RECOMMENDATIONS TO EXPAND USE OF NON-CASH COLLATERAL THROUGH USE OF DISTRIBUTED LEDGER TECHNOLOGY

REPORT TO THE COMMODITY FUTURES TRADING COMMISSION'S GLOBAL MARKETS ADVISORY COMMITTEE BY THE DIGITAL ASSET MARKETS SUBCOMMITTEE

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INTRODUCTION

The Commodity Futures Trading Commission ("CFTC" or "Commission") has consistently permitted the use of non-cash assets as collateral to satisfy regulatory margin requirements for both cleared[1] and non-cleared derivatives,[2] subject to specified conditions and limitations designed to mitigate credit, market, and liquidity risks. The Commodity Exchange Act ("CEA") also expressly provides for use of non-cash collateral.[3]

Various operational challenges, however, have impeded use of non-cash collateral, which results in adverse consequences for market efficiency. By improving the operational infrastructure for assets already eligible to serve as regulatory margin, blockchain or other distributed ledger technology ("DLT") can help reduce or eliminate some of those challenges without requiring any changes to collateral eligibility rules. Market participants can also use their existing policies, procedures, practices, and processes to identify, assess, and manage risks to using DLT, like they do for other forms of market infrastructure and technologies.

This Report addresses the use of DLT for assets already eligible to serve as regulatory margin. It begins with relevant background to the use of non-cash assets as collateral to satisfy regulatory margin requirements. It then summarizes the operational challenges that have impeded use of non-cash collateral. The Report then describes how market participants have begun to use DLT to record interests in and facilitate transfers of various types of financial instruments and assets, and how such use could address the previously described operational challenges. The Report concludes by providing a legal and regulatory framework for how market participants can apply their existing policies, procedures, practices, and processes to support use of DLT for non-cash collateral in a manner consistent with margin requirements

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[1] *See* 17 C.F.R. § 39.13(g)(10).

[2] *See* 17 C.F.R. § 23.156 (CFTC collateral eligibility rules); *see, also* 12 C.F.R. §§ 45.6. 237.6, 349.6, 624.6, and 1221.6 (U.S. prudential regulator collateral eligibility rules). Consistent with Section 4s(e)(3)(D) of the CEA, these rules are consistent with each other, and the CFTC and U.S. prudential regulators consult with respect to the comparability of their margin requirements.

[3] *See* CEA Section 4s(e)(3)(C).

adopted by the Commission, U.S. prudential regulators, and derivatives clearing organizations ("DCOs").

REPORT

A. BACKGROUND: COLLATERAL ELIGIBILITY RULES

The CEA expressly mandates the Commission and U.S. prudential regulators to permit the use of non-cash collateral to satisfy margin requirements for uncleared swaps.[4] Consistent with this mandate, the Commission and U.S. prudential regulators have identified specified types of non-cash assets that swap dealers and major swap participants ("Swap Entities") may collect and post as regulatory margin.[5] As the Commission explained when it adopted these collateral eligibility rules, these assets share certain "fundamental characteristics": they are "liquid and, with haircuts, hold their value in times of financial stress" and their value does "not exhibit a significant correlation with the creditworthiness of the counterparty or the value of the swap portfolio."[6] Eligible assets generally comprise certain government and agency debt securities, certain multilateral development bank and international organization debt securities, certain corporate debt securities, certain listed equities, shares in certain money market funds ("MMFs"), and gold, with the rules making certain distinctions as to when such assets may be used as initial margin versus variation margin.

The Commission has adopted similar requirements with respect to the types of assets that a DCO may accept as collateral for centrally cleared derivatives, including futures, options on futures, and swaps. Specifically, Commission Regulation 39.13(g) provides that a DCO "shall limit the assets it accepts as initial margin to those that have minimal credit, market, and liquidity risks," "apply appropriate reductions in value to reflect credit, market, and liquidity risks (haircuts), to the assets that it accepts in satisfaction of initial margin obligations, taking into consideration stressed market conditions, and shall evaluate the appropriateness of the

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[4] *See id.*

[5] *See* Note 2, *supra*.

