
Assessing Tokenized Money Market Funds as Eligible Collateral Under the ISDA CSA

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1. EXECUTIVE SUMMARY

Distributed ledger technology (DLT) and digital assets have matured from their early stages to solutions capable of addressing longstanding inefficiencies in collateral management. Tokenized money market funds (TMMFs) represent a particularly promising area for the application of this technology, combining the liquidity, stability and regulatory familiarity of traditional money market funds (MMFs) with the programmability and operational efficiency of digital assets. These features have driven substantial interest in the use of shares in TMMFs as collateral for financial market transactions, and notably derivatives.

The purpose of this paper is to further facilitate the potential use of TMMFs in collateral arrangements by: (i) raising awareness of the particular issues that may need to be considered when taking or posting shares in TMMFs as collateral (depending on the structure of those TMMFs); (ii) highlighting which of those issues could potentially be dealt with through standardization, including potential amendments to, or supplements of, standard-form ISDA documentation; and (iii) otherwise outlining practical approaches that market participants may use to address party-specific considerations arising from the particular operational or legal features of tokenized assets.

This whitepaper seeks to identify some of these challenges and support the market in the adoption of TMMFs as collateral by assessing the use of TMMFs under key ISDA collateral documents

The paper aims to encourage discussion with, and elicit feedback from, market participants with respect to the areas of ISDA's collateral documentation that may be amenable to standardization in future to better accommodate shares in TMMFs as collateral, as well as feedback on the appropriate timeline for implementing any standardization amendments to the ISDA collateral documentation.

While shares in traditional MMFs may be used as collateral today, this typically involves several steps: (1) redemption of shares or units in an MMF; (2) receipt by the collateral provider of cash proceeds from the redemption; (3) the collateral provider posting the cash proceeds to the collateral receiver as collateral; and (4) the collateral receiver then investing the cash proceeds in an MMF. If that collateral has to be returned, the shares or units in an MMF must be redeemed again, with the cash proceeds returned and then reinvested

in an MMF by the original collateral provider. TMMFs would simplify this and facilitate direct posting of shares in an MMF as collateral. For this to occur safely and efficiently at scale, legal, operational and technological advancements must be implemented, including standardizing industry documentation for collateral arrangements to accommodate this new collateral asset.

Given the novelty of TMMFs and the lack of uniform tokenization structures currently in the market, counterparties seeking to use TMMFs in their collateral arrangements may encounter novel challenges in assessing the appropriateness of using industry standardized documentation to document these arrangements.

This whitepaper seeks to identify some of these challenges and support the market in the adoption of TMMFs as collateral by assessing the use of TMMFs under key ISDA collateral documents, including the ISDA 2016 Credit Support Annex for Variation Margin (VM) (Title Transfer – English Law) (VM CSA (English law)) and the ISDA 2016 Credit Support Annex for Variation Margin (VM) (Security Interest – New York Law) (VM CSA (New York law)). Many of the issues described in this whitepaper will not be specific to the English and New York law VM CSAs and will likely also be relevant to other standard-form documentation and related collateral arrangements, including with regard to initial margin. The paper provides illustrative examples of scenarios that may arise when using the standard collateral documentation referenced in this

section to take shares in TMMFs as collateral (depending on the structure of those TMMFs). The paper does not comment on the commercial appetite for using TMMFs as collateral, the consistency of doing so with applicable regulatory requirements or the enforceability or legal certainty of the various tokenization structures seen in the market with respect to TMMF products in any jurisdiction.

This work builds on ISDA's ongoing commitment to support innovation in financial markets, while maintaining the legal certainty and risk management discipline that underpin safe, efficient markets. This paper is intended to facilitate market participants' journey to the adoption of DLT-based settlement infrastructure, with automated on-chain collateral movement executed by smart contracts and supported by standardized documentation. It is not intended to be the final statement on standardized documentation for TMMFs, nor to outline a definitive approach towards standardization. Rather, this paper highlights some of the relevant considerations that may arise for parties using shares in TMMFs as collateral, and discusses potential avenues to address those issues in the future. ISDA invites feedback on the issues discussed in this paper.

2. INTRODUCTION

2.1 Background and Purpose

2.1.1 Evolution of Collateral Management in the Derivatives Markets and the Emergence of Tokenized Assets

Market participants are increasingly focused on developing and implementing technology solutions within collateral management to deliver greater efficiencies and cost savings, following a period of significant change to collateral management processes and infrastructure, largely driven by new regulatory requirements. There is an opportunity to harness DLT and related innovative technologies to provide scalable, cost-efficient and more integrated collateral solutions. It is becoming increasingly clear that these technologies have an important role to play within a highly digitized and automated collateral management ecosystem.

There is an opportunity to harness DLT and related innovative technologies to provide scalable, cost-efficient and more integrated collateral solutions

Market participants are now focused on implementing DLT-based systems that yield direct benefits that include real-time settlement, lower transaction and maintenance costs and greater automation within the trade lifecycle. As the broader financial industry seeks to take advantage of these opportunities, the development of a robust derivatives market will be crucial to facilitating price discovery, increasing liquidity and allowing market participants to hedge risks that may arise from both

projected and realized price fluctuations. The corresponding emergence of contractual standards and guidelines will be equally crucial in supporting the market throughout the transition period.

ISDA and its members have devoted considerable effort to analyzing how novel technologies such as DLT and smart contracts can be integrated within its contractual framework. Based on those efforts, ISDA considers TMMFs to be a particularly promising area of application of DLT and smart contract technology. Importantly, there is also growing confidence in the market that tokenization may be a particularly useful mechanism to enhance the ability to use MMFs as collateral in non-centrally cleared derivatives trades, as well as repurchase transactions, securities lending transactions and other related transactions.

2.1.2 ISDA's Contributions to the Evolution of Collateral Management and the Development and Use of Tokenized Collateral

ISDA has published a variety of letters to US, UK and EU regulators advocating for the development and standardization of the use of MMFs as viable eligible collateral (initial margin) on a cross-border basis, and to expand the types of MMFs that can be used as eligible collateral¹.

Alongside these efforts, ISDA has commissioned and published a range of papers that explore opportunities for technology and standardization and consider the legal and regulatory issues associated with distributed ledger and smart contract technology, proposing practical and constructive measures to deploy new technology in an effective manner².

¹For example, see: Letter from Joint Trade Associations to US Regulators, August 2019, www.isda.org/2019/09/27/joint-trade-association-letter-on-cash-and-money-market-funds-as-initial-margin/ and Letter from Joint Trade Associations to EU Policy Makers, August 2019, www.isda.org/a/TUVTE/ISDA-Letter-to-EU-policy-makers-Money-Market-Funds-9.30.19.pdf in relation to posting cash and money market funds (MMFs) for initial margin; and Letter from ISDA to Financial Conduct Authority (FCA), March 2024, www.isda.org/a/7usgE/ISDA-Response-to-FCA-MMF-consultation-030824.pdf in response to the FCA's consultation paper 23/28 on updating the regime for money market funds. In the US, the Commodity Futures Trading Commission has since approved a final rule amending margin requirements for non-cleared swaps that, among other things, expands the types of MMFs qualifying as eligible initial margin collateral and adopts specific haircut percentages for money market and similar funds, www.govinfo.gov/content/pkg/FR-2026-07-17/pdf/2026-14509.pdf

ISDA has also published a *Legal Guidelines for Smart Derivatives Contracts* series from 2019, which outlines the core provisions of ISDA documentation that should be maintained when new technology solutions, such as smart contracts, are applied to derivatives trading³.

In addition, ISDA has published contractual standards for digital asset derivatives, which consider the valuation of digital assets and analyze how digital assets interact with the existing ISDA documentation architecture. This includes the ISDA Digital Asset Derivatives Definitions in January 2023, which create an unambiguous contractual framework for digital asset derivatives under the umbrella of the ISDA Master Agreement, reducing credit and market risk by setting clear provisions for execution and settlement⁴.

This has allowed ISDA to establish the foundations for the use of tokenized collateral within its framework, with the publication of the Tokenized Collateral Model Provisions for the VM CSA in December 2023 (both English and New York law editions), which recommend amendments for provisions of the ISDA credit support documentation for variation margin to accommodate the use of tokenized securities and/or stablecoins as collateral. ISDA has also published the *Guidance Note on Tokenized Collateral* (ISDA guidance note), which considers the enforceability of collateral arrangements under certain ISDA collateral documentation (as set out in section 2.1.5) where the eligible collateral includes tokenized collateral⁵.

ISDA is analyzing other collateral tokenization initiatives, including Depository Trust & Clearing Corporation's (DTCC) Tokenization Services⁶, to understand how collateral tokenization initiatives such as these can best be accommodated by the current ISDA documentation architecture and, more specifically, what updates, if any, may be necessary or desirable to ISDA's credit support documentation and industry legal opinions.

2.1.3 Objectives of the Whitepaper

In light of the emergence of tokenized assets and the current market focus on TMMFs and their use as collateral, this paper analyzes the suitability of the ISDA collateral documentation (as defined in section 2.1.5) in facilitating the posting of shares in different structures of TMMFs. It provides a review of the key provisions of the applicable ISDA collateral documentation that may be relevant for market participants to consider in the context of tokenized collateral, and aims to either clarify how those provisions may already accommodate the posting of shares in TMMFs as collateral or outline options for potential amendments or expansions to those provisions to better accommodate shares in TMMFs as collateral.

