



International Swaps and Derivatives Association, Inc.

**Guidance for memorandum of law examining the validity
and enforceability of collateral arrangements using the ISDA
model provisions for tokenized collateral**

*published on 21 May 2024
by the International Swaps and Derivatives Association, Inc.*

Introduction

In December 2023, the International Swaps and Derivatives Association, Inc. (“**ISDA**”) published model provisions (the “**Model Provisions**”).

The Model Provisions are intended for use by parties transferring tokenized securities (“**DLT Securities**”) or ‘stablecoins’ (“**DLT Cash**”, and together with DLT Securities, “**Tokenized Collateral**”)¹ that utilize distributed ledger technology (“**DLT**”) as collateral pursuant to a 2016 Credit Support Annex for Variation Margin (“**VM CSA**”).²

The purpose of this guidance note is to inform how counsel may approach a legal opinion on the enforceability of collateral arrangements entered into under certain ISDA collateral documentation where the relevant collateral arrangement comprises one or more forms of Tokenized Collateral. Accordingly, this guidance note sets forth (i) a basic taxonomy of common Tokenization Structures (as defined below) and (ii) a non-exhaustive list of key issues to consider when analyzing the enforceability of collateral arrangements involving Tokenized Collateral.

This guidance note is intentionally high level and jurisdiction-agnostic. For that reason, the Tokenization Structures may not map directly into recognized existing legal categories in various jurisdictions. Nevertheless, they represent observed structures in the market and reflect important differences, including the key operational characteristics of each structure to the extent they are relevant to the transfer and settlement of Tokenized Collateral.

Tokenization Structures

“Tokenization” broadly refers to a technological and legal process of attaching enforceable rights to entries in a DLT-based system. In this context and for the purposes of this guidance note, a “token” is represented by data recorded in such a system.

Tokenization is not a single, uniform mechanism. Technologically, there are many variants of DLT-based systems that may give rise to tokens. These technological differences may create significantly different legal outcomes. In some cases, differences in functionality which may appear limited from a user experience perspective will give rise to important legal distinctions. Similarly, from a legal perspective, different legal techniques or structures may be deployed in order to ensure that the relevant tokenholder is entitled to enforce the corresponding legal rights.

In this guidance note we distinguish between the following structures for Tokenized Collateral: the Bearer Structure, Registered Structure and Claims Structure (each as defined below and each a “**Tokenization Structure**”). This is not an exhaustive list and we recognize that additional structures may be possible (including hybrid and intermediated structures). However, by

¹ The Model Provisions broadly define each of “DLT Securities” and “DLT Cash” and leave it to the relevant counterparties to determine whether specific collateral constitutes DLT Securities or DLT Cash, provided in each case that they are transferable by entry in a distributed ledger. Please note that “DLT Securities” and “DLT Cash” are defined terms in the Model Provisions. The use of these terms should not be taken to mean that the parties are necessarily characterizing the relevant assets as securities or cash for any other purpose, regulatory or otherwise.

² Digital assets native to public blockchains (such as Bitcoin and Ether) and Central Bank Digital currencies were not considered during the preparation of the Model Provisions.

distinguishing between Tokenization Structures in this way our aim is to create a basic taxonomy to facilitate more nuanced legal analysis that engages with the complexity and variety of Tokenization Structures and enables meaningful comparison across jurisdictions. Diagrams representing each of the three Tokenization Structures discussed in this guidance note are set forth in the Appendix hereto.

In understanding the different Tokenization Structures, the traditional securities markets provide a useful point of comparison. Securities have traditionally been issued in various forms, depending on the jurisdiction, including (i) as bearer instruments where the security is represented in physical paper form and rights under it are transferred by transferring possession of the physical instrument,³ (ii) as registered instruments where ownership of the security is recorded on a register maintained by or on behalf of the issuer (that may or may not⁴ be evidenced by a physical certificate) and where rights under it are transferred upon application to the registrar and a recording in the register, and (iii) as dematerialized instruments where rights and obligations are represented in account-entry records maintained by a third-party, such as a central securities depository (i.e., not for or on behalf of the issuer) and transferred via book entry.

