



Digital Token Identifier Foundation (DTIF)

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To: Hong Kong Monetary Authority

Re: CP 24.01 consultation paper – Cryptoasset Exposures

The Digital Token Identifier (DTI) Foundation¹ and its Product Advisory Committee (PAC) welcome the opportunity to respond to the Hong Kong Monetary Authority's (HKMA) consultation paper 'Cryptoasset Exposures' (hereafter referred to as the 'consultation paper') setting out its proposal for implementing new regulations on the prudential treatment of cryptoasset exposures.

The DTI Foundation is the Registration Authority for the International Organization for Standardization (ISO) 24165 Digital Token Identifier (DTI) standard², an ISO standard that enables the unique identification of all fungible digital assets which use distributed ledger technology (DLT) for token issuance, storage, exchange, a record of ownership, or transaction validation. The DTI itself comprises a code - a random, unique combination of nine alphanumeric characters allocated to a digital token - and a record of data relevant to that token (the reference data), which is held by the DTI Foundation. The reference data provides information about the DLT on which the token is deployed, as well as token technical attributes (such as address, name(s) and any external identifiers).

The DTI Foundation's mission is to provide the golden source reference data for the unique identification of digital tokens. The DTI Foundation issues and maintains DTIs on a non-profit basis, to increase transparency in the digital asset space by creating a core reference data set based on open data principles and made available as a public good.

The DTI ISO standard was established to enhance efficiencies within crypto and digital asset markets, assisting regulators and market participants in managing risks through greater transparency. The DTI

¹ The DTI Foundation is a non-profit division of Etrading Software Limited: <https://etradingsoftware.com/>

² [ISO 24165-1:2021](#) and [ISO 24165-2:2021](#), Digital token identifier (DTI)

Foundation would like to highlight to the HKMA the potential benefits of using the DTI to support the requirements set out in the consultation paper.

In particular, the use of the DTI, a globally consistent identification standard for digital tokens, could be integrated within HKMA's implementation of standards set by the BCBS to provide additional consistency and transparency for regulators, banks, and market participants. The following sections outline how the DTI supports (i) the classification of digital tokens and DLT networks, and (ii) the assessment of risks associated with cryptoasset technology.

DTI supports classification of digital tokens and DLT networks

A standardised form of identification will facilitate the consistent classification of digital tokens and DLT networks across internationally active banks for reporting cryptoasset exposures. The HKMA may consider the ISO 24165 DTI standard to be the designated identifier of cryptoassets across the proposed implementation. Specifically, the DTI could be used for:

- **Cryptoasset identification:** A DTI code can be leveraged for the unambiguous identification of cryptoassets within the tables defined under paragraph 87 of the *Standardised (market risk) approach for Group 2a cryptoassets*. The HKMA may also consider DTI use within the standard tables for disclosure requirements, which will be consulted upon in due course, per paragraph 143.
- **Expression of quantity:** A DTI code can be leveraged as a unit of value when expressing quantity of a cryptoasset position, as required under paragraph 82 of the *Standardised (market risk) approach for Group 2a cryptoassets*.

The DTI is a globally recognised ISO standard that provides guaranteed uniqueness of digital tokens and DLT networks based on objective and verifiable technical data across different platforms, systems, and jurisdictions.

- **Digital Tokens:** Cryptoasset names are not standardised or unique across market infrastructure or institutions, therefore, any disclosures should relate to a global standard, such as the DTI, to ensure clarity and avoid confusion. As an example, names such as "BTC" or "Bitcoin" lack clarity as numerous tokens share these designations. By uniquely identifying each token through its technical specifications, the DTI can assist banks and market participants in verifying that they are holding and comparing the same cryptoasset. Banks filling out templates similar to the BCBS' *CAE1 Cryptoasset exposures and capital requirements* could use DTIs to specify any individual cryptoassets across all group types. A DTI could also be used for any templates similar to the

BCBS template *CAE3: Liquidity requirements for exposures to cryptoassets and cryptoliabilities* when banks are required to provide an accompanying narrative for when a single cryptoasset or cryptoliability exposure is considered material. Bitcoin has been issued a DTI of 4H95J0R2X, which, with the use of fork records, uniquely distinguishes it from any historical Bitcoin forks such as Bitcoin Cash, Bitcoin Gold, Bitcoin SV, and others. Additionally, the DTI establishes a link to any underlying asset identifier (such as a financial instrument’s ISO 6166 International Securities Identifier Number (ISIN)³). Furthermore, DTIs support the unique identification of bridged and wrapped tokens which are represented on different DLT networks to their underlying asset.