² The Future of Derivatives Processing and Market Infrastructure, ISDA, September 2016, www.isda.org/a/UEKDE/infrastructure-white-paper.pdf; Smart Contracts and Distributed Ledger – A Legal Perspective, August 2017, www.isda.org/a/6EKDE/smart-contracts-and-distributed-ledger-a-legal-perspective.pdf&lang=en&lang=en; Derivatives Contracts - From Concept to Construction ISDA, October 2018, www.isda.org/a/6EKDE/smart-contracts-and-distributed-ledger-a-legal-perspective.pdf&lang=en&lang=en; Smart Derivatives Contracts - The ISDA Master Agreement and the Automation of Payments and Deliveries, Christopher D. Clack and Ciarán McGonagle, April 2019, <https://arxiv.org/pdf/1904.01461>; Private International Law Aspects of Smart Derivatives Contracts Utilizing Distributed Ledger Technology, ISDA, January 2020, www.isda.org/a/4RJTE/Private-International-Law-Aspects-of-Smart-Derivatives-Contracts-Utilizing-DLT.pdf

³ Legal Guidelines for Smart Derivatives Contracts, ISDA, www.isda.org/2019/10/16/isda-smart-contracts/#legal-guidelines

⁴ Contractual Standard for Digital Assets Derivatives, December 2021, ISDA, www.isda.org/a/QVtgE/Contractual-Standards-for-Digital-Asset-Derivatives.pdf; ISDA Launches Standard Definitions for Digital Asset Derivatives, January 2023, www.isda.org/2023/01/26/isda-launches-standard-definitions-for-digital-asset-derivatives/

⁵ Tokenized Collateral Model Provisions for the VM CSA, December 2023, ISDA, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/; Guidance Note on Tokenized Collateral, May 2024, ISDA, www.isda.org/a/ox1gE/ISDA-Tokenized-Collateral-Guidance-Note-052124.pdf

⁶ Available at: www.dtcc.com/digital-assets/tokenization

The intention is to provide representative examples of the issues that may arise for parties posting shares in TMMFs as collateral under ISDA collateral documentation, depending on the structure of those TMMFs, and elicit feedback from market participants on the potential avenues to address those issues. ISDA hopes to provide market participants with sufficient comfort that ISDA collateral documentation provides an effective legal basis for the posting of shares in TMMFs as collateral, while highlighting areas where clarifications or targeted amendments could be considered.

ISDA welcomes feedback from market participants on the issues discussed in this paper – specifically, on:

- i) The areas highlighted in section 4 (*Key Provisions of the ISDA Collateral Documentation*), where standardized amendments or clarifications have been identified that could be made to ISDA collateral documentation to accommodate the posting of shares in TMMFs as collateral more efficiently;
- ii) The preferred format for any amendments to ISDA collateral documentation (for example, a standardized supplement to the ISDA collateral documentation for a TMMF structured in a specific way to implement the relevant amendments, or another format); and
- iii) The appropriate timeline for the implementation of any standardized amendments to the ISDA collateral documentation.

ISDA hopes to provide market participants with sufficient comfort that ISDA collateral documentation provides an effective legal basis for the posting of shares in TMMFs as collateral, while highlighting areas where clarifications or targeted amendments could be considered

2.1.4 Scope and limitations

This paper focuses on tokenized collateral in the form of shares in TMMFs as a representative example of the types of tokenized assets that may be used as collateral under ISDA collateral documentation. It does not consider other forms of tokenized collateral in the market.

The paper also analyzes the provisions of ISDA collateral documentation to consider their suitability for the posting of shares in TMMFs as collateral and includes analysis relating to achieving effective transfer depending on the legal structure of such collateral. It then considers and outlines certain areas where standardized amendments or clarifications could be made to ISDA collateral documentation to more efficiently accommodate the posting of shares in TMMFs as collateral.

The paper does not set out specific language for amending the ISDA collateral documentation. Rather, the intention is to generate discussion and elicit market feedback on the potential clarifications and approaches discussed. As a result, legal issues relevant to the use of shares in TMMFs as collateral under ISDA collateral documentation are analyzed⁷, but this does not constitute legal advice and should not be relied upon as such. Firms should seek their own independent legal advice in relation to their specific circumstances. Issues under any jurisdictions outside the UK and the US are not considered.

⁷ The analysis and recommendations are not based on any particular form of tokenized money market fund (TMMF) but are based on ISDA's general knowledge of market practice in this area

2.1.5 Documents Covered

This paper covers collateral documentation for the transfer of variation margin and initial margin. As representative examples, it examines:

- i) The ISDA 2016 Credit Support Annex for Variation Margin (VM) (Title Transfer – English Law); and
- ii) The ISDA 2016 Credit Support Annex for Variation Margin (VM) (Security Interest – New York Law) (together, the ISDA collateral documentation).

3. OVERVIEW OF TOKENIZED MONEY MARKET FUNDS

3.1 Definition and Characteristics

3.1.1 What Constitutes a TMMF?

Tokenization broadly refers to a technological and legal process of attaching enforceable rights to entries in a DLT-based system. A TMMF in this paper is therefore an MMF with units or shares that are represented as digital tokens on a DLT-based system, with ownership recorded and transfers effected through that system. More detail on the available transfer mechanics is included in section 3.2. Other than their legal structure, TMMFs generally have the same economic profile as MMFs (for example, they are generally yield-bearing).

3.1.2 Benefits of TMMFs Versus MMFs

In this section, the benefits of using shares in TMMFs as collateral versus MMFs are considered.

TMMFs may offer near-instantaneous settlement (within minutes or seconds). Because mobilization occurs on digital platforms that are not confined to traditional market hours, time zone restrictions may be mitigated

i) Settlement Timing

Settlement of MMF transactions (including through a process of redemption by the transferor and subscription by the transferee) is confined to traditional market hours with specific closing times. Settlement can often take one or two days from submission of a redemption or transfer instruction, and parties in different time zones may be exposed to overnight risk. By contrast, TMMFs may offer near-instantaneous settlement (within minutes or seconds). Because mobilization occurs on digital platforms that are not confined to traditional market hours, time zone restrictions may be mitigated. Faster settlement may also significantly reduce intermediation costs of settlement agents and post-trade services and greatly reduce counterparty credit and market risks.

ii) Liquidity Management

While shares in traditional MMFs may be used as collateral today, this typically occurs in the context of an overnight cash sweep or comparable arrangements. This involves the collateral provider sending cash to the custodian of the collateral receiver and the custodian performing an overnight sweep into the appropriate MMF, purchasing shares of the MMF that will constitute the collateral provided to the collateral receiver. If this collateral is required to be returned, the shares in the MMFs must be redeemed, with the cash then returned to the provider. This limits the ability to rehypothecate or substitute collateral on an intraday basis. It also exposes the collateral

provider to intraday credit risk, including if the custodian enters into insolvency proceedings after cash is posted to it but before it conducts the overnight sweep.

By contrast, shares in TMMFs may be capable of being posted directly as collateral in their own right. The near-instantaneous settlement of TMMFs enables shares in TMMFs in principle to be rehypothecated or used for substitutions intraday to reduce collateral-related funding costs. It also reduces credit risk exposure to the custodian.

iii) Operational Ease

Shares in MMFs cannot be easily transferred as collateral and their use as collateral is contingent on various factors, including the specific structure of the MMF. However, shares in TMMFs can be transferred directly (and instantly) from one counterparty to another without the need for redemption and reinvestment, streamlining the collateral transfer process and reducing operational risk.

iv) Recordkeeping Transparency

DLT structures should enable more immediate (and potentially more targeted) information sharing (or limitations on sharing where appropriate – for example, in light of confidentiality issues). When MMFs are used as collateral – for example, in the context of a cash sweep – the MMF transfer agent may only have visibility over the identity of the custodian, not the collateral provider or the collateral receiver, and this could pose a significant operational burden following an event of a default of a counterparty. TMMFs allow direct posting of MMF shares as collateral, improving transparency as all parties (transfer agent, custodian, collateral provider and collateral receiver) are reflected on the DLT record. Certain DLT structures therefore provide more flexibility in how records are shared and/or made transparent directly rather than requiring updates of siloed databases and subsequent reconciliation through messaging between institutions.

v) Yield Generation

For MMFs, yield is calculated once daily. By contrast, some TMMFs calculate yield on an intraday basis, which can improve investment performance possibilities and potentially reduce the effective cost of collateral posting arrangements, improving the efficiency of the related hedging and risk management transactions.

3.2 Classification of TMMFs

There are many ways to distinguish and categorize different TMMF structures. This paper adopts a general framework for analyzing the legal nature of tokenized assets, as set out in the ISDA guidance note. It also references the TMMF models described in a July 2026 paper by ISDA and Global Digital Finance (GDF), *Unlocking Capital with US Tokenized Money Market Funds for Collateral Mobility*⁸, and points to how those models may be categorized under the ISDA guidance note framework, assuming certain structural features.

Tokenization is not a single, uniform mechanism. There are many variants of DLT-based systems that may give rise to tokens. These technological differences, and variations in how the same technological systems are used, may create divergent legal outcomes. In some cases, differences in functionality that may appear limited

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⁸Unlocking Capital with US Tokenized Money Market Funds for Collateral Mobility, July 2026, ISDA and Global Digital Finance, www.gdf.io/wp-content/uploads/2026/07/3.8.26_Unlocking-Capital-with-U.S-Tokenized-Money-Market-Funds-for-Collateral-Mobility.pdf

from a user experience perspective will give rise to important legal distinctions. Similarly, different legal techniques or structures may be deployed to ensure the relevant token holder is entitled to enforce the corresponding legal rights.

The ISDA guidance note classifies tokenized assets into three basic categories: bearer structures, registered structures and claims structures. These categories apply neutrally across asset classes and are distinguished based on the legal outcome of the tokenization – in particular, the legal mechanism for transferring the asset. The terms bearer structure, registered structure, claims structure and digital object of property have the meanings given to them in the ISDA guidance note.