Similar structures exist for Tokenized Collateral. However, in this context, proprietary rights and interests may be created, evidenced, and transferred via a blockchain or other system that utilizes DLT. For example, Tokenized Collateral may comprise proprietary rights and interests (including contractual claims against a person that are held and transferred as proprietary rights) that are: (i) linked to Digital Objects of Property⁵ (the “**Bearer Structure**”)⁶; (ii) represented by tokens recorded to a register maintained on a DLT-based system controlled by (or on behalf of) the issuer (the “**Registered Structure**”), or (iii) represented by tokens recorded to a register maintained on a DLT-based system controlled by a third-party operator (the “**Claims Structure**”). All three Tokenization Structures are capable of being considered “dematerialized”, in the sense that no physical certificate will typically be issued.

Whilst there is potential for fluidity and overlap, the Tokenization Structures can be generally differentiated by reference to the following features:

- **Control of token:** who retains control over the token, including authority to update/rectify the DLT record?
- **Transfer mechanism:** is settlement effected through updates to token balances on the DLT record or via the transfer of the token itself?

³ Bearer securities (as well as registered securities) are now typically immobilized and held by a custodian, with investors deriving rights against the custodian through a chain of intermediaries.

⁴ Depending on the relevant jurisdiction and/or constitutive documents of the issuer.

⁵ In this guidance note, we use the term ‘Digital Object of Property’ to refer to tokens that are themselves recognised as objects of property rights independent of any legal rights they might otherwise represent. In certain jurisdictions this may refer to tokens exclusively issued and transferred via public, permissionless DLT-based systems. Such tokens can be distinguished from a broader class of digital tokens which merely evidence or represent rights in a novel digital form, on a DLT record, without themselves attracting property rights.

⁶ This is referred to as the Bearer Structure by analogy to bearer securities or other bearer instruments where the rights embedded in the instrument are combined through a legal fiction with something that comprises a separate item of property such that transfer of possession of the instrument transfers the embedded rights (in the case of bearer instruments, the paper on which the rights are printed, and in the case of Digital Objects of Property, the token).

- **Property status of token:** is the token itself an intangible asset or mere data/evidence of rights?

Structure	Description	Control of tokens	Transfer mechanism	Property status of token
Bearer Structure	Rights determined by reference to exclusive control of tokens	Token holder has exclusive control	Transfer of control of token	Intangible asset in its own right
Registered Structure	Rights determined by reference to a DLT-based system controlled by the issuer or a third-party acting on its behalf	Registrar has powers to update/rectify entries	Updating token records	Typically mere data/evidence of rights ⁷
Claims Structure	Rights determined by reference to a DLT-based system controlled by a third-party acting in its principal capacity	Third-party operator has powers to update/rectify entries	Updating token records	Typically mere data/evidence of rights ⁸

Bearer Structure

Under the Bearer Structure, Tokenized Collateral comprises rights and interests linked to Digital Objects of Property. These Digital Objects of Property are legally recognized as distinct “things” independent of any legal rights that they might otherwise represent. That being the case, the availability of the Bearer Structure is dependent on the applicable law recognizing that Digital Objects of Property may be objects of property rights.⁹

⁷ It is possible that such tokens may be deemed expressly in statute to be objects of proprietary rights despite the relevant Tokenization Structure otherwise exhibiting the features of the Registered Structure.

⁸ It is possible that such tokens may be deemed expressly in statute to be objects of proprietary rights despite the relevant Tokenization Structure otherwise exhibiting the features of the Claims Structure.

⁹ We note for example that, in many common law jurisdictions, there is some authority to the effect that crypto-assets are capable of being the object of property rights, including a number of preliminary judgments. See, for example: *AA v Persons Unknown* [2019] EWHC 3556 (Comm), [2020] 4 WLR 35; *Ion Sciences v Persons Unknown and Others* (unreported) December 21, 2020 (Commercial Court); *Marian Toma, David True v Ciaran Murray* [2020] EWHC 2295 (Ch); *DPP v Briedis* [2021] EWHC 3155 (Admin); *Danisz v Persons Unknown* [2022] EWHC 280 (QB); *Tulip Trading Ltd v Bitcoin Association for BSV* [2022] EWHC 667 (Ch) (Judgment date: March 25, 2022); *HDR Global Trading Ltd v Shulev* [2022] EWHC 1685 (Comm); *Nicholls v Little* [2022] EWHC 2344 (QB); *D’Aloia v Person Unknown & Others* [2022] EWHC 1723 (Ch); *Ruscoe v Cryptopia* [2020] NZHC 728, [2020] 22 ITELR 925 (New Zealand High Court); and *Quoine pte v B2C2* [2020] SGCA(I) 02 (Singapore Court of Appeal).