[6] *See* 81 Fed. Reg. 636, 659 (Jan. 6, 2016).

haircuts on at least a monthly basis," and "apply appropriate limitations or charges on the concentration of assets posted as initial margin, as necessary, in order to ensure its ability to liquidate such assets quickly with minimal adverse price effects, and shall evaluate the appropriateness of any such concentration limits or charges, on at least a monthly basis."

In addition to satisfying these requirements, a Swap Entity or DCO collecting non-cash assets as collateral for regulatory margin requirements must ensure that the margin arrangement satisfies legal enforceability requirements. For example, margin for uncleared swaps may only be collected on a net basis if the swaps are governed by an eligible master netting agreement,[7] and initial margin for uncleared swaps must be held pursuant to a legal, valid, binding, and enforceable custodial agreement.[8] DCOs likewise must address the enforceability of netting arrangements and the DCO's interest in collateral.[9] Margin also must be held in a manner consistent with applicable segregation requirements.[10] Also, while not specific to margining arrangements, Swap Entities DCOs, and futures commission merchants ("FCMs") must satisfy risk management requirements addressing operational and other relevant risks.[11]

Notably, none of these requirements prescribe the particular operational or technology infrastructure that a Swap Entity, DCO, or FCM must use to effect transfers of, or record interests in, eligible collateral assets. Rather, regardless of the infrastructure used for these purposes, an asset retains its margin eligibility so long as it is held by a custodian satisfying

[7] *See* 17 C.F.R. § 23.151 and 12 C.F.R. §§ 45.2. 237.2, 349.2, 624.2, and 1221.2 (definition of eligible master netting agreement).

[8] *See* 17 C.F.R. § 23.157(c)(2) and 12 C.F.R. §§ 45.7(c)(2). 237.7(c)(2), 349.7(c)(2), 624.7(c)(2), and 1221.7(c)(2).

[9] *See* 17 C.F.R. § 39.27(b); *see, also* 17 C.F.R. § 39.13(g)(14) (requiring a DCO that permits its clearing members to pledge assets for initial margin while retaining such assets in accounts in the names of such clearing members to ensure that such assets are unencumbered and that such a pledge has been validly created and validly perfected in the relevant jurisdiction).

[10] *See* Note 8, *supra* (segregation requirements for uncleared swap initial margin); *see, also* 17 C.F.R. §§ 1.20-30, 22.1-22.17, and 30.7 (segregation requirements for futures and cleared swaps).

[11] *See, e.g.,* 17 C.F.R. § 1.11 (FCM risk management programs), 17 C.F.R. § 23.600 (Swap Entity risk management programs); National Futures Association ("NFA") Interpretive Notice 9070 (information systems security programs); 17 C.F.R. §§ 39.10(d) (DCO enterprise risk management programs), 39.13(b) (DCO risk management frameworks), 39.18 (DCO system safeguards), and 39.27 (DCO legal risk considerations).

relevant independence and other requirements and the Swap Entity, DCO, or FCM addresses the legal enforceability and risk management considerations described above.

B. CHALLENGES TO USE OF NON-CASH COLLATERAL

Despite broad eligibility to serve as regulatory margin, existing transfer mechanics for many non-cash assets inhibit firms owning or holding such assets from posting them to satisfy applicable margin requirements. In particular, the transfer or pledge of these assets frequently can require the sequential involvement of multiple intermediaries (banks, brokers, central depositories and/or other custodians), which can make the settlement process more lengthy and complex. Some types of eligible assets, in particular shares in MMFs, do not conventionally allow for "secondary" transfers taking place away from the issuer or its transfer agent, meaning that an investor wishing to transfer the asset must first redeem it for cash and then transfer the cash instead, which in turn requires the issuer to sell assets it owns in order to fund the redemption. Additionally, across various eligible assets, relevant infrastructure typically is not in operation on a 24/7/365 basis.