In understanding these different tokenization structures, traditional securities markets provide a useful point of comparison. Securities have typically 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; (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 not 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 or custodian (ie, not for or on behalf of the issuer) and transferred via book entry.

Tokenized assets can be analyzed based on similar classifications, adopting the framework in the ISDA guidance note. For example, tokenized assets used for collateral purposes may comprise rights or interests (including contractual claims against a person that are held and transferred as proprietary rights) that are:

- i) Linked to digital objects of property⁹ (bearer structure);
- ii) Represented by entries in a register, which may be a DLT-based register or a traditional, off-chain register that is in some way maintained by reference to a DLT-based system¹⁰, where the register is maintained and controlled by (or on behalf of) the issuer (registered structure); or
- iii) Represented by entries in a record, which may be a DLT-based record or a traditional, off-chain record that is in some way maintained by reference to a DLT-based system¹¹, where the record is maintained and controlled by a third-party operator or intermediary acting in a principal capacity and not on behalf of the issuer (claims structure).

For the registered and claims structures, if the register is maintained on-chain, a state change in the distributed ledger necessarily updates the register or record, as the distributed ledger is itself the golden source of truth. On the other hand, if the register or record is maintained off-chain, a state change in the distributed ledger will not *in and of itself* update the register or record, so further operational measures will need to be put in place to achieve that outcome.

⁹ The term 'digital object of property' refers to tokens that are recognized as objects of property rights, independent of any legal rights they might otherwise represent. In certain jurisdictions, this may refer to tokens issued and transferred via public, permissionless distributed ledger technology (DLT)-based systems. These tokens can be distinguished from a broader class of digital tokens that merely evidence or represent rights in a novel digital form on a DLT record, without themselves attracting property rights

¹⁰ Such a DLT-based system may or may not give rise to digital objects of property. To fall within the registered structure, such digital objects of property must at all times remain under the control of the issuer or registrar for the purposes of maintaining the register, and not themselves represent an asset that is traded or transferred among investors

¹¹ Such a DLT-based system may or may not give rise to digital objects of property. To fall within the claims structure, such digital objects of property must at all times remain under the control of the relevant recordkeeper for the purposes of maintaining the record, and not themselves represent an asset that is traded or transferred among investors.

In the event of a discrepancy, the off-chain register or record would prevail as the distributed ledger has no legal significance. This is not a legally significant tokenization in a legal sense (ie, a technological and legal process of attaching enforceable rights to entries in a DLT-based system). However, there are currently various models that are described as tokenizations and fall into this category. ISDA has therefore sought to accommodate these models in the categories outlined in the ISDA guidance note by reference to the legal mechanism used to transfer the underlying asset. It is important to note, however, that the distributed ledger will only have legal significance if the register or record is maintained on-chain.

Additionally, the nature of the rights or interests that are linked to a digital object of property or recorded and transferred through the register or record (as applicable) is a distinct variable that is, in some senses, orthogonal to this framework, although there may be some interplay.

All three tokenization structures are capable of being considered ‘dematerialized’, in the sense that no physical certificate will typically be issued. The three structures are intentionally high level and asset-neutral, but draw out important differences relevant to transfer and settlement. The ISDA guidance note framework focuses on the legal outcome of the structure – in particular, the legal mechanism for transfer, as explained in Table 1.

The GDF report identifies three common TMMF structures observed in the market to date:

- i) **Fund Issuer Sponsored – Digital Native (the Digital Native Structure):** The MMF issuer or its transfer agent uses a DLT-based system as the authoritative books and records (ie, the golden source of truth) for the purposes of recording ownership of MMF shares.
- ii) **Fund Issuer Sponsored – Digital Twin (the Digital Twin Structure):** The MMF issuer or its transfer agent maintains off-chain books and records as the authoritative record of ownership of MMF shares and the on-chain token is used to mirror those off-chain books and records.
- iii) **Third-Party Sponsored – Custodial Tokenized Securities (the Custodial Structure):** A bank, broker or other securities intermediary agrees to custody the MMF shares for clients, with its books and records reflecting this custodian arrangement, either maintained on DLT or updated based on DLT. The custodian/intermediary does not act as an agent on behalf of the issuer in the same manner as a transfer agent. This model is indifferent as to how ownership is recorded, whether on- or off-chain.

A high-level overview of the key characteristics of the three structures is set out in Table 1¹². Diagrams representing each of the three tokenization structures from the ISDA guidance note are also included in Appendix 1. For the registered and claims structures, those diagrams assume the register or record is maintained on-chain.

¹² For more detail on the different tokenized collateral structures, refer to Guidance Note on Tokenized Collateral, May 2024, ISDA, www.isda.org/a/ox1gE/ISDA-Tokenized-Collateral-Guidance-Note-052124.pdf

Table 1: Characteristics of Key Tokenization Structures

	Bearer Structure	Registered Structure	Claims Structure
Summary Description	Rights determined by reference to exclusive control of tokens	Rights determined by reference to a register, which may be a DLT-based register or a traditional, off-chain register that is in some way maintained by reference to a DLT-based system, where the register is maintained and controlled by (or on behalf of) the issuer	Rights are determined by reference to a record, which may be a DLT-based record or a traditional, off-chain record that is in some way maintained by reference to a DLT-based system, where such record is maintained and controlled by a third-party operator or intermediary acting in a principal capacity and not on behalf of the issuer
Property status of token	The token is a digital object of property, over which the investor has exclusive control	Tokens are either evidence of rights or interests or, if they are digital objects of property, remain at all times under the control of the issuer or registrar for the purposes of maintaining the register and do not themselves represent the asset that is traded or transferred among investors	Tokens are either evidence of rights or interests or, if they are digital objects of property, remain at all times under the control of the record-keeper and do not themselves represent the asset that is traded or transferred among investors ¹³
Effecting Transfer/Mean of Instructing	Transfer is effected by conveying practical control and/or ownership of the token	Transfer is effected by way of update to a register ¹⁴	Transfer is effected by way of update to the record of entitlements
Control of the Tokens	Investor has exclusive control of the token and exclusive power to effect a change of control in respect of the token	The registrar maintains control over the register at all times – for example, through powers to prevent an update or to rectify or amend the register. The registrar's role may be defined by legislation	The third-party operator or intermediary maintains control over the record at all times – for example, through powers to prevent an update or to rectify or amend the record
Application to Models Described Under the GDF Report	None of the TMMF models described in the GDF report fall within this category, reflecting the fact that this model has not been used widely for TMMFs to date	Both the digital twin and digital native models contemplate a registered structure, where an update to a register (maintained by or on behalf of the issuer) is the legal mechanism through which shares in the TMMF are transferred. Under the digital native model, the register is maintained on-chain, while it is maintained off-chain under the digital twin model. The digital twin model would fall under this structure provided the 'twin' tokens are either not digital objects of property or, if they are, remain at all times under the control of the issuer (or registrar on its behalf) and are not themselves treated as assets that are traded or transferred among the investors. Achieving this outcome requires appropriate legal and operational structuring ¹⁵	The custodial model would fall under the claims structure in circumstances where the books and records of the third-party operator or intermediary evidence entitlements in respect of MMF shares. As with the registered structure, those books and records may be maintained on-chain or off-chain

¹³ For example, a model under which an intermediary is maintaining a record of entitlements in respect of financial assets held in a securities account, where the intermediary's books and records are DLT-based (or maintained through a DLT-based system), would typically fall under the claims structure

¹⁴ & ¹⁵ on next page

4. KEY PROVISIONS OF THE ISDA COLLATERAL DOCUMENTATION

Defined terms used in this section but not otherwise defined have the meanings given to them in the ISDA collateral documentation (as applicable). These include base currency equivalent, credit support balance (VM), credit support eligibility condition (VM), distributions, eligible collateral (VM), eligible credit support (VM), equivalent credit support (VM), equivalent distributions, FX haircut percentage, interest payment (VM), local business day, minimum transfer amount, posted collateral (VM), secured party, transferee, transferor, valuation agent, valuation percentage, valuation time and value. Where text from the ISDA collateral documentation is quoted directly, or a defined term is referred to by name, the term is capitalized as it appears in the ISDA collateral documentation.

4.1 2016 Credit Support Annex for Variation Margin (VM) (Title Transfer – English Law) and 2016 Credit Support Annex for Variation Margin (VM) (Security Interest – New York Law)

4.1.1 Definition and Inconsistency – Paragraph 1(a) VM CSA (English Law) and VM CSA (New York Law)

Paragraph 1(a) of the VM CSA (English law) stipulates that references to ‘transfer’ mean payment in relation to cash and delivery in relation to other assets. This definition does not expressly contemplate the transfer of DLT assets – for example, by entry on a DLT ledger.

