilize Corda to build their CorDapps, with such CorDapps commonly referred to as sitting at the 'top of the stack'. It is important to note that parties using CorDapps interface with platform providers operating CorDapps at the 'top of the stack'.

It is conceivable that, due to software programming bugs or hardware issues, corrupted or otherwise incorrect data might be fed into smart contracts, or smart contracts might not function as envisaged. This would then give rise to a potential dispute between one or both of the parties to a derivatives transaction that have suffered a loss when using the CorDapp.

[33] In a situation where a Japanese entity and a US entity enter into an ISDA Master Agreement, entities have often chosen English law as the law of a neutral third country for both parties

To participate in a Corda-enabled derivatives transaction using a CorDapp, the parties would have entered into written agreements with the platform provider containing express choices of governing law. There would generally be two types of agreements governing use of the CorDapp:

- A platform-level licensing agreement between each party and the platform provider operating the trading platform; and
- A rule book that governs the transactions.

As with the relationship between the parties to the derivatives transaction, there seems no reason under current private international law rules why a court in Japan would reject this express choice of law in the absence of any countervailing mandatory legal rule, public policy or good-moral reason.

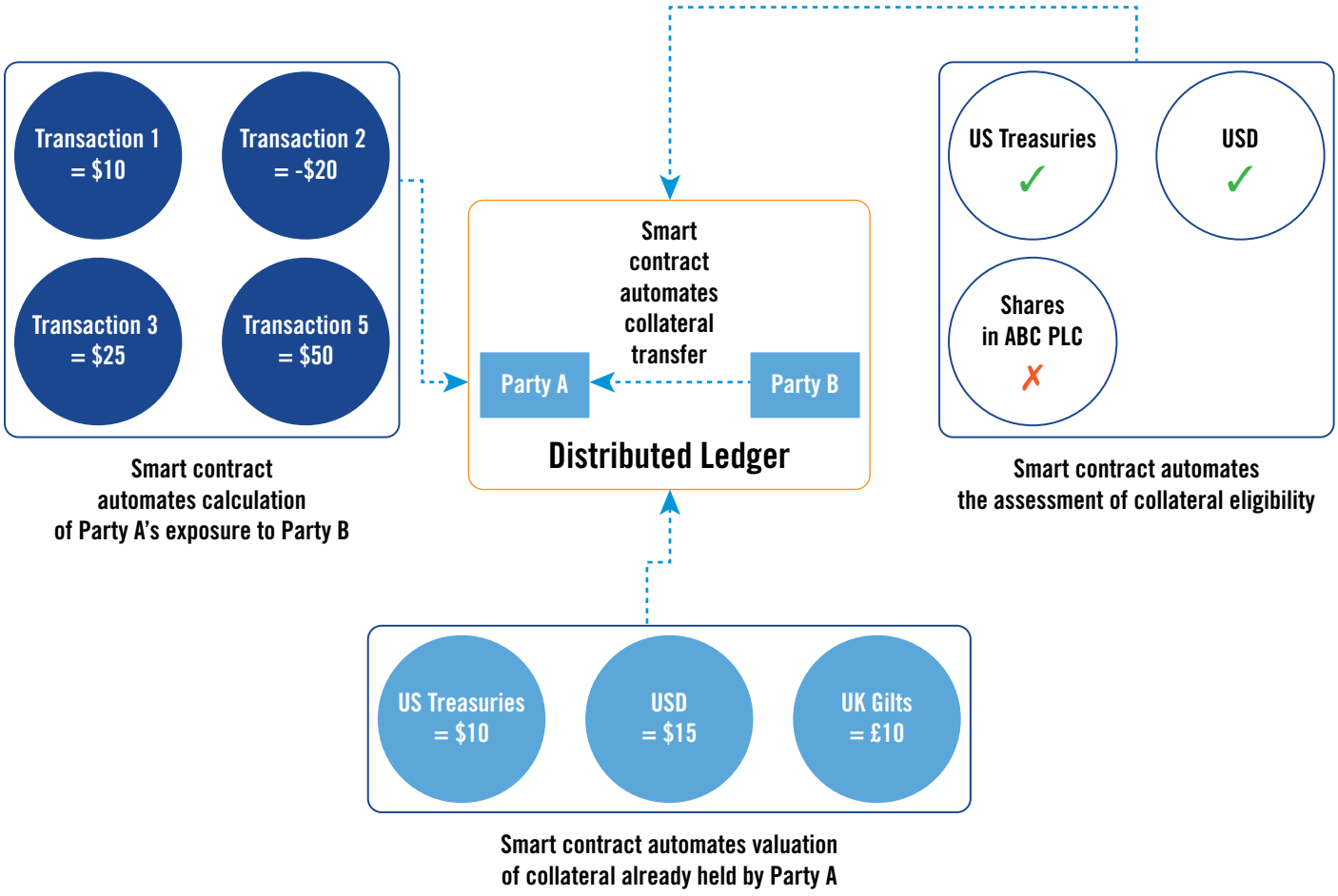
COLLATERALIZED DLT TRANSACTION

Smart Derivatives Contracts – Collateral

In September 2019, ISDA published *Legal Guidelines for Smart Derivatives Contracts: Collateral*[34]. These guidelines provide an overview of current legal standards that exist within the collateral management process, and how they can be more effectively applied to assist technology developers, collateral operations, risk management and other key stakeholders in developing technology solutions that are consistent with applicable legal and regulatory standards that govern and regulate collateral relationships and processes.

These guidelines are agnostic about the types of technology and solutions that may ultimately be used. However, they do provide an illustration of a potential smart derivatives contract construct using DLT that is designed to automate certain aspects of the collateral management process.

Figure 2



[34] ISDA *Legal Guidelines for Smart Derivatives Contracts: Collateral*, https://www.isda.org/a/VTkTE/Legal-Guidelines-for-Smart-Derivatives-Contracts-Collateral.pdf

In considering the use of DLT in this context, it is useful to recall the distinction made in the ISDA *Legal Guidelines for Smart Derivatives Contracts: Introduction*[35] between different types of potential DLT implementation that could support smart derivatives contracts. In the context of collateral management, a system designed as a 'light chain' would not house any collateral, whereas a system designed as a 'heavy chain' would be able to support the key operational mechanisms of the ISDA collateral documentation. Figure 2 illustrates how, under a heavy chain implementation, the platform could house tokenized collateral assets that are native to a DLT platform and could support the transfer of such assets between the parties.