These dynamics make it difficult to post non-cash collateral on a timely basis, especially considering that applicable deadlines for posting collateral can be quite abbreviated, with T+1 typically being the longest time period allowed, and some deadlines (especially for centrally cleared positions) being same-day or intra-day. Because cash collateral does not usually raise these issues to the same extent,[12] cash is commonly used to satisfy margin requirements even where non-cash assets would be eligible.

However, use of cash collateral (especially initial margin) results in increased credit risk since the cash typically takes the form, directly or indirectly, of unsecured commercial bank deposits. Also, maintaining cash balances in anticipation of having to post cash as collateral increases costs to participants relative to investing that cash in other assets.

As a result of these dynamics, market participants normally maintain their liquid reserves in income-producing non-cash assets, but must in turn liquidate those assets to generate

[12] Some cash transfers, particularly those taking place on a cross-border basis, can raise similar issues.

the cash needed to satisfy margin requirements, only to have the receiving Swap Entity, DCO, FCM or custodian reinvest the cash back into an eligible non-cash asset. Especially during periods of market stress, this process 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.

C. BENEFITS OF USING DLT FOR NON-CASH COLLATERAL

Market participants have begun using DLT in lieu of, or on an integrated basis with, pre-existing market infrastructures for various types of "real-world" assets, including (among others) eligible collateral assets such as multilateral development bank debt securities, MMFs, and gold.[13] These use cases typically follow one of two implementation formats: "books and record" or "tokenization":

- *Books and Records*: A financial institution's internal recordkeeping, accounting, reporting, or other back-office functions can be supported by DLT-based infrastructure. In these instances, the technical design of the financial institution's internal books and records system does not change the asset into a "tokenized asset" – *e.g.*, securities may remain in the financial institution's omnibus account for the benefit of customers at a central securities depository, customers who deposited such securities at the financial institution still expect custody of the securities (not a tokenized asset), and the financial institution's custody obligation remains for the securities (not a tokenized asset).
- *Tokenization:* Ownership and other rights in an asset can be represented digitally on a distributed ledger, with transfer between entities intermediated using the ledger. In some of these instances, the underlying asset is issued and custodied traditionally, but also converted onto a distributed ledger through a digital twin token representing the underlying asset. In other instances, the asset is issued and custodied natively on a

[13] *See* Global Financial Markets Association, "Impact of Distributed Ledger Technology in Global Capital Markets" (2023) (link) for a comprehensive report on the use of DLT in capital markets.

distributed ledger only, and therefore does not have a traditional asset as an underlying basis.

Use of DLT in these ways can facilitate real-time, 24/7/365 transfers of the asset without costly or complex linkages across multiple intermediaries. Importantly, the use of DLT has the potential to both increase the velocity of transfer of assets currently utilized as collateral, as well as the potential to expand the pool of assets available for use. Use of DLT can also permit peer-to-peer transfers, meaning that a person owning the asset can transfer or pledge that asset without transacting through a broker or engaging in a redemption or subscription process with the issuer.[14]

As a result of these benefits, use of DLT can help address the challenges to non-cash collateral described above by enabling the direct pledge or transfer of eligible assets without the need to convert those assets into cash. Consequently, use of DLT can facilitate asset transfers to meet margin calls during times of market stress without fire sales to generate cash collateral.

D. RECOMMENDED LEGAL AND REGULATORY FRAMEWORK

The above benefits of DLT can, with appropriate safeguards in place, help to expand use of non-cash assets as derivatives collateral without requiring the costly, intermediate step of converting those assets into cash in order to effect a timely posting of margin. In support of that goal, below we set out a legal and regulatory framework for using DLT in a manner consistent with applicable U.S. regulatory requirements around derivatives collateral.

1. Collateral Eligibility Rules

The examples provided in section C do not envisage any change in the fundamental character of the relevant asset. Whether in the context of a books and records or

[14] *See* Bank for International Settlements, "Blueprint for the future monetary system: improving the old, enabling the new" (2023) (link) for a further description of these benefits. *See, also* ISDA, Response to FCA CP23/28: Updating the regime for money market funds (Mar. 8, 2024) (link) at 5 (addressing the benefits of tokenizing MMFs); 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").

tokenization implementation format, use of DLT is typically limited to changing the technology infrastructure pursuant to which asset entitlements are recorded and transferred. Although the relevant regulator for the asset in question may impose its own rules and guidance for use of DLT to record and transfer an asset,[15] CFTC and U.S. prudential regulator collateral eligibility rules in contrast do not address—and do not depend on—the technology infrastructure used for these purposes.