To ensure that references to ‘transfer’ readily contemplate the transfer of tokenized collateral in the form of DLT cash and/or DLT securities, amendments could be made to paragraph 1(a), including¹⁶:

- i) References to ‘currency’ and ‘cash’ include DLT cash and amounts thereof (as appropriate), where DLT cash is defined on a case-by-case basis in paragraph 11 (Elections and Variables) of the VM CSA (English law)¹⁷;

¹⁴ An example of this is On-chain US Government Money Fund (BENJI) launched by Franklin Templeton on the public blockchain Stellar, which uses Franklin Templeton’s proprietary in-house blockchain-enabled transfer agency platform (Franklin Templeton On-chain US Government Money Fund – Prospectus, January 3, 2025, <https://file.perfectinfo.com/sec/0001741773-25-000031/306733768/0001741773-25-000031.pdf?userId=311360&costCode=CostCodeAcclid228&prodId=300&documentId=306733768&hitWords=333-233596+AND+811-23471&script=5759b9ace2fd05d0cb9c64b766a09ed3&caption=Franklin+Templeton+Trust%3a+Files+Form+485BPOS>). The transfer agent maintains a proprietary blockchain-integrated ledger that utilizes features of traditional book-entry form and public blockchain networks. Those blockchains store the complete transaction history from the issuance of BENJI shares, which is available to the public. The integrated ledger is the definitive record of legal ownership of the underlying shares. Unlike permissionless tokens, the shares recorded on the integrated ledger are under the unilateral control of the transfer agent. The transfer agent is responsible for maintaining the accuracy of fund share ownership on any blockchain network used by the blockchain-integrated system and has the ability to correct errors and unauthorized transactions in BENJI shares. However, beyond correcting inaccurate or unauthorized entries, the transfer agent cannot unilaterally or arbitrarily amend the ledger without instruction. Franklin Templeton Investor Services, LLC is BENJI’s shareholder servicing agent and acts as the fund’s transfer agent (rather than a third-party intermediary).

¹⁵ An example of this is the Fidelity Treasury Digital Fund (FYOXX), where the fund’s transfer agent maintains the official record of share ownership of the ‘OnChain’ share class in traditional book-entry form (Fidelity Treasury Digital Fund - Prospectus, July 25, 2025, www.sec.gov/Archives/edgar/data/917286/000113322825007437/ftdf-efp16750_497k.htm). Ownership of the OnChain class will also be recorded on a public blockchain, but this is a ‘secondary recording’ mirroring the off-chain books and records, which themselves constitute the official record of ownership. The transfer agent will reconcile the secondary blockchain records with the official books and records on at least a daily basis during business days under normal conditions. Therefore, market participants may choose to refer to or rely on the on-chain record, but it is not officially regarded as the definitive record of ownership.

¹⁶ These potential amendments are based on the Tokenized Collateral Model Provisions for the VM CSA, December 2023, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/

¹⁷ On next page

- ii) References to ‘securities’ include DLT securities, where DLT securities is defined on a case-by-case basis in paragraph 11 (Elections and Variables) of the VM CSA (English law)¹⁸; and
- iii) References to ‘clearance systems’ include systems for the transfer of DLT securities by way of entry in a distributed ledger.

While the VM CSA (New York law) does not contain a similar provision relating to references to ‘transfers’, the clarifications discussed in (i) to (iii) could nonetheless be made to paragraph 1(a) of the VM CSA (New York law).

4.1.2 Transfers, Calculations and Exchanges – Paragraph 3 VM CSA (English Law); Paragraph 12 VM CSA (New York Law)

i) Transfers – Paragraph 3(a) VM CSA (English Law)

Paragraph 3(a) of the VM CSA (English law) sets out how transfers of eligible credit support (VM), equivalent credit support (VM), interest payment (VM) or equivalent distributions are to be made under the VM CSA (English law) in respect of:

- a) Cash;
- b) Certificated securities that cannot or which the parties have agreed will not be delivered by book entry; and
- c) Securities that the parties have agreed will be delivered by book entry.

Cash

Transfers of cash are made by transfer into one or more bank accounts specified by the recipient¹⁹. This definition is not applicable to TMMFs as they cannot be transferred by way of ordinary bank transfer nor held in a bank account.

Certificated Securities Not Delivered by Book Entry

Transfers of certificated securities that cannot, or which the parties have agreed will not, be delivered by book entry will occur “*by delivery in appropriate **physical** form to the recipient or its account accompanied by any duly executed instruments of transfer, transfer tax stamps and any other documents necessary to constitute a legally valid transfer of [...] legal and beneficial title*”²⁰. The term ‘certificated securities’ is generally understood to refer to securities evidenced (or that may on demand be evidenced) by a physical certificate. The definition of transfer here specifically refers to delivery in a ‘physical form’. Therefore, TMMFs would not generally fall within this limb.

¹⁷ The classification of certain assets on DLT as cash or securities could be different between parties or over time. The *Tokenized Collateral Model Provisions for the VM CSA* require the parties to identify whether specific collateral types are treated as DLT cash or DLT securities under ISDA collateral documentation. While this is ultimately a matter for the parties to determine in light of the specifics of the relevant collateral arrangements, this paper assumes parties will generally treat TMMFs as: (i) securities that the parties have agreed will be delivered by book entry; or (ii) falling within DLT securities (on which point – see section 4.1.2). Classifying TMMFs as securities may raise additional operational considerations for parties, particularly in the context of distributions, which are required to be passed through on a daily basis for securities. These considerations are addressed in section 4.1.3

¹⁸ See footnote 16.

¹⁹ VM CSA (English law) paragraph 3(a)(i)

²⁰ VM CSA (English law) paragraph 3(a)(ii)

Securities that will be Delivered by Book Entry

Where the parties have agreed for securities to be delivered by book entry, transfer will be made “by causing the relevant depository institution(s) or other securities intermediaries to make changes to their books and records sufficient to result in a legally effective transfer of the transferring party’s legal and beneficial title to the recipient or its agent”²¹. Parties will need to consider whether tokenized collateral in the form of TMMFs would constitute securities that the parties have agreed will be delivered by book entry by reference to the relevant structure.

If a TMMF is structured within the claims structure or a registered structure and there is an intermediary or custodian interposed within the structure, transfer of the TMMF could be made by causing the intermediary to update its books and records to result in a legally effective transfer of the transferring party’s legal and beneficial title to the recipient or its agent. The existing limb (iii) may therefore be fit for purpose for certain TMMF structures. The drafting of limb (iii) is wide enough to capture scenarios in which transfers are legally effected by updating either an on-chain register or an off-chain register (ie, both digital native and digital twin structures).

For example, the official record of share ownership of the ‘OnChain’ share class in the Fidelity Treasury Digital Fund (FYOXX) is maintained by the fund’s transfer agent in traditional book-entry form. Transfer of the ‘OnChain’ shares can therefore be achieved by causing the transfer agent to update its books and records in a way that is sufficient to result in a legally effective transfer of title. The JPMorgan OnChain Liquidity-Token Money Market Fund (JLTXX) operates in the same way, with the off-chain investor register being the official record of share ownership for the fund, but token balances will also be recorded on-chain and attributed to investors’ blockchain addresses. Investors in JLTXX can use on-chain smart contract technology to submit transaction requests with respect to fund shares, but the transfer will occur when the change in ownership is recorded on the off-chain investor register.

However, limb (iii) of the transfer definition refers to the “depository institution or other securities intermediaries” updating the books and records to effect a legal transfer. This may not apply directly to registered structure TMMFs, where the issuer itself or its transfer agent maintains and updates the register. For these TMMF structures, market participants may consider amendments to the language of limb (iii) to contemplate transfer by way of the issuer or its transfer agent updating the register.

As an alternative, market participants may consider adopting a new limb (iv) to capture TMMF-specific transfer scenarios that do not fall within the existing limb (iii). Limb (iii) and limb (iv) are not proposed as mutually exclusive options. Both options are included here to generate discussion and ISDA welcomes feedback from market participants on these options.

Potential Fourth Limb²²

To further facilitate accommodation of transfers of TMMFs with different legal structures, the addition of a fourth limb in this paragraph could be considered to specifically contemplate the transfer of DLT cash, DLT securities and other property. This could be reflected in the documentation by specifying that the transfer of such assets will be made by causing sufficient changes to the entries in the distributed ledger to result in a legally effective transfer of the relevant right or interest to the recipient or its agent. This additional limb would provide clarity on the means for effecting legal transfer of title in the case of any TMMFs for which a state change in the

²¹ VM CSA (English Law) paragraph 3(a)(iii)

²² This potential amendment is based on the Tokenized Collateral Model Provisions for the VM CSA, December 2023, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/

distributed ledger is sufficient to effect a legal transfer. It will not apply to TMMF structures for which the distributed ledger has no legal significance²³.

Transfer – Paragraph 12, VM CSA (New York Law)

The definition of ‘transfer’ in paragraph 12 of the VM CSA (New York law) contains substantially the same limbs (i)-(iii) as the VM CSA (English law), as well as an additional limb (iv) that specifies that, in the case of other eligible support (VM), transfer has the meaning specified by parties in paragraph 13 on a case-by-case basis.

Similar to the VM CSA (English law), it may be appropriate to add a new limb to the definition of ‘transfer’ in paragraph 12, in the same form as set out in respect of the VM CSA (English law), to clarify how transfers can be legally effected with respect to TMMFs with different legal structures. It may also be appropriate to consider amendments to the language in limb (iii), as discussed in relation to the VM CSA (English law), to accommodate some TMMF structures.

ii) Calculations – Paragraph 3(b) VM CSA (English Law); Paragraph 4(c) VM CSA (New York Law)

Paragraph 3(b) of the VM CSA (English law) and paragraph 4(c) of the VM CSA (New York law) each provide, among other things, the method for calculating the value of eligible credit support (VM). In this case, the valuation agent may use “*values most recently reasonably available for close of business in the relevant market for the relevant Eligible Credit Support (VM) as of the Valuation Time*”, (where the valuation time is specified by parties on a case-by-case basis in paragraph 11 (Elections and Variables) of the VM CSA (English law) and paragraph 13 (Elections and Variables) of the VM CSA (New York law)).

‘Value’ is defined in paragraph 10 (Definitions) of the VM CSA (English law) and paragraph 12 (Definitions) of the VM CSA (New York law):

- a) In the case of cash, as the Base Currency Equivalent of the cash; and
- b) In the case of securities, as the Base Currency Equivalent of the bid price obtained by the Valuation Agent, in each case taking into account the Valuation Percentage specified by the parties and the applicable FX Haircut Percentage.

