GLOBAL BLOCKCHAIN CONVERGENCE

A "Sensible" Token Classification System

Global Blockchain Convergence ("GBC") is pleased to present a "sensible" token classification system that is based on the concept of "tokenization" and its core features. The classification system is sensible because its categories are based on the nature of a token as determined by its functionality and/or features, rather than the arbitrary choice of the technology that creates the token (digital representation). The essential nature of a digital representation forms the proper basis for legal and regulatory treatment.

GBC is an informal global organization whose primary mission is to create organic opportunities for collaboration and self-organizing communities of professionals from diverse segments of the global blockchain ecosystem, dedicated to advocating, writing about and generating proposed approaches to business, market and policy frameworks that facilitate the adoption of blockchain and complementary technologies and that advance entrepreneurship and inclusion. Our membership includes nearly 200 professionals, many with extensive backgrounds in legal, compliance and operations. Members volunteer time and resources in working groups, monthly meetings and projects to help further initiatives and education. This classification system represents one of those collaborations and does not purport to speak for all members of GBC.[*]

This document starts with an Introductory Discussion and then sets out the Basic Premises from which the system emanates. Finally, it describes a classification system based on broad categories of tokens designed to provide principles for the legal and regulatory treatment of the different classes of tokens identified.

Introductory Discussion

Physical (tangible) assets or items ("assets," for simplicity) exist in the physical world. Intangible assets do not; they are creations of the human mind and need to be represented so that other people can interact and transact with them.

The sensible classification system differs from other approaches and taxonomies in that it starts with the fact that anything, whether physical or intangible, whether a physical object or the right/entitlement to receive something (including other rights and entitlements), can be represented digitally, that is to say "digitized". In other words, anything can exist as a representation on a computer to demonstrate ownership of, entitlement to or an interest in the thing. Tokens are a type of digital representation specific to distributed ledger technology, including blockchain ("DLT") but the type of computer system or database used to create and maintain the digital representation is irrelevant to the fact that something has been digitized.

If anything can be digitally represented, then most tokens already fall within a well-developed legal and regulatory regime because they are simply digital representations of existing asset types. The act of tokenization does not change the essential nature or character of the underlying asset or item that is digitally represented by the token, it merely provides a type of form to it (expressing the entitlement to it or interest in it). Shares of stock in a company (an intangible asset) can be represented in the form of a paper certificate

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or notations in a handwritten ledger or entries in a computerized spreadsheet or a token on a blockchain. Physical gold held at a custodian can be represented in the form of a paper certificate or notations in a handwritten ledger or entries in a computerized spreadsheet or a token on a blockchain, each of which entitles the owner to receive the physical gold upon presentation or other form of authentication. Identity (another intangible asset) can be represented in the form of a paper certificate, through a dataset in a computer database or as a token on a blockchain, each of which proves the identity of a person.

Existing taxonomies and classification systems typically suffer from being either too broad or too narrow. Three category systems such as the UK's "security tokens", "e-money tokens", and "unregulated tokens" are paradigmatic of the problem. Both security tokens and e-money tokens are very specific categories that include only a narrow set of tokens that fit within very specific definitions based on existing law and regulation. On the other hand, unregulated tokens (which some tripartite systems call "utility tokens") is a category so vast as to give no hint about the myriad legal and regulatory regimes that may apply to the items within it. Moreover, "unregulated tokens" presumes that the only type of regulation that might apply to tokenized items is either securities laws or e-money laws, which does not bear up under scrutiny. Rather, the functions and features of the particular unregulated or utility token will determine its nature under law and therefore the particular regulatory regime that would apply.

This frustration about over-breadth is further borne out in the UK's definition of cryptoassets: "a digital representation of value or contractual rights that can be transferred, stored or traded electronically, and which may (although does not necessarily) utilise cryptography, distributed ledger technology or similar technology." While recognizing that anything can be represented on a blockchain or other database, the core notion behind the sensible classification system, the definition cries out for structure and a system to help guide the legal and regulatory aspects of the particular asset or item that is digitized (digitally represented) and activities associated with such asset or item.

