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REPORT

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THE TOKENIZED COLLATERAL TRANSFORMATION

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In recent years, financial industry participants have been exploring the tokenization of assets to facilitate more efficient trading and settlement.[1] Asset tokenization involves digital tokens that represent tangible or intangible assets, such as stocks, bonds, cash, or securities, and creating a record of ownership for such assets on blockchains. These tokenized assets can then be more efficiently traded, transferred, used as collateral, and more.

A few financial companies have made significant headway in tokenizing assets for use as collateral. For example, earlier this year BlackRock Inc. launched its first tokenized mutual fund, the BlackRock USD Institutional Digital Liquidity Fund ("BUIDL"). Recent reports indicate it is in discussions with large global crypto exchanges to have its BUIDL token used as collateral for crypto derivatives trades.[2] Further, in 2023, BlackRock conducted a test in partnership with JP Morgan and Barclays where it used JP Morgan's platform to tokenize units of one of BlackRock's money market funds, which were then transferred to Barclays as collateral for an over-the-counter derivatives trade.[3]

Regulators are also beginning to consider the use of tokenized assets in the financial industry and how the new technology may fit within existing regulatory regimes. For example, on November 21, 2024, the Commodity Futures Trading Commission's Digital Asset Markets Subcommittee of the Global Markets Advisory Committee ("GMAC") advanced its recommendations to expand the use of non-cash collateral through the use of distributed ledger technology ("DLT"), including the use of "books and records" and tokenization ("GMAC Report").[4]

The GMAC Report noted that the use of DLT is generally limited to changing the technology for which an asset is recorded and transferred, but does not affect the characteristics of the underlying asset so long as the ledger entries constitute an entitlement to the asset and is not a separate financial instrument.[5]

Further, the GMAC Report described legal and regulatory requirements relevant to the use of DLT. With respect to tokenization specifically, the GMAC Report stated that registrants can follow their existing policies, procedures, and practices to address risks related to legal enforceability, segregation and custody arrangements, credit and custodial risk, and information security and other operational risks.[6]

Ultimately, the GMAC Report advanced three recommendations related to the use of DLT for holding and transferring non-cash collateral:

- **Recommendation 1**: 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 inter-

nal 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.

- **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.[7]

Despite the apparent willingness of industry participants and regulators alike to consider the use of tokenized collateral, many operational and legal questions remain, including with respect to the characterization and enforceability of tokenized collateral under the Uniform Commercial Code ("UCC"). Market participants must be sure that their interests in tokenized collateral are enforceable and that any security interests in the collateral have been properly perfected. Further, in the futures industry, CFTC regulations and exchange rules require certainty in the enforceability of collateral.[8]

The recent adoption of Article 12 of the UCC in a number of states is a significant step forward in providing such certainty.

Passage of UCC Article 12

Assembly Bill 10579 was introduced in New York on June 20, 2024 to enact a New York form of the official text of the (i) UCC Article 12 *Controllable Electronic Records* ("UCC Article 12"), (ii) amendments to UCC Articles 1 and 9 to implement UCC Article 12 (the "Related Amendments") and (iii) miscellaneous amendments to UCC Articles 1, 2, 2A, 3, 4A, 5, 7, 8 and 9 (collectively with UCC Article 12 and the Related Amendments, the "UCC 2022 Amendments"). As of December 20, 2024, the UCC 2022 Amendments, or some form thereof, have been enacted in the District of Columbia and 24 states[9] and enacting bills have been introduced in five additional states.[10] The enactment of the UCC 2022 Amendments will impact the negotiability of certain digital assets (including, for example, certain virtual currencies, non-fungible tokens ("NFTs") and electronic promises to pay) and the priority of liens on such digital assets under UCC Article 9 by providing legal rules to govern the transfer (both outright and for security) of interests in such digital assets.

UCC Article 12 *Controllable Electronic Records* together with certain other amendments to UCC Articles 1 and 9 provide legal rules to govern the transfer (both outright and as security) of a subset of digital assets consisting of (i) controllable electronic records ("CERs"), (ii) controllable accounts and (iii) controllable payment intangibles (collectively with CERs and controllable accounts, "Article 12 Property"), and the rights of a purchaser (including a secured party and a donee (defined below))[11] of Article 12 Property. The UCC 2022 Amendments will (among other things) facilitate the use of Article 12 Property in commerce (including as collateral) because (i) purchasers and securities intermediaries will be able to acquire their interests in Article 12 Property, free from competing property claims and (ii) secured parties will be able to control Article 12 Property to obtain super-priority status for their security interests therein. In short, UCC Article 12 enables Article 12 Property to become negotiable.