On the assumption that references to securities will include references to DLT securities (see section 4.1.1), and that TMMFs will be treated as DLT securities, the definition in limb (b) would apply to TMMFs. However, as with traditional securities, counterparties may need to consider the appropriate authoritative source for determining the bid price of a TMMF. In most cases, it is expected that parties will refer to the published net asset value (NAV) of the TMMF as the bid price for this purpose. However, if parties would prefer to rely on an alternative valuation of the market value of the TMMF, further amendments to the definition of ‘Value’ may need to be considered.

Unlike blockchain-native assets, certain TMMFs continue to rely on traditional fund administration, with one NAV calculation per day²⁴. In these cases, existing issues associated with

²³ We recognize that there may be a degree of overlap between the existing limb (iii) relating to securities that the parties have agreed will be delivered by book entry and an additional category contemplating DLT cash, DLT securities and other property transferable by entry in a distributed ledger. As an inherent part of dealing in tokenized collateral in the form of TMMFs, however, it is likely parties will conduct due diligence on the legal structure of the specific TMMF, which will involve positive identification of the mechanism required to transfer such asset, and this will, in turn, inform which limb that asset best falls into for the purposes of determining how to effect legal transfer of the asset

²⁴ For example, the net asset value (NAV) of the Franklin Templeton BENJI token is calculated at 1pm Pacific time or at New York Stock Exchange market close, whichever is earlier (on days the New York Stock Exchange is open)

traditional assets relating to the alignment of NAV calculation timing with the valuation time under the CSA may remain. For example, if the NAV figure becomes available after the valuation time on the day of the trade, parties will need to rely on the most recently available value as of close of business on T-1. This in effect will be the value available in respect of T-2.

However, this issue is not unique to TMMFs or tokenized collateral. In practice, a valuation time may be selected in paragraph 11 (Elections and Variables) in the VM CSA (English law) or paragraph 13 (Elections and Variables) in the VM CSA (New York law) to ensure the timing of publication of the relevant values aligns with the valuation time. As existing market structures progress, more frequent or continuous valuations are expected to become available for TMMFs, which may mitigate this issue.

4.1.3 Definitions – Paragraph 10 VM CSA (English Law); Paragraph 12 VM CSA (New York Law)

i) Distributions

Paragraph 10 of the VM CSA (English law) specifies that ‘Distributions’ with respect to any eligible credit support (VM) comprised in the credit support balance (VM) consisting of securities means all principal, interest and other payments and distributions of cash or other property to which a holder of securities of the same type, nominal value, description and amount as such eligible credit support (VM) would be entitled from time to time.

The definition in paragraph 12 of the VM CSA (New York law) is substantially the same. It provides that ‘Distributions’ with respect to posted collateral (VM) other than cash means all principal, interest and other payments and distributions of cash or other property with respect thereto, regardless of whether the secured party has disposed of that posted collateral (VM). It does not include any item of property acquired by the secured party upon a disposition or liquidation of posted collateral (VM) or, with respect to any posted collateral (VM) in the form of cash, any distributions on that collateral unless otherwise specified in the VM CSA (New York law).

Paragraph 5(c) (Distributions and Interest Amount) of the VM CSA (English law) specifies that *“the Transferee will transfer to the Transferor not later than the Settlement Day following each Distributions Date cash, securities or other property of the same type, nominal value, description and amount as the relevant Distributions [(being Equivalent Distributions)] to the extent that a Delivery Amount (VM) would not be created or increased by the transfer, as calculated by the Valuation Agent (and the date of calculation will be deemed a Valuation Date for this purpose)”*.

Paragraph 6(d)(i) (Distributions, Interest Amount (VM) and Interest Payment (VM)) of the VM CSA (New York law) similarly specifies that *“if the Secured Party receives or is deemed to receive Distributions on a Local Business Day, it will Transfer to the Pledgor not later than the following Local Business Day any Distributions it receives or is deemed to receive to the extent that a Delivery Amount (VM) would not be created or increased by that Transfer, as calculated by the Valuation Agent (and the date of calculation will be deemed to be a Valuation Date for this purpose)”*.

Depending on the way in which the TMMF is structured, there may be distributions or equivalent assets received by the holder of the TMMF (which are specific to the tokenization structure) for which the impact of treating such amounts as distributions may need to be considered.

One such example is an airdrop, which involves the unilateral issuance of a new asset to the holders of an associated asset recorded on a distributed ledger (generally, a public ledger). These new digital assets will most likely be issued by the issuer of the original tokenized asset.

However, there may be some cases in which the new digital assets originate from a third party. Counterparties may consider it inappropriate (or operationally burdensome) to treat these amounts as distributions under the ISDA collateral documentation, which would then require the transferee to pass back these amounts to the transferor on a T+1 basis from the date on which the transferee receives or is deemed to receive the new digital asset. Clarifications to the definition of ‘Distributions’ could therefore be considered, so that distributions for the purposes of eligible credit support (VM) consisting of DLT securities should only include property transferred by or on behalf of the issuer of those DLT securities²⁵.

Furthermore, funds that aim to maintain a stable NAV will generally issue dividends daily to maintain that value. For example, Franklin Templeton’s BENJI fund intends to declare income dividends from its net investment income on each day its NAV is calculated (ie, days on which the New York Stock Exchange is open) and reinvest them daily. The board of directors of Franklin Templeton can also choose to distribute dividends more frequently if deemed necessary or appropriate in its sole discretion²⁶. If a BENJI token was being held as collateral under the VM CSA (English law) or VM CSA (New York law), it may be unduly burdensome to require the transferee to pass back dividends to the transferor daily.

Given this, targeted amendments to the distributions provisions in the VM CSA (English law) and VM CSA (New York law) could be considered. In the context of DLT securities, there is potential for the distributions provisions to be modified to operate in a similar way to the interest payment (VM) provisions in the respective CSAs. In other words, the transferee would be required to transfer distributions to the transferor when specified by the parties under paragraph 11 (Elections and Variables) of the VM CSA (English law) or paragraph 13 (Elections and Variables) of the VM CSA (New York law).

This amendment could avoid a situation where parties are required to pass through distributions daily. As an alternative approach, distributions could be treated as part of the eligible credit support (VM) unless and until such eligible credit support (VM) exceeds the minimum transfer amount, at which time the transferee must transfer any excess to the transferor. This would help to avoid the need for transfers of de minimis amounts between the parties that may otherwise arise. To the extent different TMMFs take varying approaches to the timing or characterization of such distributions, market participants will need to consider whether these targeted amendments work for the TMMF under consideration. ISDA welcomes feedback on these options, as well as any other proposals that may assist parties to navigate distributions scenarios when dealing with tokenized collateral.

ii) Equivalent Credit Support (VM)

Paragraph 10 of the VM CSA (English law) defines ‘Equivalent Credit Support (VM)’ in relation to any eligible credit support (VM) comprised in the credit support balance (VM) as eligible credit support (VM) of the same type, nominal value, description and amount as that eligible credit support (VM).

In the case of eligible credit support (VM) in the form of DLT cash or DLT securities, a question arises as to what assets would be considered as being the ‘same type’ as that eligible credit support (VM).

²⁵ This potential amendment is based on the Tokenized Collateral Model Provisions for the VM CSA, December 2023, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/

²⁶ Franklin Templeton On-chain US Government Money Fund – Prospectus, January 2025, <https://file.perfectinfo.com/sec/0001741773-25-000031/306733768/0001741773-25-000031.pdf?userId=311360&costCode=CostCodeAcclid228&prodId=300&documentId=306733768&hitWor ds=333-233596+AND+811-23471&script=5759b9ace2fd05d0cb9c64b766a09ed3&caption=Franklin+Templeton+Trust%3a+Files+Form+485BPOS>

In respect of traditional securities, it is widely accepted that ‘same type’ generally refers to the equivalent collateral having the same ISIN and legal structure as the eligible credit support (VM). It is likely that a similar logic can be applied to tokenized collateral, although this will ultimately depend on the tokenization structure.

While this provision does not appear to require further standardized amendments to accommodate the posting of shares in TMMFs as collateral, further specificity could be included on a case-by-case basis to document the understanding between the counterparties of which assets they consider to be of the same type for the purposes of their arrangement (for example, by reference to a particular blockchain on which the token is available, a specific smart contract identifier, unique securities token or other equivalent identifier specific to the particular tokenization arrangement).

iii) Local Business Day

The definition of ‘Local Business Day’ in paragraph 10 of the VM CSA (English law) and paragraph 12 of the VM CSA (New York law) each specify the business day convention for the transfer of cash or other property (other than securities) and the transfer of securities (on the basis that the transfer is first to be effected by the acceptance and execution of settlement instructions and, separately, on the basis that the delivery of the securities is to be effected by any other means).

Due to the nature of TMMFs offering near-instantaneous settlement – meaning the transfer of TMMFs is not confined to traditional market hours – it may be appropriate for an additional limb to be added to the definition of ‘Local Business Day’ in the VM CSA (English law) or VM CSA (New York law). This could specify that a local business day for the transfer of DLT cash, DLT securities or any distributions or equivalent distributions in respect of such DLT securities transferable by entry in a distributed ledger under the VM CSA (English law) or VM CSA (New York law) is a day on which both:

Due to the nature of TMMFs offering near-instantaneous settlement – meaning the transfer of TMMFs is not confined to traditional market hours – it may be appropriate for an additional limb to be added to the definition of local business day in the VM CSA (English law) or VM CSA (New York law)

- a) The system(s) for the delivery of such property to the account or address identified by the secured party are open for the acceptance and execution of settlement instructions²⁷; and
- b) Commercial banks are open for business (including dealings in foreign exchange and foreign currency deposits) in the relevant DLT location(s) (which are to be defined by the parties in paragraph 11 (Elections and Variables) of the VM CSA (English law) or paragraph 13 (Elections and Variables) of the VM CSA (New York law))²⁸.