The UK is by no means alone. Here is the proposed definition of cryptoassets in Europe's Markets in Crypto-Assets Regulation: "a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology." The Financial Action Task Force, responsible for setting anti-money laundering policy, defines "virtual asset" as follows: "a digital representation of value that can be digitally traded or transferred and can be used for payment or investment purposes." Each of these definitions is followed by exceptions and narrowings that curtail their reach but are further evidence of their over-breadth. Other jurisdictions and inter-governmental organizations have similar definitions.

The outlier is the US Commodity Futures Trading Commission. Its "Digital Assets Primer" defines "digital asset" as "anything that can be stored and transmitted electronically, and has associated ownership or use rights." Rather than stopping there and concluding that digital assets are a category, the Primer actually envisages the sensible classification system: it uses this broad definition to recognize that an understanding of the functions and features of the particular token is critical to any analysis of the laws and regulations that apply to it.

With this recognition of the scope of what can be digitally created or represented, it is important to have a more comprehensive and descriptive classification system to provide clarity about how to assess which legal and regulatory regimes apply to a particular token (which is short-hand for cryptoasset, virtual asset, digital asset and the other names used by

different stakeholders). Even starting from a sensible system does not mean the task of determining the applicable regimes is easy. It still requires an understanding of the functions and features of the token in question. But that requirement to assess is no different than what happens every day with physical and intangible assets and rights, whatever they are and however they are presented or represented. Once those functions and features are understood and the asset or item categorized, the sensible system reverts to the oft-cited principle of "same asset, same risk, same regulation" or "same activity, same risk, same regulation." Europe also has started to articulate the principle of "what is unlawful in the physical world is unlawful in the digital world." The sensible classification system expands on that principle by saying "what has been regulated a particular way for the physical world should be regulated the same basic way for the digital world."

One logical outcome of the sensible classification system would be to move many (but by no means all) cryptoassets outside the reach of anti-money laundering ("AML") regulation. As the sensible system makes plain, this is a correct outcome as a legal matter based in the functions and features of many tokens because they are not "money" or financial instruments, which is the critical asset type for AML rules and the regulation of intermediaries for AML purposes. Nevertheless, there may be policy reasons to apply AML rules to the transfer and trading of tokens beyond those that function as money or a medium of exchange or are otherwise financial instruments due to the ease of transferability and tradability on a global basis. The sensible system takes no position on these policy arguments, other than to note that there are many forms of digital assets that do not rely on blockchain or distributed ledger technology and therefore are not subject to AML requirements. Subjecting all tokens to money laundering regimes would represent a clear departure from the principle of technology neutral regulation and the traditional divide between financial instruments and general commerce.

Basic Premises:

1. Blockchain and other DLTs are database technologies that store and allow for the transfer of information in a secure manner maintaining digital integrity, which permits the creation and maintenance of anything in digital form without risk of "double-spend" (referred to for simplicity as "DLTs").

2. "Tokens" are the shorthand name for assets or items ("assets," for simplicity) that are created or maintained on DLTs, including both natively DLT assets (defined next) and digitized assets (defined below); often referred to, variously, as cryptoassets, cryptocurrencies, virtual assets, virtual currencies, digital assets, convertible virtual currencies, etc.

3. "Natively DLT assets" are tokens that are created, maintained and utilized on a specific DLT or smart contract and are an integral feature of the DLT or smart contract.

4. "Digitized assets" are a digital representation of any other type of asset. Digitized assets do not need a blockchain to be created or maintained; they could be created and exist on any type of database technology, whether centralized or decentralized, whether or not using cryptography, whether or not using a distributed ledger. But if the digitized asset is represented on a DLT, it is a type of token; that is to say, it has been tokenized. Put another way, tokenized assets are the subset of digitized assets that use DLT databases.

5. As a digital representation of some type of asset, digitized assets are not distinct from the asset they represent. Rather, they are a simple right to receive that asset, whether the asset is physical and subject to delivery or intangible and delivered through notations on a database (including but not limited to a DLT).