UCC Article 12 is Flexible and Dovetails with the Effective UCC Articles

UCC Article 12 and the Related Amendments are drafted (i) with technologically neutral language, to

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cover not only existing technology but also the technologies of the future, (ii) to dovetail with UCC Article 9 (a CER is a "general intangible," a controllable account is an "account" and a controllable payment intangible is a "payment intangible" (and a general intangible), each as defined in UCC Article 9) and (iii) to mirror many of the principles set forth in other UCC Articles, such as the (a) "take-free" rule, providing certain purchasers greater rights than their transferors had or had the power to transfer (i.e., protection from third-party claims of a property interest against the same Article 12 Property that Purchaser controls)[12] and the "no-action" rule which provides protection analogous to the take-free rule to certain purchasers against third-party claims of a property interest in Article 12 Property that is equivalent to but not the identical Article 12 Property purchased from the transferor ("Traceable Article 12 Property"), (b) "shelter" principle, providing purchasers with all of the rights their transferors had or had the power to transfer, even if such purchasers do not have the status to obtain such rights,[13] (c) super-priority of a security interest perfected by control,[14] (d) discharge of the rights of an account debtor after its receipt of a Change Payment Notice (defined below)[15] and (e) choice of law rules.[16]

Definition of CER

A CER is defined in UCC Section 12-102(a)(1)[17] as a record[18] stored in an electronic medium that can be subjected to control under UCC Section 12-105. The term does not include a controllable account, a controllable payment intangible, a deposit account, an electronic copy of a record evidencing chattel paper, an electronic document of title, electronic money, investment property or a transferable record. If an electronic record is not susceptible to control, it is not a CER. A CER is not an obligation because there are no parties to a CER (it is just a record, i.e., information). Some CERs, such as bitcoins,[19] have inherent value because there is a market for their sale. Other CERs only evidence rights in other property (for example, an NFT that evidences the ownership of art, real property, intellectual property, accounts or payment intangibles). Other than with respect to controllable accounts and controllable payment intangibles, UCC Article 12 leaves to other laws the question of the property rights acquired by the person who has acquired a CER.

Control of a CER

UCC Section 12-105(a) provides that a person has control of a CER if the person has the (i) power to enjoy "substantially all the benefit" of the CER, (ii) exclusive power to prevent others from enjoying "substantially all the benefit" of the CER, (iii) exclusive power to transfer control or to cause another person to obtain control of the CER and (iv) ability to identify itself as the person having the foregoing powers. The exclusivity requirements can be shared[20] or satisfied by an agent having control of the CER, if such agent acknowledges that it has such control for the benefit of such buyer or secured party (unlike under UCC Article 9, such acknowledgment does not need to be in writing).[21] Control is very important because (a) an electronic record is a CER and subject to UCC Article 12 only if the electronic record can be subjected to control pursuant to UCC Section 12-105,[22] (b) only a person having control of a CER is eligible to become a Qualifying Purchaser (defined below) and only a Qualifying Purchaser can obtain a property interest in Article 12 Property free of competing property claims (i.e., be protected by the take-free rule or the no-action rule),[23] (c) it is another method of perfection of a security interest in Article 12 Property (a security interest in Article 12 Property can also be perfected by the proper filing of an effective financing statement) and (d) similar to the super-priority afforded a secured party with control of a deposit account,[24] investment property,[25] letter-of-credit rights[26] and electronic chattel paper,[27] a security interest in Article 12 Property that is perfected by control has priority over a conflicting security interest held by a secured party that does not have control (including a security interest that was perfected earlier by the proper filing of an effective financing statement).[28] There is a rebuttable presumption that the

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requirements to have the exclusive power to (1) prevent others from enjoying substantially all the benefits of the CER and (2) transfer control or to cause another person to obtain control of the CER are satisfied, i.e., a person is presumed to have control of a CER[29] unless evidence to the contrary is provided.

