July 30, 2025

BIS Office for the Americas

Consultative Group on Innovation and the Digital Economy

Email: americas@bis.org

Response to Consultation: Leveraging Tokenisation for Payments and Financial Transactions

The International Swaps and Derivatives Association, Inc. ("**ISDA**")[1] welcomes the opportunity to provide a response to the consultation: Leveraging Tokenisation for Payments and Financial Transactions to the BIS Representative Office for the Americas.

Since its inception, ISDA has pioneered efforts to identify and reduce the sources of risk in the derivatives and risk management business through documentation that is the recognized standard throughout the global market, legal opinions that facilitate enforceability of agreements and collateral arrangements, the development of sound risk management practices, advancing the understanding and treatment of derivatives and risk management from public policy and regulatory capital perspectives, and developing operational workflow and technology-based mutual solutions. ISDA is a strong proponent for a safe and efficient market infrastructure for derivatives trading, clearing and reporting.

Consistent with our mission, we are primarily concerned in this Consultation Paper directly related to legal, regulatory and documentation issues relevant to the over the counter ("**OTC**") derivatives markets, including financial market infrastructure ("**FMI**") with whom participants interact in the context of those markets. While we do not comment on specific use cases or settlement models or technologies in this letter, we do take the opportunity to make some general principles-based observations about particular issues raised in the Consultation Paper. These observations are intentionally high level and jurisdiction-agnostic[2] and should not be taken to be views of ISDA or members on the commercial feasibility or appropriateness of any particular structure or settlement method involving central bank digital currency ("**CBDC**"), other digital forms of money, market infrastructure of asset market, nor on the relevant merits, efficacy or fitness for purposes of any existing or new financial market infrastructure or asset market, nor as being a comprehensive statement on the issues and considerations that may be relevant to these matters. Nevertheless,

[1] Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 1,000 member institutions from 76 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org. Follow us on Twitter, LinkedIn, Facebook and YouTube.

[2] Where we describe specific legal or regulatory issues, these should be taken as examples only and not as definitive statements on legal issues nor whether those legal issues arise in all jurisdictions.

these observations represent our perspectives as an industry association focused on facilitating effective risk management in the global derivatives marketplace.

While we acknowledge that many of the issues dealt with in the Consultation Paper are interrelated, we believe that, given our focus on the OTC derivatives markets, the issues of settlement of cash and other assets will be more relevant to respondents from other areas of the financial markets, who are therefore better placed to comment in detail on many parts of the Consultation Paper. In principle, a settlement mechanism that operates effectively for cash and purchase and sale of assets should be equally effective for settlement of derivatives transactions and collateral movements related to those derivatives transactions. Accordingly, our submission is limited to the matters set out in this submission, this submission does not bind our members, and our members may choose to make their own individual submissions in relation to the Consultation Paper.

The technological, operational and commercial infrastructure used to facilitate trading, clearing, reporting and processing of derivative transactions, and the settlement of obligations under those transactions, continues to grow in maturity and scale. As this occurs, it is critical that this new technology and infrastructure functions safely and efficiently. It is in this broader context that we comment on the opportunities and challenges of tokenization in wholesale derivatives markets.[3]

As a statement of core principle, any tokenization or other use of new technology in financial markets:

- should not adversely affect legal and regulatory certainty or systemic stability; and
- should facilitate the safe and efficient management of risks.

The opportunities and challenges presented by asset tokenization can vary depending on the particular use case and implementation.

In the context of derivatives transactions and related collateral management, we have set out below a non-exhaustive list of opportunities and challenges:

Key opportunities

(a) Improving collateral management risks via atomic settlement. Due to the decentralized nature of DLT-based platforms, with tokenization, settlement can occur almost instantaneously (so-called 'atomic settlement'), rather than the usual T+2 or longer timeframe.[4] Facilitating 24/7 near instantaneous settlement offers opportunities to substantially reduce counterparty, settlement, and market risk. As the ability to use near instantaneous settlement develops, it is important that firms appropriately manage any risks arising from using assets with different settlement timeframes. The longer parties are committed to a future transaction, the greater the risk something may go wrong.