Enforceable rights to underlying assets may be linked to a Digital Object of Property such that these rights accompany legal title to that Digital Object of Property. Transfers of Tokenized Collateral under the Bearer Structure may, therefore, be effected by conveying practical control and/or ownership of the related Digital Object of Property (which may be evidenced by control of the private-public key pair necessary to transfer the Digital Object of Property within the relevant DLT-based system).¹⁰

Where control or ownership of the Digital Object of Property depends on factual control of a private-public key pair, it is generally expected that the person lawfully in control of the private-public key pair under a properly structured tokenization arrangement should be entitled to the enforceable rights to the underlying assets. Because transfers of rights to the underlying assets are effected by transferring lawful control of the Digital Object of Property, it is important that the transfer mechanism for the Digital Object of Property must also be effective to transfer the rights to the underlying assets. It will be important for counsel to consider whether their jurisdiction would recognize that the transfer mechanism for the Digital Object of Property will be effective to transfer the rights to the underlying assets.

In the event of mistaken or unlawful transfer (such as in the case of a hack or theft), a person rightfully entitled to a token under the Bearer Structure (and, therefore, the related rights to the underlying assets) may be generally required to seek the reversal by the current holder of the tokens (which may not be forthcoming). There would in general be no recourse to a central operator or registrar for Bearer Structures, as opposed to the Registered Structure or Claims Structure.

In the context of DLT Securities, Digital Objects of Property will typically represent a direct right of the holder against the securities issuer. DLT Securities that operate without a registrar or central operator often function like traditional bearer securities where rights against the issuer pass with the ‘physical’ bearer instrument. Similar to traditional bearer securities, such DLT Securities may be immobilized with a custodian with investors acquiring and trading rights against that custodian (which may be proprietary or contractual depending on the terms of the custody arrangement).

In the context of DLT Cash, Digital Objects of Property will generally represent a right against the stablecoin issuer. This entitlement may comprise a mere contractual claim against the issuer of the token or a proprietary interest/statutory preference in underlying funds (depending on the terms of the arrangement between issuer and customer). The nature of the customer’s rights against an issuer will ultimately determine the nature of its claim against that entity in any insolvency proceedings.

Registered Structure

Under the Registered Structure, Tokenized Collateral comprises proprietary rights or interests represented by tokens recorded to a register maintained on a DLT-based system controlled by (or on behalf of) the issuer. In contrast to tokens under the Bearer Structure where there is no registrar

¹⁰ Transactions in Digital Objects of Property are generally dependent on public key cryptography. Digital Objects of Property are recorded to an address that is typically a hash of a public key which corresponds cryptographically to a unique private key. That private key is required to sign/authenticate any transfer of Digital Objects of Property recorded to the corresponding public key address.

or central operator, tokens under the Registered Structure merely serve as evidence of rights and are generally not intangible assets in their own right.¹¹ Registered Structure tokens are ultimately subject to the rights and the ability of the registrar – often through smart contract functionality – to modify (including rectifying) the ledger if necessary or appropriate.

Transfers of Tokenized Collateral are generally effected by updating token records through a smart contract that is deployed by or on behalf of the registrar on the relevant DLT-based system. Each transfer may take place (i) through instructions to the registrar, who then updates, or causes to be updated, the relevant entries, or (ii) by way of direct instruction by the participants which is validated and processed by the DLT-based system (if the registrar has set the criteria for validation and retains overriding powers to intervene and/or rectify the entries as appropriate).

In the event of mistaken or unlawful transfer, a person rightfully entitled to a token (and related rights) under the Registered Structure would generally have recourse to the registrar who ultimately retains overriding legal and practical powers of control over the entries in the DLT-based system (generally through smart contract functionality), including to rectify any errors.

In the context of DLT Securities, entitlements to the securities are typically recorded on chain to a public key address which is associated with a specific security holder in the registrar's off-chain records.

In the context of DLT Cash, the DLT-based system is generally maintained by a commercial bank or other regulated financial institution and used to record debt claims against that entity. Again, entitlements to the cash are typically recorded on chain to a public key address which is associated with a specific person entitled to the cash in the registrar's off-chain records.