The guidelines note the importance of understanding the precise nature and location of these digitized assets, as well as any security or ownership rights attached to them. The paper also observes that achieving legal certainty in this area will be vital in assessing the efficacy of any system that supports the key operational mechanisms of the collateral management process.

This paper will explore the relevant private international law issues relating to the situs of digital assets by reference to a collateralized DLT transaction.

The Collateralized DLT Transaction

Implementation of the collateralised DLT transaction on Corda would be achieved in much the same way as the uncollateralized DLT transaction[36].

In this example, the parties to the collateralized DLT transaction will have negotiated the terms of their relationship under the ISDA Master Agreement and documented the economic terms relating to the interest rate swap under a transaction confirmation. The parties would also have entered into a form of credit support annex (CSA) published by ISDA[37].

In addition, the parties would enter into a platform agreement with the platform provider as the operator of the CorDapp.

As with the uncollateralized DLT transaction, the parties would become 'nodes' on Corda and would use a CorDapp to execute the transaction and any collateral obligation arising from it.

In this example, the CSA would be a state object in addition to the ISDA Master Agreement and transaction confirmation. A separate Corda contract would be required, setting out the various rules governing the CSA state object. For example:

> "Eligible collateral must be [a specified asset]."

The structure, set-up and execution of the collateralized DLT transaction would happen in much the same way as for the uncollateralized DLT transaction, except it is likely that collateral settlement would take place on a much more frequent basis.

[35] Above, n 7

[36] See Uncollateralized DLT Transaction section

[37] Discussion of the different types of ISDA collateral documentation can be found in the ISDA *Legal Guidelines for Smart Derivatives Contracts: Collateral* paper, https://www.isda.org/a/VTkTE/Legal-Guidelines-for-Smart-Derivatives-Contracts-Collateral.pdf

It is also possible that the collateral assets could be documented as tokens[38] – whether as the representation of a real-world collateral asset that is held and transferred off-ledger, or some form of digital asset that could possess value in and of itself and could therefore be used as collateral without any corresponding real-world asset. Tokens possessing intrinsic value could be used to settle transactions without the need for any off-ledger fund transfers. This paper will explore potential issues arising under each of these scenarios.