[3] We note and acknowledge that the wholesale derivatives markets in respect of which we comment in this submission can be subject to different circumstances and influences that other wholesale domestic markets. However, due to the scope of ISDA's role, we do not comment in this submission on those other markets.

[4] ISDA response to FCA CP23/28: Updating the regime for Money Market Funds (8 March 2024) https://www.isda.org/a/7usgE/ISDA-Response-to-FCA-MMF-consultation-030824.pdf

Facilitating atomic settlement could also significantly reduce counterparty, clearing, and market risks, as it could eliminate the risks and operational burdens associated with collateral, margining, and reconciliation in Delivery versus Payment (DvP) and Receive versus Payment (RvP) with third parties. Eliminating these risks could also increase the safety and soundness of the financial ecosystem. We describe other related benefits in the following paragraphs.

(b) Enhancing non-cash assets for use as collateral and more efficient collateral management. Tokenized asset markets and the use of new technological infrastructure present an opportunity to reduce risk, increase efficiency and cut costs. Market stress events in recent years like the March 2020 dash for cash and the September 2022 UK gilt crisis have brought collateral management into sharp focus and have underscored the importance of efforts by ISDA and industry participants to bring more efficiency and data standardization to collateral management processes. The exchange of collateral is one of the central planks of regulatory efforts to mitigate counterparty credit risk and maintain the resilience of the financial system. Massive industry effort has been spent on complying with regulatory margin requirements that have resulted in many more entities having to exchange collateral, but the underlying collateral management systems and processes are often still reliant on manual intervention. Even in periods of relative calm, this can be time consuming and lead to errors. We consider that greater automation and data standardization will help drive efficiency and reduce risk in collateral management, as well as cut costs for market participants. But it will require the industry to work collectively to develop and implement common solutions.[5]

In its report to the Commodity Futures Trading Commission's (**CFTC**) Global Markets Advisory Committee (**GMAC**),[6] the Digital Asset Markets Subcommittee asserted that the "[u]se of DLT for holding and transferring non-cash collateral has significant potential to address key challenges posed by existing market and technology infrastructure."[7]

The Digital Asset Markets Subcommittee identified that the use of DLT in particular ways "can facilitate real-time, 24/7/365 transfers of the asset without costly or complex linkages

---

[5] That effort is underway, with:
(i) in 2020, we published a series of collateral management transformation toolkits (Collateral Settlement Automation, Portfolio Reconciliation and Dispute Resolution, and Digitizing Documentation) to help firms identify opportunities to improve processes in key areas, including digitizing documentation, automating margin calls and collateral settlement, and streamlining portfolio reconciliation and dispute management;
(ii) we have updated our suggested operational practices for collateral management to encourage industry improvements, based on feedback from market participants;
(iii) we have been working with industry participants on several collateral management initiatives using the Common Domain Model, a free-to-use data standard for financial products, trades and lifecycle events that is available as code in multiple languages.
Using the CDM will streamline counterparty onboarding, enhance interoperability, reduce negotiation time on eligible collateral schedules and automate cash collateral calculations and payment processes. This will increase efficiency and reduce operational risks, settlement fails and fees. The CDM has already been used to develop standard digital representations of eligible collateral specifications and key operational provisions of ISDA's most widely used credit support documentation, but other uses cases are also in development.

[6] CFTC Press Release, "CFTC's Global Markets Advisory Committee Advances Recommendation on Tokenized Non-Cash Collateral" (21 November 2024) https://www.cftc.gov/PressRoom/PressReleases/9009-24; GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download.