Certain systems described in limb (a) may operate on a 24/7 basis. Limb (b) enables parties to specify those locations in which they are operationally able to accept and execute settlement instructions with respect to DLT securities and DLT cash, distributions and equivalent distributions.

²⁷ By way of example, transactions in certain types of DLT securities and DLT cash may be executed on multiple blockchain networks (for example, it is possible to transact in certain stablecoins on both the Ethereum and Solana networks). The wording in limb (a) is intended to clarify that it is only those systems required to transfer the property to the relevant account or address identified by the secured party that need to be open and operational

²⁸ This potential amendment is based on the Tokenized Collateral Model Provisions for the VM CSA, December 2023, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/

If parties would like transfers to occur on a 24/7 basis, then further amendments to the definition of ‘Local Business Day’ would be required²⁹. In that case, counterparties will also wish to assess whether it is indeed possible for such transfers to be effected on a day where commercial banks are not open for business³⁰.

4.1.4 Elections and Variables – Paragraph 11 VM CSA (English Law); Paragraph 13 VM CSA (New York Law)

i) Elections and Variables

Depending on whether any amendments are made to the VM CSA (English law) or VM CSA (New York law), the following elections will need to be made (as applicable)³¹:

- a) The types of eligible collateral (VM) that will qualify as DLT cash;
- b) The types of eligible collateral (VM) that will qualify as DLT securities; and
- c) If a new limb is added to the definition of ‘Local Business Day’ in paragraph 10 of the VM CSA (English law) and paragraph 12 of the VM CSA (New York law) (as described in paragraph 4.1.3(iii)), the ‘DLT Location’, which means each city, region or country to be specified by the parties.

For limbs (a) and (b), the following section describes the specificity with which parties may want to list certain DLT cash and DLT securities.

For limb (c), the locations in which the counterparties are operationally able to accept and execute settlement instructions for DLT securities and DLT cash should be specified.

ii) Credit Support Eligibility Conditions (VM)

For an item of collateral to qualify as eligible credit support (VM), it will need to satisfy each credit support eligibility condition (VM) that is specified by the parties.

The use of shares in TMMFs as collateral is in early stages of development and therefore the pool of TMMFs in circulation that could be contemplated for use as collateral under the ISDA collateral documentation is limited. With that in mind, the specific assets that are determined as being capable of being transferred as eligible collateral (VM) under the VM CSA (English law) or VM CSA (New York law) may be specified in the elections for DLT cash and/or DLT securities (to be included in paragraph 11 (Elections and Variables) of the VM CSA (English law) and paragraph 13 (Elections and Variables) of the VM CSA (New York law)) on a case-by-case basis following the parties’ individual diligence processes for the onboarding of these assets.

Alternatively, eligibility conditions may be specified as ‘Credit Support Eligibility Conditions (VM)’ in paragraph 11(c)(iv) of the VM CSA (English law) or paragraph 13(c)(iv) of the VM

²⁹ This paper does not consider the impact of transfer of TMMFs on a 24/7 basis on the collateral operations of the ISDA collateral documentation. However, it is expected that this will have a broader impact than the addition of tokenized collateral alone.

³⁰ In addition to the amendments to the definition of ‘Local Business Day’, market participants seeking to take full advantage of the faster settlement capabilities offered by TMMFs and other tokenized collateral may wish to consider further amendments to the timing provisions in the ISDA collateral documentation more broadly.

³¹ These suggestions are based on the Tokenized Collateral Model Provisions for the VM CSA, December 2023, www.isda.org/book/tokenized-collateral-model-provisions-for-vm-csa/

CSA (New York law). These eligibility conditions will be specific to the parties, but the following considerations might be relevant:

a) Permitted blockchain networks and token standards. Parties may have technological, operational resilience or other risk management preferences regarding the networks and token standards they are willing to accept as the infrastructure on which their collateral assets are held.

b) Acceptable TMMF types (for example, government only or prime funds). Parties may have differing risk appetites or internal investment policies that influence which categories of MMFs are acceptable as collateral. Many current TMMFs intend to qualify as Securities and Exchange Commission rule 2a-7 government MMFs, meaning they intend to invest over 99.5% of their assets in US government securities, cash and/or repurchase agreements collateralized fully by government securities or cash³². For any collateral arrangement, the parties will have their own views on the type and quality of asset they are willing to accept as collateral, and these should be specified.

Parties may have differing risk appetites or internal investment policies that influence which categories of MMFs are acceptable as collateral

c) Tokenization structures (see section 3.2). The legal and operational characteristics of a tokenized asset can vary significantly, depending on the tokenization structure. Certain TMMF structures may be specified to ensure certainty when entering into transactions as this will affect how transfers of the collateral are achieved.

d) Acceptable trading venues. Eligible collateral (VM) may be specified to be limited to assets tradeable or redeemable on venues that meet certain standards of regulatory oversight, price transparency or market liquidity.

e) Concentration limits on TMMFs posted as eligible collateral (VM) as a percentage of the credit support balance (VM). Given TMMFs remain a relatively novel asset class, the proportion of the overall credit support balance (VM) that can comprise TMMFs may be capped to manage the concentration of risk within the collateral pool.

f) Eligible issuers. Considerations on the creditworthiness and jurisdiction of the entity issuing or sponsoring a TMMF may be relevant to a party's assessment of the quality and reliability of the collateral, and minimum criteria for acceptable issuers may therefore be specified.

g) Eligible service providers involved in the legal structure underpinning the TMMF. The legal structure of a TMMF may involve a range of third-party service providers, such as custodians, transfer agents, fund administrators or smart contract operators, which could affect operational resilience or enforceability of the collateral arrangement. Minimum standards or a pre-agreed list of acceptable providers or potential concentration limits (eg, for TMMFs relying on particular custodians) may therefore be specified in this regard.

³² For example, JPMorgan JLTXX (JPMorgan OnChain Liquidity-Token Money Market Fund - Prospectus, May 13, 2026, <https://am.jpmorgan.com/JPMorgan/TVT/46655R119/SP?site=JPMorganv3>), Franklin Templeton BENJI (Franklin Templeton On-chain US Government Money Fund - Prospectus, January 3, 2025, <https://file.perfectinfo.com/sec/0001741773-25-000031/306733768/0001741773-25-000031.pdf?userId=311360&costCode=CostCodeAcclid228&prodId=300&documentId=306733768&hitWords=333-233596+AND+811-23471&script=5759b9ace2fd05d0cb9c64b766a09ed3&caption=Franklin+Templeton+Trust%3a+Files+Form+485BPOS>), and Fidelity FYOXX (Fidelity Treasury Digital Fund - Prospectus, July 25, 2025, www.sec.gov/Archives/edgar/data/917286/000113322825007437/ftdf-efp16750_497k.htm) all aim to fall within this category

h) KYC and onboarding requirements. Many MMF issuers require unit holders or shareholders to satisfy know-your-customer (KYC) and onboarding checks before they are eligible to hold shares in the relevant MMF. This may be an important determinant of a TMMF's suitability as collateral between two parties to ISDA collateral documentation, as both the transferor and the transferee (and, where applicable, any custodian holding shares on their behalf) may need to satisfy the relevant fund's eligibility criteria in order to hold units or shares in that TMMF. This issue is not unique to TMMFs or tokenized collateral and may already be under consideration by market participants.

5. OTHER INCREMENTAL CONSIDERATIONS WITH RESPECT TO TMMFs

In addition to the documentation considerations discussed in section 4, market participants posting or receiving TMMFs as collateral will need to think about other legal, regulatory and commercial issues that fall outside the scope of this paper. These include:

Legal considerations, including precisely how TMMFs are structured to achieve the legal outcomes described in this paper, incremental conflicts-of-laws issues that may arise from the distributed nature of the ledger or the classification of the asset under existing conflicts-of-laws rules and whether the novel nature of the asset or arrangements, including operational arrangements designed to effect collateral movements, have the intended legal effects and/or give rise to any incremental insolvency or clawback risks.

Regulatory considerations, including whether the TMMF is treated in the same way as a traditional MMF for the purposes of applicable regulatory frameworks – for example, in relation to eligibility for margining purposes, licensing frameworks and regulatory capital frameworks.