Private International Law Rules Relating to Property Interests in Securities

Japanese conflict-of-laws rules generally take a traditional *lex situs* position. According to Article 13, paragraph 1 of the Conflict of Laws Act, the law governing ownership and other proprietary rights/real rights (*bukken*), including security interest in movable personal property and immovable real property, is the law of the jurisdiction where the property is located. Therefore, if the relevant asset is (or is construed as) a movable asset (*dousan*), the law governing the disposal and perfection of the relevant proprietary rights/real right (*bukken*), and the creation and perfection of security interest, is the law of the jurisdiction where the asset is located[39].

However, under Article 11 of the Conflict of Laws Act, it is uncertain whether this rule applies to dematerialized securities, including those managed under the Act on Book-Entry Transfer of Company Bonds, Shares, Etc (*shasai, kabushiki tou no furikae ni kansuru houritsu*)[40].

Under Article 23 of the Conflict of Laws Act, the effects of the assignment of a claim against an obligor and third parties will be governed by the law applicable to the claim. Although a case-by-case analysis would be required to determine whether the securities fall within a 'claim', it would be reasonable and practicable to follow the actual settlement practices applied to the relevant securities.

There is no provision in the Conflict of Laws Act directly dealing with which law governs a security interest created over an asset that is not a movable or immovable asset but an intangible claim. However, there is a Supreme Court judgment rendered in 1978[41] that is recognized as providing an authoritative interpretation of law on this issue. The 1978 Supreme Court precedent indicates that the creation and perfection of a pledge as a statutory security interest over a claim (not being a tangible object) is to be governed by the law of the pledged claim. The law of a claim is the governing law of the contract giving rise to the claim. If a certain law is specified as the governing law in the contract, then it is the law governing the claim. However, if nothing is specified as the governing law in the contract, then the law of the place where the debtor is located would be deemed the governing law of the claim in most cases.

[38] A 'token' is a type of state object that is classified as a digital asset and that has an owner

[39] If global notes are issued with respect to the relevant securities and the parties are not aware of the location of the relevant global notes, there would be the issue of how to determine the location from the viewpoint of the *lex situs* approach. However, to our knowledge, there is no judicial precedent in Japan on this issue

[40] Act No. 75 of 2001, as amended

[41] Judgment of the Supreme Court of Japan, April 20, 1978, *Minshu* 32-3-616

With respect to dematerialized securities (including book-entry securities), there is no judicial precedent on whether they are movable assets or intangible claims. If dematerialized securities (including book-entry securities) are characterized as intangible claims, then the governing law would be the governing law of the securities[42] or the law of incorporation of an issuer[43] (as the case may be). In contrast, if the dematerialized securities (including book-entry securities) are construed as movable property due to a specific reason(s), then it is not certain what conclusion would be made by a court in Japan. It is possible that the location of the relevant central securities depository is the location of the securities, and Article 13 of the Conflict of Laws Act may apply accordingly.

Application of Private International Law Rules to the Collateralized DLT Transaction

Where Tokens Merely Record Real-world Assets

Under the most straightforward implementation of the collateralized DLT transaction, the real world collateral assets (such as cash or securities) are not replaced with on-ledger tokens or digital assets that possess intrinsic value. Rather, the tokens merely record the various forms of collateral provided and exchanged.

If a dispute arose over the entitlement of a party to securities used as collateral, this would therefore be decided by the governing law or location of the securities, depending on the nature and characteristics of the securities. From a Japanese law perspective, there is uncertainty on this issue. However, this is the same as collateralized derivatives transactions executed and implemented outside a DLT platform.

Where Tokens Possess Intrinsic Value

A more complex implementation of the collateralized DLT transaction could involve the replacement of the real-world collateral assets with a form of token or digital asset that possesses intrinsic value (such as a cryptocurrency).

In this scenario, it is necessary to first determine the characteristics of a relevant token from the perspective of Japanese conflict-of-laws rules.

- If the token is characterized as a claim against a particular debtor, then it is necessary to determine its governing law.

- In contrast, if the token is not a claim against a particular debtor and does not represent any assets/rights in the real world, then the existing conflict-of-laws rules do not clearly cover such a scenario. Further examination would be required, as this token could not be recognized as movable personal property[44] for which the Japanese conflict-of-laws rules provide the rule on the application of laws.