[7] GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download, page 11.

across multiple intermediaries" which "has the potential to both increase the velocity of transfer of assets currently utilized as collateral, … expand the pool of assets available for use [and] permit peer-to-peer transfers". The Subcommittee also noted that the use of DLT could also "help address the challenges to non-cash collateral … by enabling the direct pledge or transfer of eligible assets without the need to convert those assets into cash" which "can facilitate asset transfers to meet margin calls during times of market stress without fire sales to generate cash collateral."[8] This takes into account that "existing transfer mechanics for many non-cash assets inhibit firms owning or holding such assets from posting them to satisfy applicable margin requirements."[9] Especially during periods of market stress, the process of needing to convert non-cash assets into cash balances to satisfy margin demands only for the transferee to reinvest cash back into non-cash assets "pro-cyclically exacerbates and propagates volatility, as margin calls may be correlated with asset price declines that deepen due to fire sales of non-cash assets to generate cash collateral".[10]

(c) In our response to the Financial Conduct Authority's ("**FCA**") consultation paper CP23/28: Updating the regime for Money Market Funds,[11] we focused on the use of Money Market Funds ("**MMFs**") as a reinvestment vehicle for cash as collateral, and the benefits that tokenizing MMFs would bring to market in relation to posting MMFs[12] as direct collateral. MMFs are a compelling use-case for tokenization because (i) the fund unit is already de-materialized and (ii) tokenization of fund units could replace the traditional subscription and redemption work-flow, making the process faster and more efficient. The ability of DLT to facilitate instant (or near-instant) settlement can increase the speed at which collateral can be moved between parties and reduces settlement risk significantly by minimizing the period between the trade date and the date on which the collateral settles.

(d) Tokenizing securities, such as corporate and government securities that are already eligible collateral per BSBC-IOSCO guidelines[13] but processed via DLT with atomic settlement, would have similar benefits to the benefits mentioned above regarding tokenized MMFs. The faster and streamlined settlement process would mitigate operational and counterparty credit risks. DLT-platform processing, with recordkeeping data included, would contribute

[8] GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download, page 7; Also see ISDA, Response to FSB Consultation report "Liquidity Preparedness for Margin and Collateral Calls" (Jun. 19, 2023) (link) at 3 (recommending consideration of how "innovation in collateral and tokenization may offer improvements in collateral mobility and reduce the need for collateral holders to liquidate collateral to realize cash").

[9] GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download, page 5.

[10] GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download, pages 5-6.

[11] For further details see: ISDA response to FCA CP23/28: Updating the regime for Money Market Funds (8 March 2024) https://www.isda.org/a/7usgE/ISDA-Response-to-FCA-MMF-consultation-030824.pdf.

[12] In particular, we focused on MMFs that invest in government securities, where the unit holder register is recorded and managed using distributed ledger technology.

[13] Margin requirements for non-centrally cleared derivatives

to collateral funding reduction, especially when processing collateral substitutions that are manually intensive and time-consuming.[14]

(e) Programmability and Data Standards. Through tokenization, many slow and cumbersome manual processes in traditional financial markets could be automated through the use of smart contracts. This may be particularly useful in the collateral management context described above as well as in the context of managing the distributions of income from the fund and any required reinvestment, or automating the entire life cycle of the conditional execution of a transaction on a self-executing basis.[15] However, effective automation of financial instruments should be based on legal validation so that parties have certainty as to the legal effect of any coded or automated provision.[16]

Programmability can only be recognized by all parties involved if those parties are also using the same data standards for smart contracts, which should be the Common Domain Model ("**CDM**"). The CDM is an open-source data model, governed by the Fintech Open Source Foundation ("**FINOS**"), that can be used to standardize the digital representation of financial products, trades of those products, and post-trade activities, along with the documentation of the products and trades.

(f) Lower transaction costs. Tokenization could offer lower transaction costs by reducing the need for intermediaries, or increase the capital efficiency of the asset, thereby lowering opportunity cost. For example, one benefit of tokenizing Money Market Funds to use as collateral is to reduce the operational costs related to posting cash, transforming to a MMF at the pledgor's custodian, and then having to liquidate to cash to return back to the pledgor's main account to then be reinvested again into a MMF. With tokenization, if all the parties (pledgor, secured party, custodian, transfer agent) are part of the golden record, there is no need to use the current antiquated process to post cash and transform into a MMF for collateral purposes. ISDA is participating is the Global Digital Finance's Tokenized Money Market Fund initiative.