Claims Structure

The Claims Structure is very similar to the Registered Structure. Under both structures (on the basis of our assumption that the tokens are not Digital Objects of Property), tokens are generally not intangible assets in their own right but are mere evidence of rights.¹² Further, both structures give the registrar or third-party operator (as applicable) overriding legal and practical powers in respect of the DLT-based system. However, there are two key differences between the two structures.

First, as opposed to the Registered Structure, where the registrar's role is often specifically defined in legislation, under the Claims Structure the parties to the arrangement recreate a similar effect contractually or through other structuring techniques (such as agency or other arrangements) that may operate (if permitted) outside any legislative regime. Tokens under the Claims Structure can be used by the operator of a system (such as a securities settlement system) to record entitlements

¹¹ However, as noted above, it is possible that such tokens may nevertheless be deemed distinct intangible assets under the laws of your jurisdiction.

¹² However, as noted above, it is possible that such tokens may nevertheless be deemed distinct intangible assets under the laws of your jurisdiction.

to assets that are not, strictly, registered assets (such as debt claims, like bonds or cash in an account).

Second, the operator of the DLT-based system under the Claims Structure is usually a third party, who is neither the issuer nor acting for or on the issuer's behalf; whereas the registrar under the Registered Structure is usually the issuer of the token or someone appointed by the issuer. The third-party operator may act as principal (instead of agent of the issuer) in the DLT-based system under the Claims Structure.

Key Issues

Set forth below are a number of key issues which counsel may consider in their analysis in an opinion. These are not intended to be exhaustive. Rather, they are issues we expect to arise across jurisdictions when analyzing the enforceability of collateral arrangements involving Tokenized Collateral. We expect counsel to exercise reasoned judgment in identifying and investigating these or any additional issues that could impact the enforceability of collateral arrangements involving Tokenized Collateral in their jurisdiction.

Counsel should consider these issues under the fact patterns presented in the relevant instruction letter, which typically include the following:

- The location of the Collateral Provider/Taker is in their jurisdiction and the location of the Collateral is in their jurisdiction.
- The location of the Collateral Provider/Taker is in their jurisdiction and the location of the Collateral is outside of their jurisdiction.
- The location of the Collateral Provider/Taker is outside of their jurisdiction and the location of the Collateral is in their jurisdiction.

When analyzing each of the foregoing fact patterns, it may also be necessary for counsel to consider the law expressed to govern the Tokenized Collateral.

Applicable Law and Characterization

For each Tokenization Structure, counsel may find it helpful to consider the following issues related to determining the applicable law with regard to Tokenized Collateral:

- Do the Tokenization Structures impact the legal or regulatory characterization of the Tokenized Collateral in a way that would impact the analysis you are asked to undertake? In certain cases (for example, under the Registered Structure or the Claims Structure), you may be able to conclude that the Tokenization Structure is neutral from this perspective, as compared with comparable collateral provided in traditional (i.e. non-tokenized) form.
- What is the proprietary status of the Tokenized Collateral in your jurisdiction?

- Does your jurisdiction recognize Digital Objects of Property? In particular, does your jurisdiction recognize Digital Objects of Property as assets that can form part of a collateral arrangement and/or be the object of property rights (such as a security interest)?
- What would be needed under the law of your jurisdiction to establish the governing law applicable to a claim to or represented by the Tokenized Collateral?
- Whether private international law rules in your jurisdiction based on the “location” of the Tokenized Collateral or other relevant categorization can be applied to determine which law will govern the proprietary effect of a transfer of the Tokenized Collateral or a grant of security over the Tokenized Collateral.
 - If not, (i) are there any specific features of the relevant Tokenization Structure that might complicate or prevent such rules from being applied and (ii) is there any additional information that is necessary for you to make such determination?