6. There is no change in the essential character of most assets simply because they are tokenized. New legal and/or regulatory regimes are needed only where we do not have well-defined legal and regulatory regimes for an asset and where a risk/policy assessment calls for one.

7. Illustration: everything we see on internet shopping sites is a digital representation of an asset, whether tangible (e.g., shoes) or intangible (e.g., gift certificate). The underlying database is different but regardless of the database what we do when we buy the item is get the right to receive it in the future (maybe immediately, in the case of the gift certificate; maybe in the future in the case of the shoes [and if the shoes haven't been made yet, maybe further into the future]).

8. There is no valid reason to distinguish between a tokenized item on a decentralized DLT and a tokenized item on a centralized DLT other than based on the terms and conditions of its creation and maintenance (which could be set by a system contract, smart contract or combination of code and text contract (sometimes called "Ricardian contract")).

9. These concepts apply whether the tokenized asset is represented by a fungible or non-fungible token.

10. Tokens of the same category or of different categories may be exchanged (transferred, bought or sold) and such transactions have no impact on the classification of either token. Whether these transactions may occur on the same platform or between platforms also has no impact on the classification of either token.

11. These concepts apply whether the protocol, system or smart contract that creates the digital representation relies on an account-based system or a token-based system. See New York Fed blog post explaining the difference.

12. The sensible classification system also rejects the idea of looking for a payment or investment purpose to classify a token.

- First, tokenized assets should follow their traditional characterization whenever possible in order to maintain the principle of technology neutrality.

- Second, given the comparative ease with which any digitized (including but not limited to tokenized) asset can be transferred, it becomes theoretically possible for anything to be used as a form of payment, depending on the circumstances.

- Third, investment or payment purposes may depend on the desire or motivation of a specific party, which could lead to conflicting results depending on who is involved. Determining a legal or regulatory regime based entirely on intent is too arbitrary to provide any legal certainty to the parties involved (including but not limited to regulators) as to how an asset will be treated.

- Fourth, just because an item may be used for payment in one narrow set of circumstances does not mean it should automatically receive treatment as a generic means of payment. For example, in-game gold may be a means on payment in a particular game but it is not regulated like e-money. Loyalty points are another example.

- Fifth, the same holds true for investments. There are many items people buy and hold as "investments" that are not regulated financial instruments (e.g., collectibles, art work, limited edition toys, antiques).

A Sensible Token Classification System: Following from the Introductory Discussion and the Basic Premises, here is the sensible system.

I. Physical asset tokens: any digital representation of a tangible (real-world) asset created and maintained on a DLT (that is, tokenized). This category is very broad and could be divided into smaller categories based on the particular type of tangible asset (e.g., gold coin physical asset tokens, Air Jordan physical asset tokens, cup of coffee physical asset tokens versus coffee cup physical tokens, etc.).

   A. The legal and regulatory treatment is the same as the treatment today of the same physical item represented on an online shopping site and may depend on the specific physical item that is tokenized and the site's terms and conditions

      1. E.g., if the sale or transfer of firearms is regulated or restricted, the same would be true for the tokenized firearm

   B. The nature of the physical asset token may differ depending on the terms and conditions pursuant to which it has become tokenized because the rights or entitlements associated with the token and/or the underlying item might be set in those terms and conditions (which could include the terms and conditions of a smart contract)

   C. There may be requirements on the custodian of the physical item, but they would be no different from the requirements traditionally imposed on the custodian of that item and would depend on the nature of the item, the specific role of the custodian and the terms and conditions of its contract

   D. The guiding principle for regulation of the asset would be stated as follows: same asset equals same risk, which results in same regulation

   E. The guiding principle for the regulation of activities related to physical asset tokens might be stated as follows: same item with same activity equals same risk, which results in same regulation

   F. The simple fact that tokenization can result in greater liquidity (e.g., ease of trade) should not result in different or new regulation

   G. Certain physical asset tokens might have functions and features of a commodities-based futures contract, forward contract or derivative. In these instances, after scrutiny of the construction, the token should follow the classification of the type of

instrument it would be without a DLT foundation. Such tokens might fall within the intangible asset token category discussed below

II. Services tokens (includes music, digital art): any digital representation of services to be provided by one or more persons/entities to other person(s)/entities. This category also includes music and purely digital art files (the intellectual property underlying the music or digital art file may be an intangible asset token, discussed next, if not transferred with the file). This category is also quite broad because it includes any type of services and digital art/music such that it is susceptible to sub-categorization (e.g., cleaning services tokens, personal performance tokens versus concert tokens, legal services tokens, etc.).