Instead, as explained above, collateral eligibility rules turn on whether the asset itself falls into a category exhibiting acceptable credit, market and liquidity risks. Use of DLT does not affect those innate asset characteristics, so long as relevant ledger entries constitute an entitlement to the relevant non-cash asset, not a separate financial instrument. As a result, use of DLT-based assets as derivatives collateral does not require an expansion of the types of non-cash assets eligible to post as collateral; those assets can remain limited to the sorts of sovereign, multilateral, or otherwise creditworthy/liquid securities and gold that are eligible today.[16]

2. Additional Requirements

While the use of DLT should not affect asset eligibility, Swap Entities, DCOs, and FCMs are also subject to certain risk management and other requirements that may bear on their use of DLT for non-cash collateral. Below we address those requirements in the context of the two main implementation models for DLT, (i) books and records and (ii) tokenization.

i. Books and Records

[15] For example, depending on the regulator, asset, and jurisdiction in question, an asset-level regulator may have rules or guidance addressing interactions with relevant custodians and the extent to which the DLT must be administered by a regulated entity, whether or to what extent the relevant DLT network is permissioned, and measures to address inadvertent or unauthorized transfer or loss of assets. Rules or guidance in these areas are meant to address matters (such as money laundering or custody risks) going beyond the considerations addressed by collateral eligibility rules, which are limited to the innate credit, market, and liquidity risk profile of the asset itself. As a result, there is no need for the CFTC or U.S. prudential regulators to adopt additional requirements or conditions in these areas in order to permit use of DLT for non-cash collateral.

[16] Relevant collateral eligibility rules already are tailored to the particular collateral use case, differing as between cleared versus non-cleared transactions and variation versus initial margin. For example, in some instances only cash is eligible to serve as variation margin; in those instances, non-cash assets would remain ineligible, regardless of whether entitlements to those assets are recorded or transferred via DLT.

Because a "books and records" implementation of DLT merely involves a different internal back-office technology infrastructure, it does not affect the market, credit, or liquidity risk profile of the relevant assets, nor does it introduce a materially different sort of operational risk than other internal recordkeeping systems. As a result, it should suffice to follow existing processes to assess information security and other relevant operational risks when using DLT-based books and records to record and transfer eligible collateral assets.

ii. Tokenization

A "tokenization" implementation for DLT can raise additional questions relative to a book and records implementation due to the use of the relevant distributed ledger across multiple entities. In this case, registrants can follow their existing policies, procedures, and practices in order to assess and address the relevant risks in the following key areas: (a) legal enforceability; (b) segregation and custody arrangements; (c) credit and custodial risks; and (d) information security and other operational risks.

a. Legal Enforceability

A Swap Entity or DCO collecting non-cash assets as collateral for regulatory margin requirements must ensure that the margin arrangement satisfies legal enforceability requirements.[17] Consequently, Swap Entities and DCOs have well-established processes to conduct legal review of collateral pledge, transfer and custody arrangements, for example to obtain and maintain legal opinions concerning whether a secured party has an enforceable, first priority security interest in, or title to, relevant non-cash assets. As would be the case any time there was a material change to those arrangements, a registrant looking to use DLT for non-cash collateral could review whether such use would have implications for its previous legal enforceability analysis and, if so, conduct such additional review and analysis as reasonably necessary to confirm the enforceability of the arrangements.[18]

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[17] *See* Notes 7-9, *supra*, and accompanying text.