Enforceability of Transfer of the Tokenized Collateral or Grant of Security over the Tokenized Collateral

If the private international law rules of your jurisdiction determine that your jurisdiction’s laws may govern the proprietary effect of a transfer of the Tokenized Collateral or a grant of security over the Tokenized Collateral, counsel may find it helpful to consider the following:

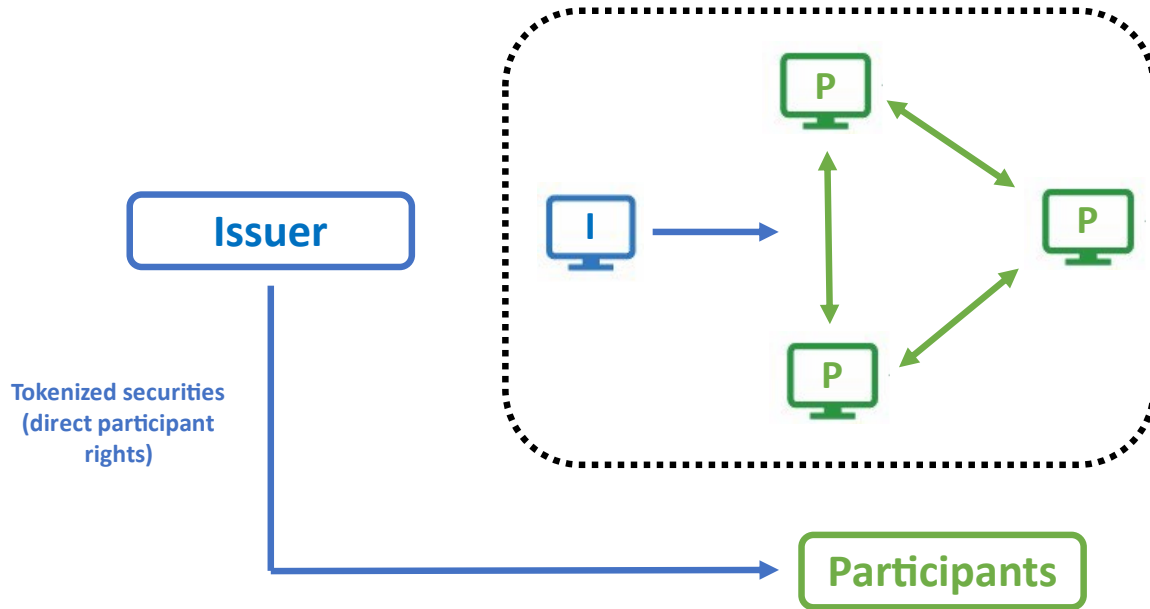
- In which circumstances would the private international law rules of your jurisdiction determine that your jurisdiction’s laws govern the proprietary effect of a transfer of the Tokenized Collateral or a grant of security over the Tokenized Collateral?
- In which circumstances would the private international law rules of your jurisdiction determine that the laws of another jurisdiction would govern the proprietary effect of a transfer of the Tokenized Collateral or a grant of security over the Tokenized Collateral?
- Bearing in mind the ways in which different forms of Tokenized Collateral may be transferred (see analysis above), would transferring the Tokenized Collateral in the relevant manner described for each Tokenization Structure be recognized in your jurisdiction as sufficient to transfer all of the transferor’s rights relating to the relevant Tokenized Collateral to the transferee and would any formalities apply in your jurisdiction to the relevant type(s) of transfer?
- What steps must be taken to perfect a grant of security interest in your jurisdiction over the Tokenized Collateral under each Tokenization Structure?