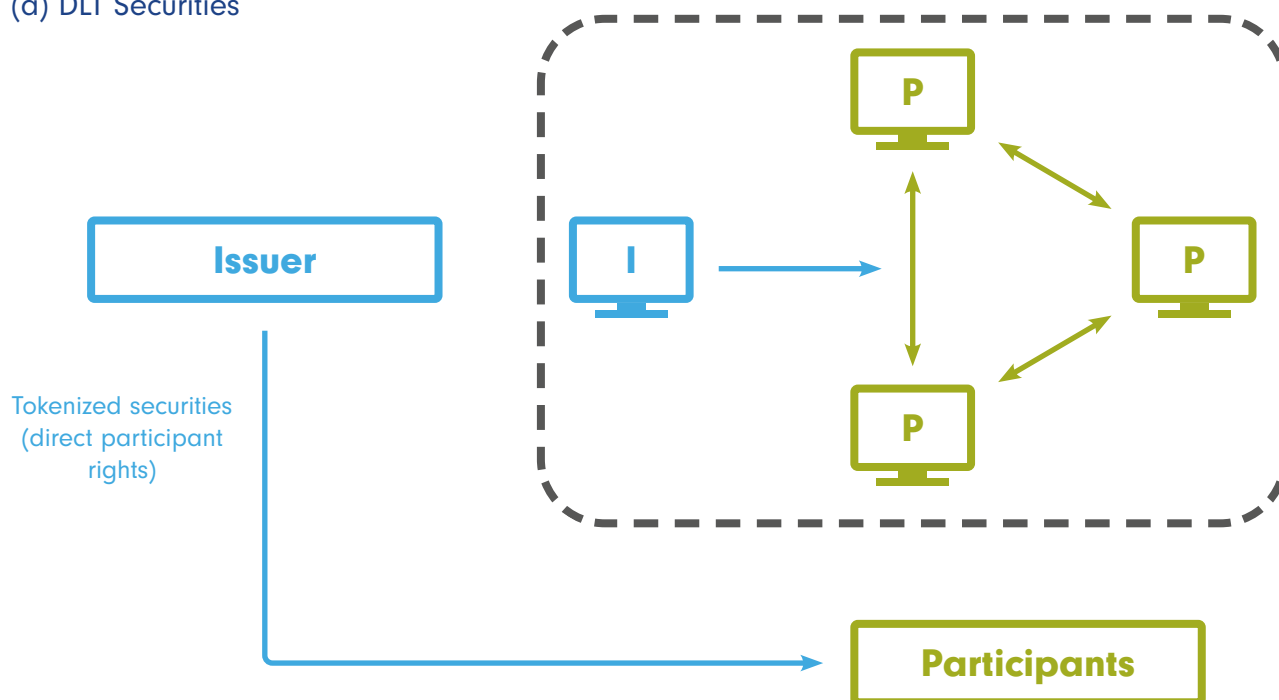
Commercial considerations, including incremental risks that may arise due to the novel nature of the asset or the arrangements through which it is transferred (such as risks of forks, loss of private keys tied to control of the asset or other technological disruptions that could affect the integrity of the asset or register/record) and whether the automation of processes introduces any incremental risks or affects how risks are traditionally allocated.

ISDA invites feedback on whether there are further matters on which ISDA could helpfully convene the market. Any feedback can be shared at ISDALegal@isda.org.

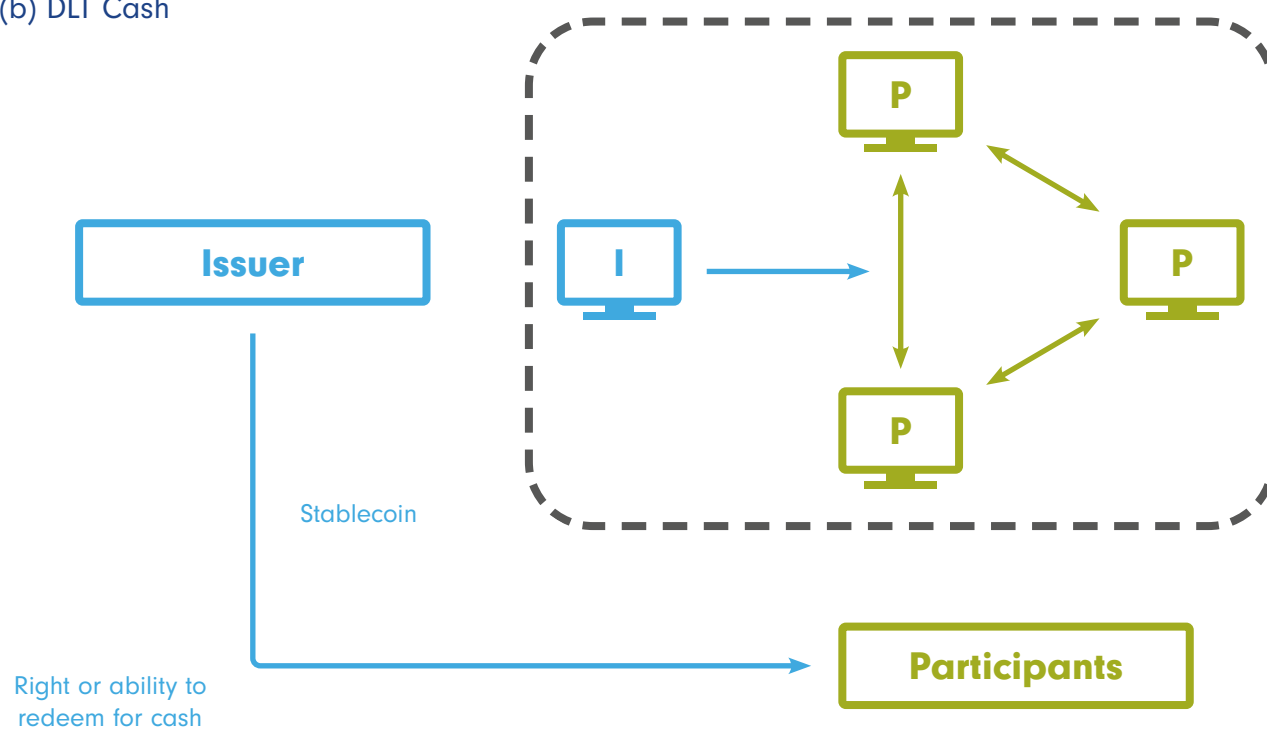
APPENDIX: TOKENIZATION STRUCTURE DIAGRAMS

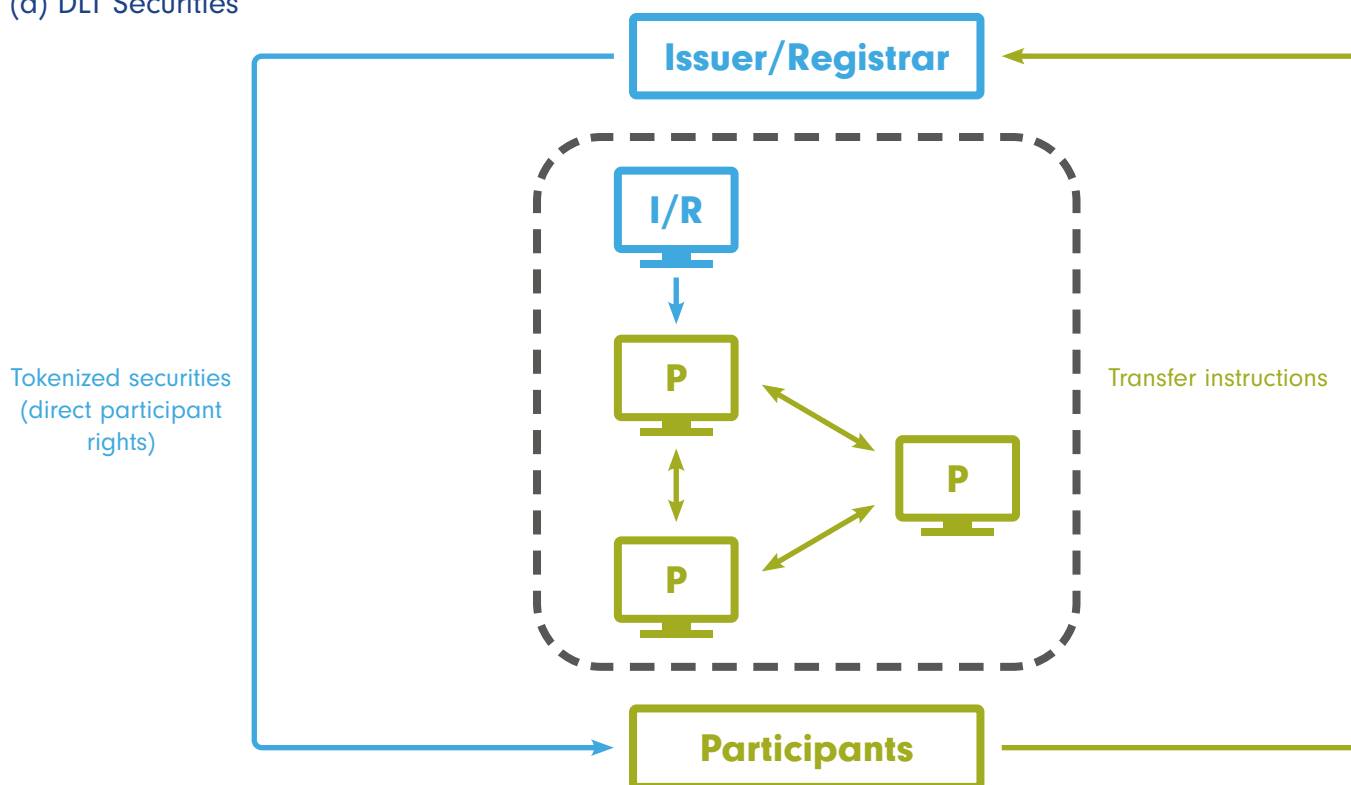
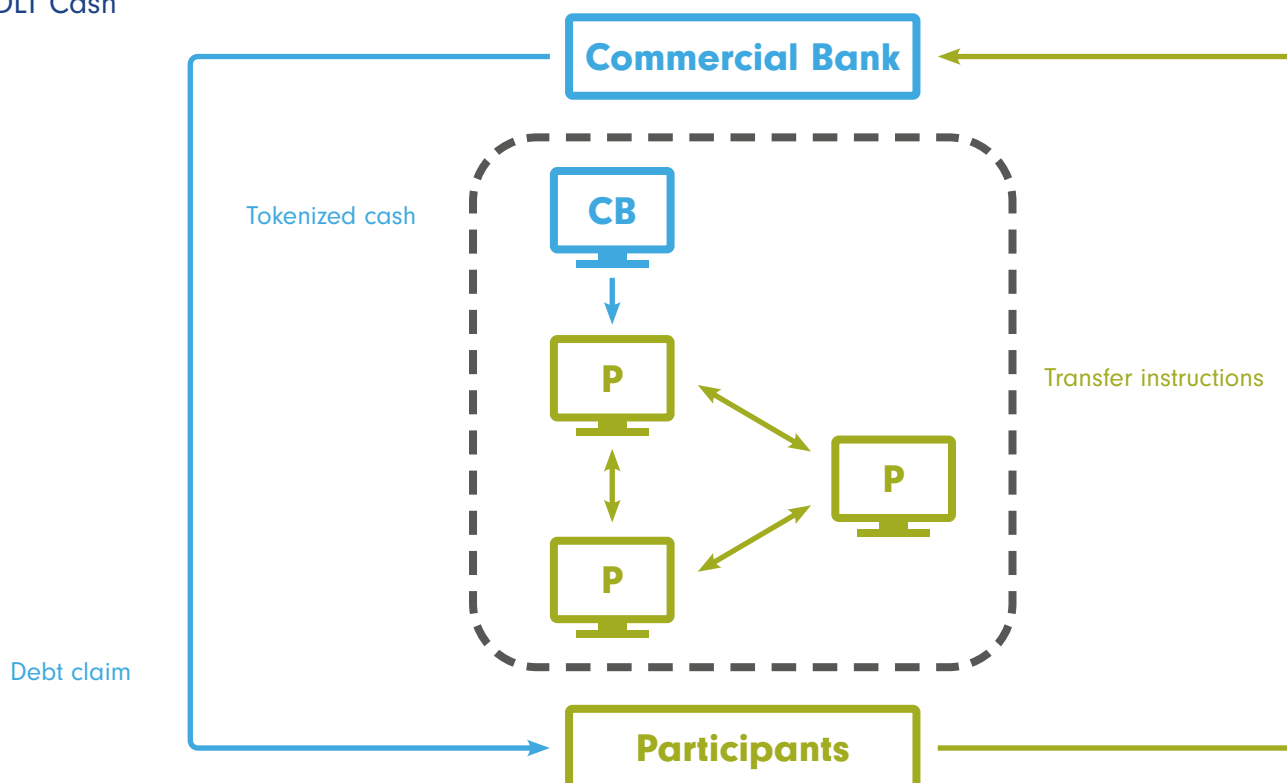
BEARER STRUCTURE