[18] In this regard, we note that ISDA has developed model contractual provisions for use of tokenized collateral and provided guidance to inform counsel on how to approach a legal opinion

b. Segregation and Custody Arrangements

Certain types of collateral, such as initial margin for uncleared swaps or customer collateral for futures or cleared swaps, are subject to segregation requirements, including restrictions on rehypothecation, repledge, reuse, investment or transfer of collateral.[19] Swap Entities, DCOs, and FCMs accordingly review custody arrangements to ensure that they satisfy those requirements, where applicable. Consistent with this practice, a registrant looking to use DLT for non-cash collateral can review to confirm that the relevant assets remain in the proper chain of custody, free from the claims of creditors or other third parties, subject to required limits on transfer, and with a mechanism guaranteeing delivery to the holder of the asset as reflected on the ledger.

c. Credit and Custodial Risks

Swap Entities, DCOs, and FCMs are subject to requirements relating to permissible custodians/depositories for certain types of collateral[20] and risk management requirements relating to exposures to such intermediaries.[21] To the extent such a registrant's use of DLT for a tokenized asset involves a third-party custodian or other intermediary, they can follow their existing policies and procedures designed to satisfy these requirements to assess the credit risk (if any) to that intermediary and confirm that the intermediary is registered or licensed as required under applicable laws.

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on the enforceability of collateral arrangements. *See* ISDA, Guidance for memorandum of law examining the validity and enforceability of collateral arrangements using the ISDA model provisions for tokenized collateral (May 21, 2024) (link).

[19] *See* Note 10, *supra*.

[20] *See, e.g.*, 17 C.F.R. §§ 1.20(b), 22.7, and 30.7 (permissible depositories).

[21] *See, e.g.*, 17 C.F.R. §§ 1.11(e)(3)(i) (FCM segregation risk management requirements) and 23.600(c)(4)(ii)(C) (Swap Entity collateral safeguarding risk management requirements).

d. <u>Information Security and Other Operational Risks</u>

Risk management requirements for Swap Entities, DCOs, and FCMs also address various sorts of operational risks, including information security risks.[22] Consistent with those requirements, such registrants normally follow detailed diligence processes before any material use of a new technology. Given the experience with implementing other new technologies over recent years (*e.g.*, cloud-based storage), registrants already have tried and tested processes they can follow in this regard. A registrant could accordingly follow those same processes before making use of DLT for non-cash collateral. Those processes also involve ongoing monitoring and incident response and audit protocols. These are all designed to be flexible to address any unique risks or issues posed by any particular technology, so that the registrant can fashion tailored safeguards for its use of DLT.[23]

E. RECOMMENDATIONS

Use of DLT for holding and transferring non-cash collateral has significant potential to address key challenges posed by existing market and technology infrastructure. Below are our recommendations for how CFTC registrants can unlock these benefits in a responsible and compliant manner:

<u>Recommendation 1</u>: Where DLT-based infrastructure is used solely as part of a financial institution's internal books and records, then a CFTC registrant should be able to rely on its normal processes to assess information security and other relevant operational risks, whether those risks arise from the registrant's own use of DLT-based infrastructure for its internal books and records or from the use of such infrastructure by a service provider, such as a custodian, for the service provider's internal books and records.

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[22] *See* Note 11, *supra*.

[23] For example, in the context of DLT to hold and transfer non-cash collateral, a registrant might consider measures for it to: (i) cease to accept a tokenized asset if the registrant becomes aware of any material security or operational problems or weaknesses with the DLT and associated network used to access and transfer the asset; and (ii) ensure control by the registrant or the relevant custodian over the private key necessary to authorize transfer of the asset, including measures to protect against theft, loss, or unauthorized or accidental use of the private key.

Recommendation 2: Where a CFTC registrant looks to accept eligible non-cash collateral in tokenized form, it should be able to satisfy relevant requirements by applying its existing policies, procedures, and practices in the following areas: legal enforceability; segregation and custody arrangements; credit and custodial risk; and operational risk.

Recommendation 3: Because use of DLT for these purposes need not affect the character of the relevant asset, and because registrants already have extensive policies, procedures, practices, and processes to address use of new technologies and infrastructures, no new rules or guidance should be necessary in order to permit such use.