(g) Single source of truth. Embedding smart contract code in a distributed ledger ensures there is a single version of code that binds both parties. This means that parties can take comfort that each participant's instance of the code will operate in the same way, thereby reducing the potential for trade breaks and improving settlement times, amongst other benefits.[17] It may also simplify or potentially eliminate certain back office processes, such as

---

[14] For further detail see the following article, in which we discuss these and other benefits in the context of digital asset markets: ISDA, "Navigating Bankruptcy in Digital Asset Markets: Netting and Collateral Enforceability" (January 2023) https://www.isda.org/a/mIxgE/Navigating-Bankruptcy-in-Digital-Asset-Markets-Netting-and-Collateral-Enforceability.pdf, pages 15 – 16.

[15] Bank of International Settlements Innovation Hub, SNB and SIX, "Project Helvetia Phase II: Settling tokenized assets in wholesale CBDC" (2022) https://www.bis.org/publ/othp45.pdf, page 25.

[16] ISDA, "Legal Guidelines for Smart Derivatives Contracts: Introduction" (January 2019) https://www.isda.org/a/MhgME/Legal-Guidelines-for-Smart-Derivatives-Contracts-Introduction.pdf, page 11. Please also see the following paper which ISDA co-authored in relation to the automation of payments and deliveries under an ISDA Master Agreement: Christopher D Clack and Ciaran McGonagle, "Smart Derivatives Contracts: the ISDA Master Agreement and the automation of payments and deliveries" (2019) https://arxiv.org/pdf/1904.01461. See also ISDA & Linklaters, "Whitepaper: Smart Contracts and Distributed Ledger – A Legal Perspective, (August 2017) https://www.isda.org/a/6EKDE/smart-contracts-and-distributed-ledger-a-legal-perspective.pdf, page 9.

[17] ISDA, "ISDA Response to HM Treasury Consultation and Call for Evidence on UK Regulatory Approach to Cryptoassets and Stablecoins" (19 March 2021) https://www.isda.org/a/UkATE/ISDA-response-to-HMT-cryptoasset-and-stablecoin-consultation.pdf, pages 4 - 5.

reconciliation, and replace documentation for which an audit trail is required.[18] Further, the distributed nature of DLT infrastructure may enhance technical resilience and enable high availability of infrastructure.[19]

(h) Cross-border payments. The development and implementation of an internationally interoperable CBDC has the potential to improve cross-border payments. International cooperation with other jurisdictions that are actively considering the development and implementation of a CBDC, including in relation to the development of international standards, could assist in developing such a system.[20] One such international project is Monetary Authority of Singapore's Project Guardian, in which ISDA is currently participating as a member of its working group.[21]

Key challenges

We also consider that, despite the benefits provided by DLT-based infrastructure and asset tokenization, there are also a number of challenges and risks that need to be considered. Among the risks that participants should consider in the context of implementing tokenization are those that relate to legal enforceability, segregation and custody arrangements, credit and custodial risks and information security and other operational risks (albeit that these should be able to be assessed by applying existing policies, procedures and practices).[22] The benefits set out above and the challenges and risks set out below are by no means an exhaustive list, and others may also be relevant.