(a) DLT Securities



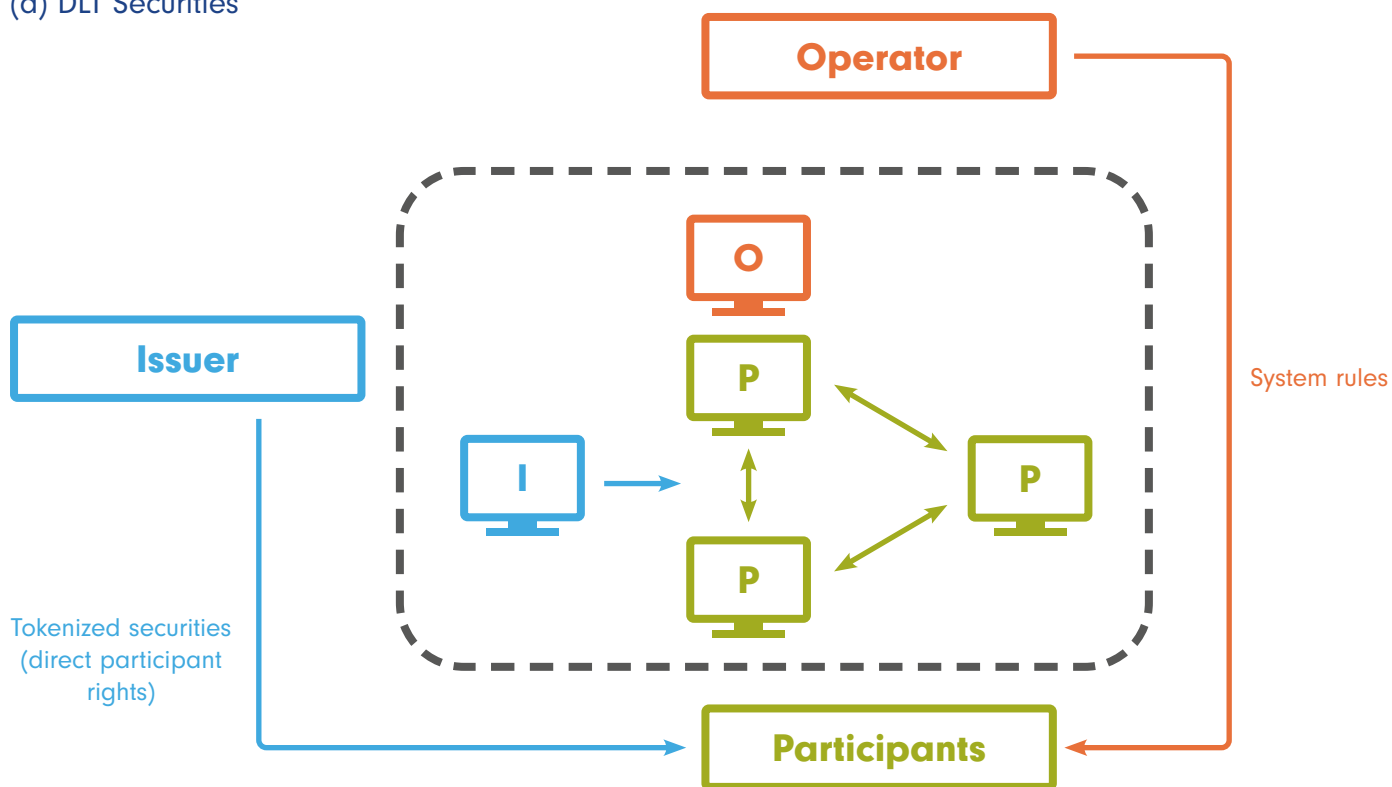
(b) DLT Cash



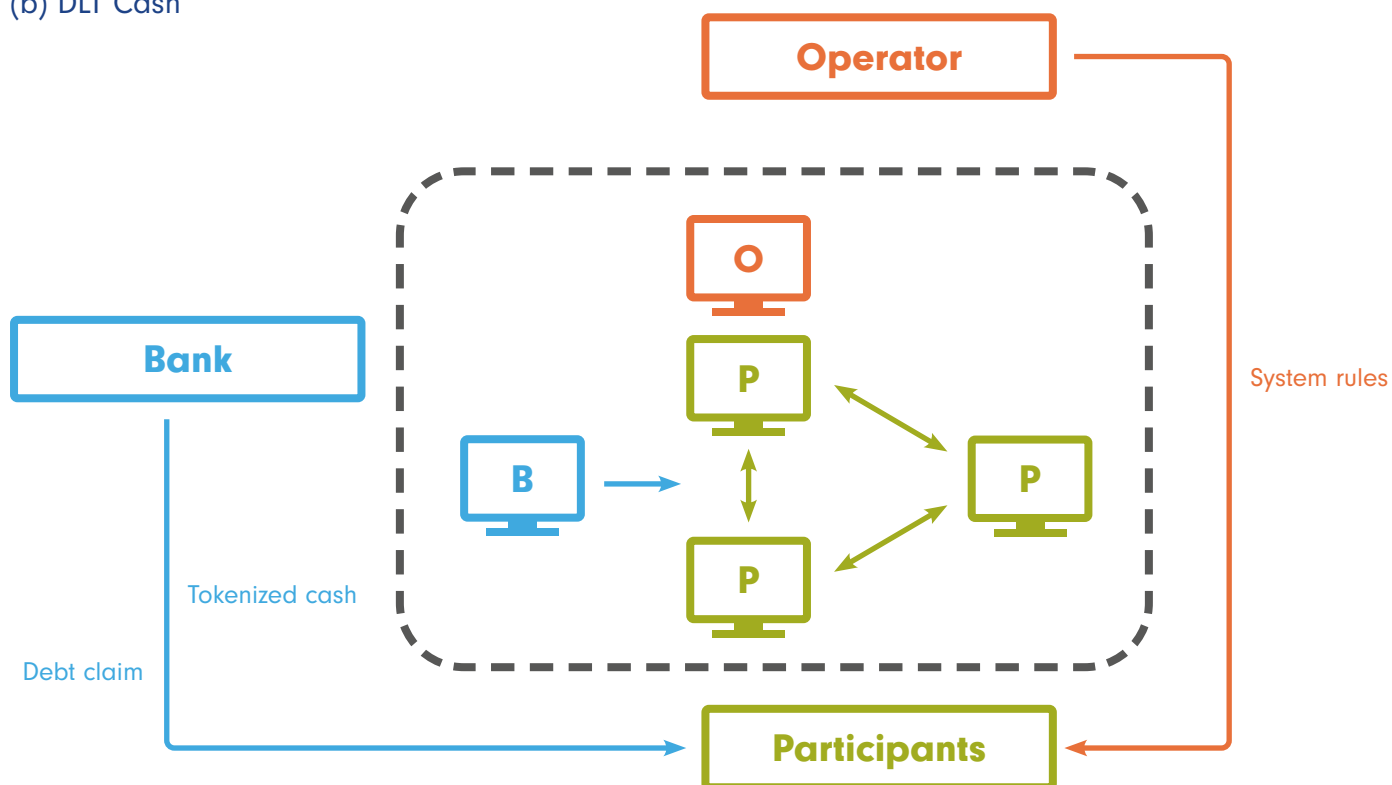
REGISTERED STRUCTURE**(a) DLT Securities****(b) DLT Cash**

CLAIMS STRUCTURE

(a) DLT Securities



(b) DLT Cash



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