A. The regulation of this token type follows the same principles set forth for physical asset tokens but the guiding principle for regulation is stated a bit differently because these are activities not items: same service/activity equals same risk, which results in same regulation

1. If the activity was unlawful before, it remains unlawful if tokenized (e.g., a contract for murder, hiring someone to hack into a computer system)

B. The applicable terms and conditions may set the specifics of the services and include limitations (or not) on any associated intellectual property and changes of its ownership or terms of its licensure (including by smart contract)

C. Certain tokens related to services might have functions and features of a commodities-based futures contract, forward contract or derivative. In these instances, after scrutiny of the construction, the token should follow the classification of the type of instrument it would be without a DLT foundation. Such tokens likely would fall within the intangible asset token category discussed below

III. Intangible asset tokens: any traditional intangible (non-physical) asset. Another broad category susceptible to sub-categories based on the asset class (bond tokens [security tokens], real estate ownership tokens, government program tokens, loyalty points program tokens, etc.).

A. The overall principles articulated for the prior two categories are adapted for the differences between tangible and intangible assets and for the differences between services and intangible items

B. Accordingly, an intangible item that is regulated a particular way is subject to the same regulation if it is tokenized

1. A tokenized security is still a security and continues to be regulated as such; tokenized intellectual property rights are still IP rights and continue to be regulated as such; tokenized reward points are still reward points and continue to be regulated as such

2. Some intangible items like insurance blur the line between a service and an intangible item; those situations would be resolved by reference to the existing legal and regulatory classification

C. For intangible assets, the documentation (including smart contract) can be especially important in defining the rights and obligations of the parties

D. Certain tokens related to intangible assets might have functions and features of a commodities-based futures contract, forward contract or derivative. In these instances, after scrutiny of the construction, the token should follow the classification of the type of instrument it would be without a DLT foundation. Such tokens also likely would fall within this category of the taxonomy

IV. Native DLT tokens. A narrow category of truly DLT-native tokens (e.g., Bitcoin, Ether, EOS, etc.). Might be a subset of intangible asset tokens in the sense that these tokens are just a bundle of rights with no physical item involved, although some may have an element of services (e.g., when the token is used for resource allocation on the network). This classification system treats native DLT tokens as not a subset of intangible asset tokens because the latter must be something that exists (or can exist) distinct from the blockchain that creates and maintains it. Native DLT tokens have no existence or purpose without the associated blockchain.

A. Tokens in this category are native to a DLT and, critically, do not fall into any of the above categories because they depend on the DLT for existence and purpose

B. Tokens in this category are created by a system contract or a smart contract built on the DLT; the functions and features can be defined soley by the programming or by a combination of programming and text (Riccardian contract)

C. These tokens often provide one or more of the following:

1. Incentivize behavior on the DLT, including the consensus mechanism, securing the platform, etc.

2. Governance rights associated with the platform, including the ability to make proposals and vote on proposals for changes to the platform

3. A means of payment (medium of exchange) and unit of account on the platform

4. The manner in which allocation of system resources is determined, including, but not limited to, system inflation (new tokens created by the system) and a share of the fees collected by the system for activities

D. This category applies regardless of whether the native DLT is decentralized or centralized, permissioned or permissionless, so long as the native DLT token meets at least one of the above criteria

1. In keeping with the ideas set forth above, it is the token's functions/features and inextricable nature that define this category, not the specifics of the DLT platform

2. Decentralized DLTs are defined as those with no single point of failure, no single source of truth and no single person or entity capable of or responsible for making changes to data. Centralized DLTs do not have those characteristics

3. Permissionless DLTs allow anyone with a computer and internet connection to participate without any authentication requirements