(a) Legal and regulatory uncertainty (including in an insolvency situation). There may be legal and regulatory uncertainty depending on the nature and features of a DLT platform, such as its level of decentralisation, and governance and legal structures. This legal uncertainty may arise in relation to the nature of any asset recorded on the platform and the nature of the rights conferred on the owner of such an asset. It may also arise where the implementation of a smart contract does not accurately retain the intended legal effect of a particular legal arrangement.[23] These issues may be exacerbated on the insolvency of the operator of, or participant in, a tokenized structure.[24] In order for a tokenized asset market to function effectively, particularly at scale, it is critical that the rights of the operator(s), participants and users are clear and robustly supported under all applicable laws. For example, the BIS has identified that a "robust legal basis is required for any

[18] Bank of International Settlements Innovation Hub, SNB and SIX, "Project Helvetia Phase II: Settling tokenized assets in wholesale CBDC" (2022) https://www.bis.org/publ/othp45.pdf, page 25.
[19] Bank of International Settlements Innovation Hub, SNB and SIX, "Project Helvetia Phase II: Settling tokenized assets in wholesale CBDC" (2022) https://www.bis.org/publ/othp45.pdf, page 25.
[20] See Bank of International Settlements, "Central bank digital currencies: executive summaries" (September 2021) https://www.bis.org/publ/othp42.pdf, page 1.
[21] MAS, "Project Guardian" (4 November 2024) https://www.mas.gov.sg/schemes-and-initiatives/project-guardian.
[22] GMAC, "Recommendations to Expand Use of Non-cash Collateral Through Use of Distributed Ledger Technology" (21 November 2024) https://www.cftc.gov/media/11581/GMAC_DAM_UseofDLTasDerivativesCollateral_112124/download, page 9.
[23] ISDA & KWM, "Whitepaper Smart Derivatives Contracts: From Concept to Construction" (October 2018) https://www.isda.org/a/cHvEE/Smart-Derivatives-Contracts-From-Concept-to-Construction-Oct-2018.pdf, pages 12 - 13.
[24] See ISDA's papers Navigating Bankruptcy in Digital Asset Markets: Netting and Collateral Enforceability (at Navigating-Bankruptcy-in-Digital-Asset-Markets-Netting-and-Collateral-Enforceability.pdf) and Navigating Bankruptcy in Digital Asset Markets: Digital Asset Intermediaries and Customer Asset Protection (at https://www.isda.org/a/CrLgE/Navigating-Bankruptcy-in-Digital-Asset-Markets-Digital-Asset-Intermediaries-and-Customer-Asset-Protection.pdf).

financial market infrastructure" and that "[d]eveloping rulebooks, contingency procedures and monitoring capabilities can help highlight" any idiosyncratic challenges that may arise depending on the jurisdictions and currencies involved in relation to "legal changes related to the issuance and transfer of a specific CBDC, and the finality and validity of the settlement".[25] The Principles for Financial Market Infrastructures (**PFMI**) are still applicable to the market infrastructure for new tokenized asset markets, including that an FMI should have "a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions".[26]

(b) Taxonomy and standardisation. Consistency of terminology and usage in the areas of CBDC, digital forms of money, tokenized and digital assets and the intersection of financial markets and technology is important, not least to facilitate commonality of understanding and reduce the risk of confusion, although the industry must come together to develop, implement, and govern a common data standard to be used throughout the tokenized asset lifecycle, such as the CDM.

Accordingly, consideration could be given to developing international taxonomies used for referring to and describing various tokenization structure, and other work done in this area could be leveraged for this purpose, for example the CFTC GMAC taxonomy.[27] In this regard, please refer to our Tokenized Collateral Guidance Note for further detail in relation to classifications that are relevant for the legal analysis of tokenization structures. As mentioned above, the Common Domain Model should be adopted as the open-source data model to be used for data standards used for digital and tokenized assets.

(c) Technology challenges and smart contract risk. DLT and smart contracts can operate differently, and have different functionality, to the technology currently used for existing financial market infrastructure. It will be important to ensure that the requirements imposed by any relevant regulatory framework are sufficiently flexible and appropriately calibrated to ensure that the regulatory objectives are achieved in a proportionate way. While introducing potential efficiency benefits, the use of smart contracts could introduce risk into the system if they are not based on mutually agreed upon data standards, do not operate as expected, or are compromised by a bad actor.