Appendix

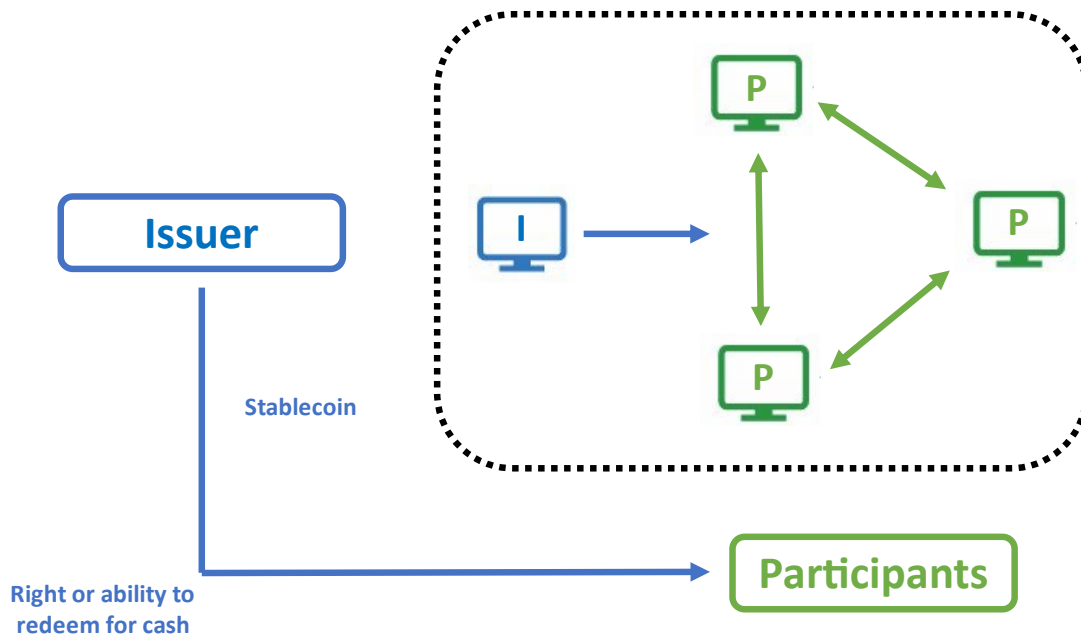
Tokenization Structure Diagrams

Bearer Structure

(a) DLT Securities

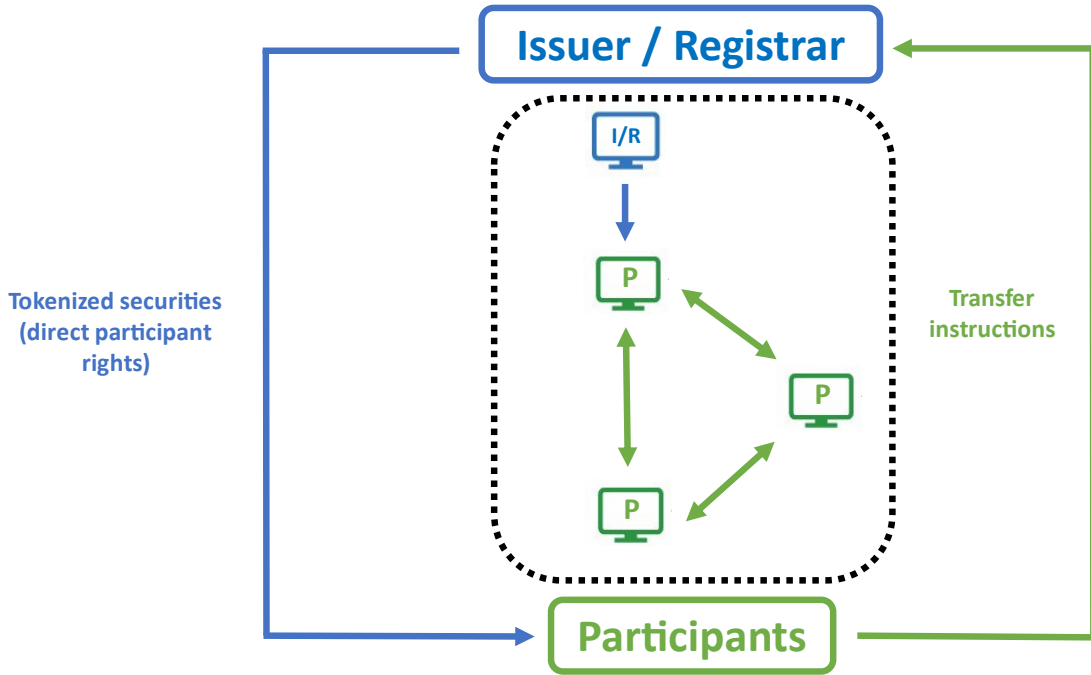


(b) DLT Cash