Definition of Controllable Account and Controllable Payment Intangible

A controllable account and a controllable payment intangible are defined in UCC Sections 9-102(a)(27A) and (27B), respectively, as an account or payment intangible evidenced by a CER that provides that the account debtor undertakes to pay the person that has control of such CER, pursuant to UCC Section 12-105. Although the account or payment intangible that is evidenced by a CER is separate from such CER, the account or payment intangible is linked to such CER by the account debtor's obligation to pay the person that has control of such CER.

Rights of a Purchaser of Article 12 Property

UCC Article 12 includes the take-free rule (with respect to the purchase of the same Article 12 Property) and the no-action rule (with respect to the purchase of Traceable Article 12 Property). A purchaser that obtains control of Article 12 Property (i) for value,[30] (ii) in good faith[31] and (iii) without notice of *any* claim to the Article 12 Property is a "Qualifying Purchaser." A Qualifying Purchaser acquires its rights in Article 12 Property free from competing property claims to the Article 12 Property (i.e., is protected by the take-free rule or the no-action rule, as applicable). "Value," as used in the definition of Qualifying Purchaser, has the UCC Article 3 definition, which is narrower than the UCC Article 1 definition because the UCC Article 3 definition only includes consideration that was actually given (unlike the UCC Article 1 definition, which also includes a promise to do something (the UCC Article 1 definition of value is used for the attachment of a security interest in UCC Article 9)). Similar to the rules for negotiable instruments and investment property, a properly filed financing statement is not in and of itself notice of a property claim to Article 12 Property.

UCC Article 12 also includes the shelter principle. A purchaser of Article 12 Property acquires an interest in all rights in the Article 12 Property that the transferor had, or had the power to transfer.[32] Pursuant to the shelter principle, if a Qualifying Purchaser gives Article 12 Property to a person as a gift (such person, a "donee"), such donee will acquire rights in such Article 12 Property free from competing claims even though the donee is not a Qualifying Purchaser.

Other than a CER that evidences a controllable account or a controllable payment intangible, law other than UCC Article 12 determines the rights that are evidenced by the CER, and whether a purchaser (including a secured party or donee) takes the CER free of competing property rights to the CER. For example, whether a purchaser (including a secured party or donee) that obtains control of an NFT that evidences the ownership of real estate takes the real estate free of competing property rights is determined by real estate law (not by UCC Article 12).

UCC Article 12 determines the rights of a purchaser of controllable accounts and controllable payment intangibles and certain obligations of an account debtor with respect thereto. If (i) the account debtor obligated on an account or a payment intangible evidenced by a CER *agrees* to (x) pay the person in control of the CER and (y) abstain from asserting claims or defenses (to the extent set forth in UCC Section 9-403) against the transferee of the CER that evidences such account or payment intangible and (ii) such CER is transferred to a Qualifying Purchaser, the controllable account or the controllable payment intangible (as applicable) becomes the electronic equivalent of a negotiable instrument because such controllable account or controllable payment intangible has the same negotiability characteristics as a negotiable instrument under UCC Article 3, i.e., the Qualifying Purchaser acquires rights in the CER and the account or payment intangible that is linked to such CER free from competing claims.

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Upon the receipt of a notification signed (in writing or electronically) by the debtor or the purchaser (which may include a secured party or donee) of the controllable account or the controllable payment intangible (a "Change Payment Notice"), an account debtor on a controllable account or a controllable payment intangible is (as is an account debtor on an account or a payment intangible) required to discharge its payment obligations on such controllable account or controllable payment intangible by paying the purchaser; provided that if such account debtor asks for reasonable proof that the purchaser is the person now in control of the controllable account or controllable payment intangible (unlike an account debtor with respect to an account or payment intangible that is not a controllable account or a controllable payment intangible), such Change Payment Notice is not effective if the account debtor did not agree to the form of such proof to be provided when the CER was created, i.e., the account debtor continues to discharge its obligations by paying the debtor.