[42] In the case where there is a governing law clause in the relevant terms (such as bonds and notes)

[43] In the case where no express governing law is provided (eg, shares). Keisuke Takeshita, *Chushaku Kokusai Shihou Dai 1 Kan* [Private International Law Annotated, Vol. 1] 385 (Yoshiaki Sakurada & Masato Dogauchi eds., 2011)

[44] Characterization of digital tokens under Japanese civil law requires a case-by-case analysis per each token type. With respect to cryptocurrencies, there are various arguments on their legal characteristics. See *Kasou Tsuuka no Shihou jou no Ichizuke ni kansuru Ronten Seiri* [Discussion on Status of Virtual Currency under Private Law] 3-11 (Tokyo: Financial Law Board (FLB), 2019) (http://www.flb.gr.jp/jdoc/publication55-j.pdf) (see also summary translation of the FLB paper :http://www.flb.gr.jp/epage/edoc/publication49-e.pdf), and Akira Kamo, *Kasou Tsuuka no Shihou jou no Houteki Seishitsu* – Bitcoin no Program Code to *sono Houteki Hyouka* [Status of Virtual Currency under Private Law – Bitcoin's program code and its legal analysis] 13-34 (2019) (https://www.zenginkyo.or.jp/fileadmin/res/abstract/affiliate/kinpo/kinpo2016_1_2.pdf).
However, "[u]nder the Civil Code of Japan, only "tangible assets" (*yutaibutsu*) are eligible to be the object of ownership rights, and it has been the common view that the exclusive right to use information requires a statutory basis (for example, intellectual property law)". See supra FLB paper 4. Therefore, it would be difficult to recognize cryptocurrencies, which are digital data, as 'movable personal property'

As discussed earlier, the Japanese conflict-of-laws rules take the *lex situs* approach with respect to movable personal property and immovable real property, but it is not certain whether this approach could be extended and applied by a court in Japan to digital assets with some intrinsic value – ie, it is not clear whether a court would try to find the location of the digital assets.

In this respect, Professor Morishita has indicated the following approach under the Japanese conflict-of-laws rules based on the legal discussion made in a Financial Markets Law Committee paper[45,46]:

- If participants to a relevant DLT platform have chosen the governing law, it shall follow this law (elective situs) unless it would not be appropriate to choose the governing law completely freely and should be subject to certain restrictions from a supervisory perspective[47].

- Even in the case where the governing law has not been chosen, when an administrator plays a certain central role, such as holding certain authorities on a relevant DLT system, it would appropriate to use the place of this administrator as a connecting factor[48].

- If these two cases do not apply, the laws of: (i) the place where a person holding the relevant tokens is located (which would be the same as the place of a defendant in many cases); or (ii) the place where a wallet service provider is located (if the person holds the relevant tokens through the service provider) could be an alternative[49].

In contrast, there is an argument that no law can be recognized as the governing law for legal title to a particular cryptoasset (ie, Bitcoin) under Japanese conflict-of-laws rules[50].

Although it is not certain what approach would be taken by a court in Japan when an actual case is filed, it would try to find the relevant governing law in some way to resolve the case.

If the relevant governing law is determined in accordance with a certain approach, a situation where the value of the collateral is represented by tokens on the distributed ledger would not be very different to that based on real world assets such as cash and securities. Despite the novelty of tokens, the principal issue would be whether a court order requiring one party to compensate another could be obtained and whether it would be enforced. So long as the judgment debtor compensates the judgment creditor in accordance with the court order, the judgment creditor is unlikely to be concerned about whether the compensation takes the form of tokens on a distributed ledger, or cash or other traditional assets.

If an order is obtained, then a question could arise over the enforceability of a foreign judgment by the court having jurisdiction over the judgment debtor if it is located in another jurisdiction. In determining the answer to this question, there seems to be little conceptual difference between a scenario where the parties have used tokens, cash or securities when exchanging collateral assets.

[45] *Supra* note 6

[46] Professor Morishita was a member of the working group for the FMLC paper. *Id*. at 2

[47] Morishita, supra note 28, at 77-78

[48] *Id*. at 78

[49] *Id*. at 78-79

[50] Nishimura & Asahi, Finance *Hou Taizen (Zenntei Ban)* [Corpus Juris Finance (Completely Revised Edition)] 848-51 (2017). Please note that it is not certain if this argument applies to tokens created by any other DLT systems

There may also be means of addressing this issue on the platform itself. For example, each transaction on Corda is validated by a notary to ensure uniqueness in order to address the 'double spend' concern.