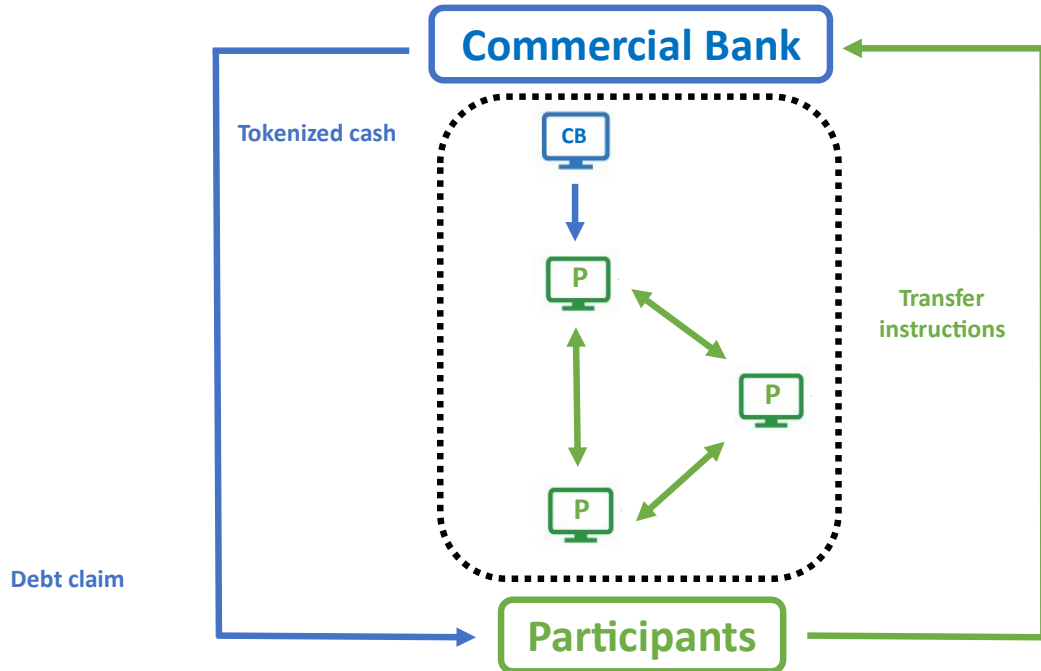


Registered Structure

(a) DLT Securities

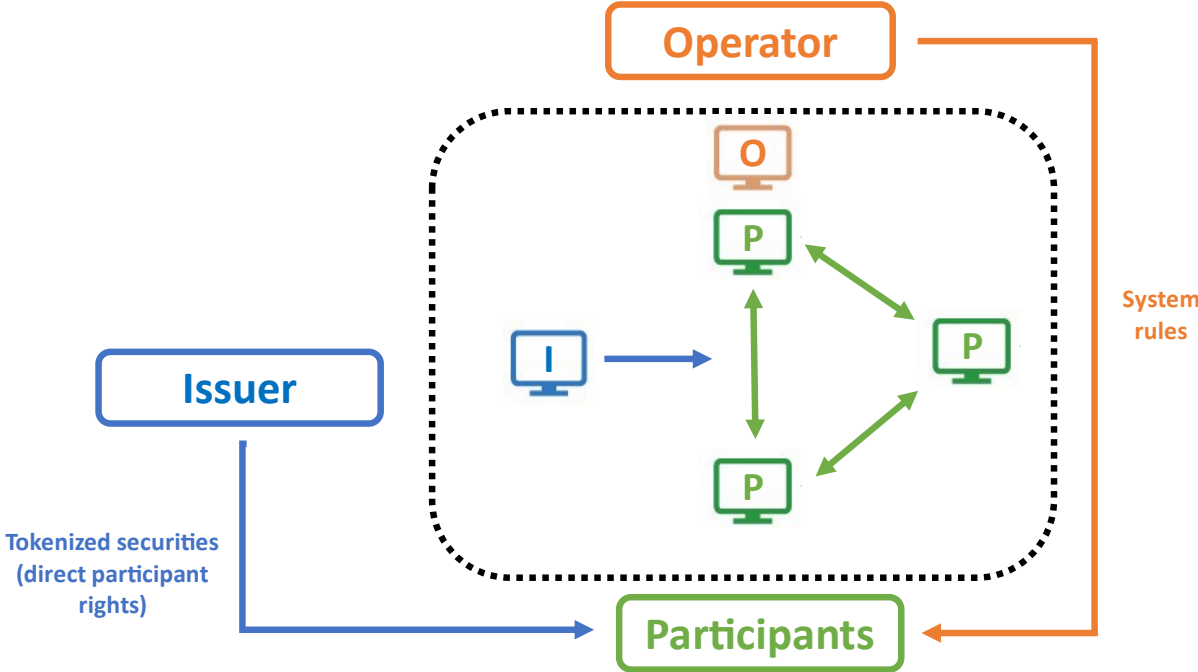


(b) DLT Cash



Claims Structure

(a) DLT Securities



(b) DLT Cash