(i) For example, if one party is functionalizing the smart contract in an automated fashion yet programs their operating system with different interpretation of legal terms, there could be disputes simply based on the differences related to human intervention between execution of the document and onboarding to the operating system.

(ii) In addition, if a tokenized asset market facilitates the use of smart contracts to automatically execute a particular function, this automatic operation of smart contracts could present legal risks where obligations that were originally required by

[25] Bank of International Settlements, "Using CBDCs across borders: lessons from practical experiments" (June 2022) https://www.bis.org/publ/othp51.pdf, page 13.
[26] See PFMI, https://www.bis.org/cpmi/publ/d101a.pdf.
[27] Available at https://www.cftc.gov/PressRoom/PressReleases/8873-24.

a contract continue to be performed in a manner contrary to law. Consequences of such an occurrence are not limited to significant economic loss, for example, amounts paid may not be recovered in insolvency, but may also include potential legal action and penalties, such as for breach of anti-money laundering laws.[28]

(iii) Further, the interconnected nature of smart contracts in a DLT or blockchain environment may also give rise to systemic risk where a fault in one smart contract spreads through to others to which it is connected.[29] This is particularly important in the context of the derivatives market, given that there can be interconnections between derivatives contracts, such as where one derivatives contract may be used to hedge the financial exposure created by another. An inability to validate the legal effect of a smart derivatives contract may therefore introduce increased risks for the parties and the wider derivatives market.[30]

While the above focused on issues associated with DLT platforms, it is likely that similar comments apply to tokenization using other types of platforms and technologies.

Guiding principles

We have set out some guiding principles that may assist in the development of a tokenized and digital assets in the derivatives market:

(a) When considering legal and regulatory issues, there is merit in applying the "same activity, same risk, same regulatory outcome" approach.

(b) New technology does not mean that existing legal and regulatory issues do not arise. Risks that exist in, and have been solved for, traditional markets can also apply to, and may need to be solved for, tokenization asset markets and relevant tokenized assets. In developing a system for the creation and transfer of tokenized and digital assets, it is important that similar protections that apply to current systems apply to the new system as appropriate, to ensure that market participants have the same level of protection, confidence and certainty as they have for existing systems.

(c) The ability to take a settlement asset or a tokenized asset as security to cover financial markets exposures is an important aspect in the utility of any such asset.

(d) Consider the development, implementation and use of interoperable and efficient legal and technology standards on an industry-wide, commercially reasonable basis where possible.[31]

---

[28] ISDA & KWM, "Whitepaper Smart Derivatives Contracts: From Concept to Construction" (October 2018) https://www.isda.org/a/cHvEE/Smart-Derivatives-Contracts-From-Concept-to-Construction-Oct-2018.pdf, page 17.

[29] The use of appropriate smart contract architecture may address such risks. See: ISDA, "Building Smart Contracts" (8 April 2024) https://www.isda.org/2024/04/08/building-smart-contracts/.

[30] ISDA, "Legal Guidelines for Smart Derivatives Contracts: Introduction" (January 2019) https://www.isda.org/a/MhgME/Legal-Guidelines-for-Smart-Derivatives-Contracts-Introduction.pdf, page 11.

[31] Please also see our Joint Association Letter on a Digital Future for Financial Markets which sets out a series of principles and objectives aimed at promoting the development, distribution and adoption of digital standards within the financial markets, as the foundation for transformational change. These principles and objectives address three key areas: Standardization, Digitization, and Distribution.: https://www.isda.org/a/MGmTE/Digital-Future-for-Financial-Markets-Letter.pdf. See also ISDA, "ISDA Response to HM Treasury Consultation

(e) When developing the legal frameworks relevant to tokenized and digital assets, it will be important to consider whether there are any legal and regulatory issues or impediments that inhibit the development and adoption of any particular tokenized structure. These issues include the following (which are particularly relevant when considering the taking of any such tokenized asset as collateral, and relying on that collateral, to cover financial markets exposures):[32]

(i) What is the proprietary status of any tokenized or digital asset under general law[33] and for the specific purposes (e.g. under insolvency laws, regulatory regimes, and regimes which protect the exercise of certain rights and certain transfers from insolvency laws)?