- **DLT networks:** In the cryptoasset market, a digital asset may be issued on multiple DLTs and traded or settled on multiple DLT market infrastructures. The 2017 BIS CPMI report on distributed ledger technology in payment, clearing and settlement identified several DLT-specific risks⁴ - each DLT network has a different combination of these risks. The DTI uniquely identifies and links cryptoassets with their respective DLT network, allowing banks, market participants and regulators to understand and monitor network risks for each cryptoasset. For example, the TetherUSD DTI on the Ethereum network (2QWSBDMNC) links to the Ethereum ledger identifier, and the TetherUSD DTI on the TRON network (C9N6ZVN7S) links to the TRON ledger identifier. Additionally, parachains – smaller networks connected to a larger DLT network (relay chain) – are allocated unique DTIs given their separate governance and infrastructure design.

In the case of multiple DLT financial instruments across different DLT networks that are deemed to be functionally fungible, a DTI can be issued to represent the group of tokens. The DTI in this case can enhance market transparency by enabling aggregation of the order and market data across multiple chains across the functionally fungible tokens.

DTI supports cryptoasset risk assessments

Reference data linked to the DTI could help banks and regulators assess risks associated with cryptoasset technology. A DTI could be an appropriate reference point alongside the descriptions set out in paragraph 143 on qualitative information Authorized Institutions must provide, as set out under Section 22 on *Disclosure Requirements*. Technical information captured by the DTI Registry to support such assessments includes, among others:

³ International Securities Identifier Number (ISIN) is an ISO 6166 standard to uniquely identify a security

⁴ [BIS CPMI report](#) (2017). DLT-specific risks: operational and security risks, settlement issues, legal risks, governance, data management and protection

- *Protocols*: The mechanism/protocol used to create a digital token, such as ERC-20 used for Ethereum.
- *Public distributed ledger indicator*: Whether access to reading the distributed ledger is unrestricted (versus private/permissioned) – whether the data elements specified in the DTI Registry are accessible for independent verification by the general public.
- *Fork information*: If a hard fork were to occur on the chain where a DLT financial instrument resides, the original token would have new ‘copies’ on both forks. It is important to unambiguously identify which fork and token represents the ‘original’ DLT financial instrument. The DTI can perform this identification because, following a hard fork, each ‘copy’ of the token will receive its own DTI, thereby allowing unambiguous identification of which token is the ‘real’ DLT financial instrument.

The DTI Foundation as part of its development work and in collaboration with the work on the CFI standard (ISO 10962), intends to add both a financial/non-financial field and a native/tokenised field to the DTI Registry. The DTI Foundation would note also that it is open to capturing additional details based on market and regulatory demand.

When configuring systems to consume data directly from the chain, regulators will need to ensure the link between the DLT financial instrument and the associated chain(s) where transaction data resides is understood. The DTI metadata provides a link between the DLT financial instrument and the chain(s) where the token is implemented, thereby providing a machine-readable mechanism to identify which chain(s) the transaction data will be available on. The DTI is agnostic to the technical implementation of the distributed ledger, with token reference data available for both public and private blockchains. It is also used to represent a wide range of cryptoassets – tokenised and native financial instruments represented as security tokens, stablecoins and other asset-based tokens, e-money tokens, cryptocurrencies, utility tokens, and digital or virtual assets.

All DTI reference data is accessible via the DTI Registry to support the implementation of automated mechanisms for any Cryptoasset exposures data submissions. The DTI Foundation offers a free service to download a historical snapshot of the entire DTI registry in JSON format. Daily incremental files and API connectivity services are also available as auxiliary services. For cryptoassets not yet captured by the DTI registry, any stakeholder can submit a request via the DTI webpage to create a DTI code for new or emerging ledgers and tokens quickly and efficiently to maintain standardised identification.

The DTI Foundation welcomes industry stakeholders to engage with the development of the ISO 24165 standard. ISO 24165 was developed by the ISO [subcommittee SC 8 Reference data for financial services](#) of the ISO/TC 68 *Financial Services* technical committee as a new standard to address the need to identify

digital tokens issued, traded, settled or stored across distributed ledger networks. The DTI Foundation's PAC aims to ensure the standard is consistent with evolving market and regulatory requirements. Stakeholders are encouraged to apply to join the PAC.

We are available to answer any questions you may have and would welcome the opportunity to discuss the ISO 24165 DTI standard further with the HKMA. Please do not hesitate to contact us at secretariat@dtif.org.