Given the flexibility that R3 provides on contractual arrangements on Corda business networks, it could be possible to create an agreement between the participants that empowers the notary to implement a court order obtained from a court of the contractually agreed jurisdiction on Corda. This would potentially avoid the need for the relevant judgment to be enforced against the judgment debtor in its home courts.

If a court order states that a participant is not the proper party to hold tokens, the notary (as a result of the platform agreement) could be empowered to deny the transferability of such tokens. This ensures that these tokens are no longer fungible. Further, the issuer of the tokens, through a contractual arrangement, could then issue replacement tokens to the proper party that should be the owner of these tokens.

Assuming the agreement between the parties contains express choices regarding the law of the platform and the court where any disputes will be litigated, a judgment creditor faced with an uncooperative judgment debtor would simply serve the court order on the notary to invalidate the tokens of the debtor and require the issuer to produce new tokens to satisfy the order. A distributed ledger structured in this way would reduce the difficulties that may arise when a judgment creditor tries to enforce a foreign judgment before a court.

It could also provide an alternative to issues posed by permissionless platforms where the identities of the parties and their physical locations are not easily ascertainable, which clearly creates difficulties for traditional court-based enforcement of judgments.

CONCLUSION AND RECOMMENDATIONS

This paper has considered a number of private international law aspects of derivatives contracts governed by the laws of Japan and involving DLT.

Considering the most straightforward implementations of the DLT-based transaction examples set out in this paper, it is unlikely that either implementation would result in a Japanese court disapplying an express choice of law, whether in the ISDA Master Agreement or any agreement between the parties and a platform provider.

This is consistent with the position in England and Wales, France, Ireland, New York and Singapore[51]. ISDA has published additional papers that consider these issues from the perspective of these jurisdictions[52].

In each of these jurisdictions, there may be additional conflict-of-laws issues arising from a potential lack of legal certainty around the *situs* of tokens that are used to effect payments or exchanges of collateral on a DLT platform. These issues are more likely to arise where a public and permissionless DLT system establishes an entirely disintermediated form of securities holding systems or trading platforms.

These challenges could be overcome by allowing all parties to agree that all on-ledger transactions or collateral arrangements taking place on a DLT platform are subject to a uniform choice of law. This common law of the platform could then also be used to determine the *situs* of any tokens that are native to that DLT system.

Adopting this approach will require national governments, judiciaries, regulators and international standard-setting bodies to work on adapting or developing global legal standards aimed at ensuring the safe, transparent and consistent regulation of DLT-based financial transactions. It will be important, for example, to consider the appropriate mechanism for ensuring the system administrator or provider, the issuer of any tokenized assets and the parties to any transactions that take place on the DLT platform continue to be subject to sufficient legal and regulatory oversight.

Achieving greater legal certainty across these areas will provide an important foundation for the development and implementation of innovative new technology within the derivatives industry, creating a more robust, efficient and cost-effective financial markets infrastructure.

[51] ISDA has published forms of ISDA Master Agreement and associated collateral documentation governed by the laws of England and Wales, New York, Ireland, France and Japan

[52] These papers can be accessed here: https://www.isda.org/2019/10/16/isda-smart-contracts/

ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has more than 925 member institutions from 75 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org. Follow us on Twitter, LinkedIn, Facebook and YouTube.

ABOUT LINKLATERS

As one of the leading international law firms, Linklaters supports clients in achieving their objectives by solving some of their most complex and important legal issues. Our expertise and resources help clients to pursue opportunities and manage risk around the world.

ABOUT R3

R3 is an enterprise software firm that is pioneering digital industry transformation. We deliver purpose-built distributed ledger technology for all types of businesses in all industries.

Developed in collaboration with our ecosystem, our enterprise blockchain platform Corda is transforming entire industries by digitalizing the processes and systems that firms rely on to connect and transact with each other. Our blockchain ecosystem is the largest in the world with more than 350 institutions deploying and building on Corda Enterprise and Corda. Our customers and partners have access to a network of leading systems integrators, cloud providers, technology firms, software vendors, corporates and banks.

To ensure our customers derive the greatest value from their investment, we provide services and support to shorten time-to-market, as well as guidance on implementation, integration and building ecosystems based on a blockchain platform. Learn more at www.r3.com and www.corda.net.

ISDA® is a registered trademark of the International Swaps and Derivatives Association, Inc.