Choice of Law Rules

UCC Section 12-107(a) sets forth the basic rule that the local law of the CER's jurisdiction governs matters covered by UCC Article 12, and UCC Section 12-107(c) provides the rules to determine a CER's jurisdiction and allows the parties to an Article 12 Property transaction to choose the law that applies to their transaction by designating such law in their CER or the system in which their CER is recorded. If the "CER jurisdiction" is not specified as such in the CER or the system in which the CER is recorded or the jurisdiction that governs the CER or the system generally, the CER's jurisdiction is the District of Columbia and the UCC 2022 Amendments as in effect in the District of Columbia govern such UCC Article 12 matter.[33] UCC Section 9-306B applies the UCC Article 12 choice of law rules to perfection, the effect of perfection or nonperfection, and the priority of a security interest in Article 12 Property with two exceptions: (a) the perfection in Article 12 Property by filing a financing statement and (b) the automatic perfection of a security interest in a controllable payment intangible upon the sale of the controllable payment intangible.[34]

Transition Rules

There is no uniform effective date for the UCC 2022 Amendments. However, in order to preserve the agreed priorities of a security interest in the Article 12 Property, the transition rules for the UCC 2022 Amendments provide a uniform adjustment date which is defined as July 1, 2025 or the date that is one year after the effective date of the UCC 2022 Amendments in the relevant state, whichever is later.

Existing security agreements and financing statements will not need to be amended upon the effectiveness of the UCC 2022 Amendments, to the extent such security agreements or financing statements describe the collateral as all general intangibles and accounts because CERs and controllable payment intangibles are included in the definition of general intangibles and controllable accounts are included in the definition of accounts. The rules of attachment of a security interest to a general intangible and an account apply to the attachment of a security interest in Article 12 Property and such security interest can still be perfected by a properly filed effective financing statement but may, upon the effectiveness of the UCC 2022 Amendments in the relevant state, also be perfected by control. If there is a conflict between UCC Article 9 and UCC Article 12, UCC Article 9 governs.

Conclusion

Electronic records is the trend. Without the UCC 2022 Amendments, the UCC does not provide rules to govern the transfer of electronic records to evidence (i) the right to receive payments, (ii) interests in real or personal property or (iii) a medium of exchange. By enabling Article 12 Property to be negotiable, the UCC 2022 Amendments protect the rights of purchasers (including secured parties) of Article 12 Property and promote Article 12 Property commercial activity. It is crucial that not only New York enacts a form of the UCC 2022 Amendments to protect its status as a lead-

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ing commercial law jurisdiction for sophisticated commercial transactions, but also that all other states enact a form of the UCC 2022 Amendments because such uniformity is required to reduce transaction costs (including the cost of credit) and protect interstate electronic commerce.

In the futures and derivatives industry, tokenization has the potential to facilitate the more efficient movement of collateral, but before market participants and regulators can move forward in the use of tokenized collateral, they must have certainty as to the enforceability of their interests in tokenized assets. Article 12 is a significant step in supporting this certainty.

ENDNOTES:

[1]The information provided herein is current as of February 10, 2024, and will not be revised to include any subsequent updates.

[2]*See* Anna Irrera & Olga Kharif, *BlackRock Seeks Bigger Foothold in Crypto Derivatives Market*, Bloomberg Law (Oct. 18, 2024), available at https://www.bloomberg.com/news/articles/2024-10-18/blackrock-wants-crypto-exchanges-to-use-buidl-token-as-collateral.

[3]*See* Will Acworth, *Analysis: Enthusiasm Builds for Tokenisation in Collateral Management*, FIA Market Voice (July 10, 2024), available at https://www.fia.org/marketvoice/articles/analysis-enthusiasm-builds-tokenisation-collateral-management.

[4]CFTC's Global Markets Advisory Committee Advances Recommendation on Tokenized Non-Cash Collateral, Release Number 9009-24 (Nov. 21, 2024), available at https://www.cftc.gov/PressRoom/PressReleases/9009-24.

[5]*See* GMAC Report at 7-8.

[6]*See id.* at 9.

[7]*See id.* at 11-12.