(ii) Is there a clear private international law rule which identifies what law governs:

a. the tokenized asset and/or claim represented by the tokenized asset given the particular tokenized structure?

b. the proprietary effect of a transfer of the tokenized asset or a grant of security over the tokenized asset?

(iii) Can a tokenized asset be validly transferred and do any formalities apply to that transfer?

(iv) Can a security interest be properly created over a tokenized asset and, if so, do any formalities apply to the creation of the security interest?

(v) What steps must be taken to perfect a grant of security interest in each applicable jurisdiction over the tokenized asset under each tokenization structure, and what stays apply on the enforcement of a security interest in respect of that tokenized asset?

(vi) Is finality of transfers/settlements of the tokenized asset, or under the tokenized structure, respected?

(vii) Can insolvency laws adversely affect the validity and finality of any transfer or creation of a property right and in what circumstances could any such transfer or creation be void or voidable, and are these appropriate for the context of these transfers?

(viii) Does the tokenized asset or tokenized structure require any special protections (or exemptions) (e.g. from insolvency laws) to ensure that legal and regulatory certainty, and monetary and financial system stability, are achieved?

---

and Call for Evidence on UK Regulatory Approach to Cryptoassets and Stablecoins" (19 March 2021) https://www.isda.org/a/UkATE/ISDA-response-to-HMT-cryptoasset-and-stablecoin-consultation.pdf, pages 1 - 3.

[32] This list is not intended to be exhaustive and nor is it specific to any particular jurisdiction. Rather, these are issues we expect to arise across jurisdictions when analyzing the tokenized structures and tokenized assets.

[33] For example, are the tokens themselves recognized as objects of property rights independent of any legal rights they might otherwise represent, and can they be the object of property rights (such as a security interest)? 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.

For a successful implementation of a tokenized and digital assets market, we expect that it will be important that market participants can identify clear answers to these questions. If these questions cannot be answered clearly, consideration could be given to whether changes could be made to the relevant legal and regulatory regime to better achieve the intended objectives.

Many wholesale asset markets are international or at least involve international participants. Accordingly, it is important to ensure that any tokenized asset and tokenization structure operates as intended across national boundaries. International cooperation will be critical, as it has been and continues to be for the OTC derivatives market. International efforts have already commenced. UNIDROIT's Principles on Digital Assets and Private Law, serve as guidelines for jurisdictions to enable their private laws to be consistent with best practice and international standards in relation to the holding, transfer and use as collateral of digital assets.[34] The Monetary Authority of Singapore have also recently published industry frameworks to assist with the implementation of tokenization in debt capital markets and for tokenized funds[35] and for tokenized settlement of FX transactions.[36] These are but a few examples of international efforts that could assist the development of a domestic regulatory regime that enables globally competitive, interoperable and efficient financial market infrastructure and financial markets that leverage tokenized and digital assets.

Conclusion

We thank you for the opportunity to respond to the consultation on the Consultation Paper. We would be very happy to discuss this matter further at your convenience. Please do not hesitate to contact Amy Caruso ACaruso@isda.org or Mark New (mnew@isda.org) if we may be of further assistance.

Sincerely,

Tara Kruse
Global Head of Derivative Products and Infrastructure

[34] UNIDROIT, "Principles on Digital Assets and Private Law" (4 October 2023) https://www.unidroit.org/wp-content/uploads/2024/01/Principles-on-Digital-Assets-and-Private-Law-linked-1.pdf.

[35] MAS, "MAS Announces Plans to Support Commercialisation of Asset Tokenisation" (4 November 2024) https://www.mas.gov.sg/news/media-releases/2024/mas-announces-plans-to-support-commercialisation-of-asset-tokenisation.

[36] Guardian FX workstream - Use of tokenised bank liabilities for transaction banking