E. While this category of tokens is not completely novel such that they require a separate and new regulatory regime, their global tradability and transferability do raise questions of market integrity

1. Note that this category of tokens does not have a consistent set of functions and features, making a consistent regulatory regime difficult to determine

2. Therefore, it may make sense to regulate intermediaries who provide services related to native DLT tokens but not principals using them

F. A proposed regulatory regime is outside the scope of this paper, but there are good reasons why any such a regime should differ from existing financial instrument regimes including the following:

1. The financial purpose is limited to being a medium of exchange (payment) or may be non-existent, for example in the case of tokens with only governance features/functions

2. Integral role in supporting the network and takes the place of a central party doing so

3. Not part of the capital stack of a legal entity and creates no obligation on a legal entity or person

4. Not a derivative or swap based on an underlying financial instrument; not a form of insurance

5. Not an investment, even if some people treat it as such, because functions are critical to network survival and growth

6. Do not provide rights to financial return from the issuer

7. Price set in open market based on market's perceived value of the token, rather than based on company financial performance or financial returns

G. Certain tokens related to native DLT assets might have functions and features of a commodities-based futures contract, forward contract or derivative. In these instances, after scrutiny of the construction, the token should follow the classification of the type of instrument it would be without a DLT foundation. Such tokens likely would fall within the intangible asset token category

V. Stablecoins. A narrow category of tokens that do not fall within any other category and are designed to maintain stable value against some underlying, reference or linked asset or pool/basket of assets.

A. Excludes tokens whose functions and features mean that they fall into some existing financial instrument classification, making this is a very narrow category

1. E.g., a token representing a physical asset like gold or Air Jordan shoes would not meet the definition of stablecoin even though its value would be stable to the underlying physical asset since it is exchangeable for the asset, but rather would be a physical asset token (it can be presented for the underlying asset) or an intangible asset token if it constitutes a commodities-based futures, forward or derivatives contract

2. E.g., a token whose design was to mimic the value of a physical asset like gold or AirJordan shoes, but not entitle the holder to receive the physical item, would be an intangible asset token (possibly a commodities-based futures, forward or derivatives contract)

3. E.g., a token representing a service would not meet the definition of stablecoin even though its value would be stable to the underlying since it is exchangeable for the service or item, but rather would be a services token (it can be presented for the underlying) or an intangible asset token if it constitutes a commodities-based futures, forward or derivatives contract

4. E.g., a token whose design was to mimic the value of a physical asset like gold or AirJordan shoes, but not entitle the holder to receive the physical item, would be an intangible asset token (possibly a commodities-based futures, forward or derivatives contract)

5. The same principles would apply to intangible assets and native DLT assets

6. These principles apply whether the underlying or reference asset is a single item or a pool or basket of items. If the pool or basket includes items from different categories, the token is likely to be some form of intangible asset token. We expect many or most such tokens with an underlying pool or basket will be some form of regulated financial instrument such as a security, futures contract or derivative

B. As such, the remaining items that evade categorization in other parts of the classification system and are designed to be stable against a reference or underlying asset are likely to have an intended use as a general means of payment (outside of a specific platform or network) and stable against a fiat currency

    1. The method used to stabilize the value of the token against the reference or underlying asset may be an appropriate subject for regulation to ensure transparency and other policy goals

C. Certain tokens related to stablecoins might have functions and features of a commodities-based futures contract, forward contract or derivative. In these instances, after scrutiny of the construction, the token should follow the classification of the type of instrument it would be without a DLT foundation. Such tokens likely would fall within the intangible asset token category

D. The classification system recognizes that there may be tokens that meet the definition of stablecoin but are not subject to regulation under an existing regime. The classification system takes no position on how they should be regulated and recognizes

that there are a number of proposals being advanced by different jurisdictions around the world.

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From this basic structure, the legal and regulatory treatment should become readily apparent upon an analysis of the functions and features of a particular token, whether fungible or non-fungible. There are many forms by which an asset can be represented. DLTs are just one of the newest. There is no need to abandon sound principles when a new technology for representing things comes along.