[8]*See* CME Rulebook, Chapter 8 Clearing House and Performance Bonds, Rule 819, available at https://www.cmegroup.com/market-regulation/files/14-254_App1C.pdf ("Each Clearing Member hereby grants to the Clearing House to secure obligations of such Clearing Member to the Clearing House a first priority and unencumbered security interest and lien against any property, cash, securities or collateral deposited with, transferred or pledged to, or otherwise where control is given to the Clearing House by such Clearing Member. Clearing Members shall take any action that may be required by the Clearing House to create, preserve, perfect, validate or enforce any such security interest."); *see also* CFTC Rule 39.27(b), 17 C.F.R. § 39.27(b) ("A derivatives clearing organization shall operate pursuant to a well-founded, transparent, and enforceable legal framework that addresses each aspect of the activities of the derivatives clearing organization. As applicable, the framework shall provide for . . . the derivatives clearing organization's interest in collateral.").

[9]As of December 20, 2024, UCC Article 12 and certain other amendments to the UCC have been enacted in Alabama, California, Colorado, Delaware, District of Columbia, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Minnesota, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Virginia and Washington. *See* Uniform Law Commission Bill Tracker, UCC Article 12, found at: https://www.uniformlaws.org/committees/community-home?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac.

[10]As of December 20, 2024, UCC Article 12 and certain other UCC 2022 Amendments have been introduced for enactment in Massachusetts, Missouri, New York, Tennessee, and West Virginia. *See* Uniform Law Commission Bill Tracker, UCC Article 12, found at: https://www.uniformlaws.org/committees/community-home?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac.

[11]"Purchaser" is defined by UCC Sections 1-201(b)(29) and 1-201(b)(30) together, as a person that acquires an interest in property pursuant to a voluntary transaction, which includes (in addition to other persons) a buyer, a secured party and a donee.

[12]The take-free rule applies to goods pursuant to UCC Article 2, negotiable instruments pursuant to UCC Article 3, documents of title pursuant to UCC Article 7, securities pursuant to UCC Article 8 and secured transactions pursuant to UCC Article 9. The no-action rule is similar to the no assertion of adverse claim provision governing the acquisition of a security entitlement under UCC Article 8.

[13]The shelter principle applies to goods pursuant to UCC Article 2, negotiable instruments pursuant to UCC Article 3, documents of title pursuant to UCC Article 7 and securities pursuant to UCC Article 8.

[14]The super-priority rules apply to perfection by control of collateral that consists of deposit accounts, investment property, letter-of-credit rights and elec-

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tronic chattel paper pursuant to UCC Article 9.

[15]*See* UCC Section 9-406.

[16]UCC Section 1-301 provides that, except as otherwise specified in Articles 2, 2A, 4, 4A, 5, 8 and 9, parties have the right to choose the law applicable to nonconsumer multistate transactions and foreign trade transactions as long as such law has a reasonable relationship to the transaction. UCC Article 1 is applicable to all Articles of the UCC.

[17]This and all other references to UCC sections other than sections referenced in the UCC 2022 Amendments are references to sections of the UCC as adopted in the State of New York, as in effect on the date hereof.

[18]"Record" is defined in UCC 1-201(b)(31) as *information* that is stored in a medium and is retrievable in perceivable form.

[19]The UCC 2022 Amendments (i) revise the definition of "money" in UCC Article 1 to expressly exclude electronic currencies that existed and operated prior to being adopted by the government, thereby clarifying that bitcoins are not money and (ii) define "money" in UCC Article 9 to exclude from the UCC Article 1 definition of money a deposit account and money in an electronic form that cannot be subject to control under Section 9-105A (*see* UCC Section 9-102(a)(54A)). Electronic money can be perfected as original collateral by control.

[20]*See* UCC Sections 12-105(b) and (c).

[21]*See* UCC Sections 12-105(f) and (g).

[22]*See* UCC Section 12-102(a)(1).

[23]*See* UCC Sections 12-104(e) and (g).

[24]*See* UCC Section 9-327.

[25]*See* UCC Section 9-328.

[26]*See* UCC Section 9-329.

[27]*See* UCC Section 9-330.

[28]*See* UCC Section 9-326A.

[29]*See* UCC Section 12-105(e).

[30]As defined in UCC Section 3-303(a).

[31]As defined in UCC Section 1-201(b)(20).

[32]*See* UCC Section 12-104(d).

[33]The District of Columbia enacted the official text of the UCC 2022 Amendments as promulgated by the Uniform Law Commission and the American Law Institute.

[34]*See* UCC Section 9-306B(b).

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