Dear Sir / Madam,

Public Comment on IOSCO’s Consultation Report on Policy Recommendations for Crypto and Digital Asset Markets

The Digital Token Identifier Foundation (DTIF)\(^1\) welcomes the opportunity to respond to IOSCO’s consultation report ‘Policy Recommendations for Crypto and Digital Asset Markets’ (hereafter called the ‘consultation report’) with the intention of addressing concerns related to market integrity and investor protection issues arising from crypto-asset activities.

The DTIF is the Registration Authority for the International Organization for Standardization (ISO) 24165 Digital Token Identifier (DTI) standard\(^2\), an ISO standard that enables the unique identification of all fungible digital assets which use distributed ledger technology for token issuance, storage, exchange, a record of ownership, or transaction validation. The DTI itself comprises a code, which is 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 sits behind the code and is held by the DTIF. 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 DTIF’s mission is to provide the golden source reference data for the unique identification of digital tokens. The DTIF issues and maintains DTIs on a non-profit basis, with the aim of increasing 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 DTIF agrees with the high-level recommendations set out by IOSCO in its consultation report. Many overarching objectives described within the consultation report align with the objectives of the DTI ISO

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1 The DTIF Foundation is a non-profit division of Etrading Software Limited: [https://etradingsoftware.com/](https://etradingsoftware.com/)
2 ISO 24165-1:2021 and - Digital token identifier (DTI)
standard such as ensuring that market integrity, investor protection, and transparency are consistent with traditional financial market principles of ‘same activities, same risks, same regulatory outcomes’. The DTI ISO standard has been created for the specific purpose of improving efficiency within the crypto-asset market, assisting regulators and market participants manage risks identified in the consultation, in recognition of the fact that identifiers used in traditional financial markets do not alone cater for digital assets traded and settled using distributed ledger technology (DLT). Indeed, the European Securities and Markets Authority (ESMA) has recommended the DTI is used under the European Union’s DLT Pilot which went live on 23 March 2023⁴.

In particular, the use of the DTI, a globally consistent identification system for digital tokens, addresses several recommendations and comments mentioned within the consultation report. This includes:

- **Recommendation 5**: ‘Regulators should require a CASP that operates a market or acts as an intermediary (directly or indirectly on behalf of a client) to provide pre- and post-trade disclosures in a form and manner that are the same as, or that achieve similar regulatory outcomes consistent with, those that are required in traditional financial markets’. See our response to question 8 for further information.

- **Chapter 4**: ‘Many crypto-assets are sold without important disclosures about the crypto-asset and its issuer’. We agree with this sentiment. Transparency on a token’s ledger should be readily available in a consolidated and consistent format. DTI creates a direct and reliable technical link between a token and traditional asset identifiers, such as an International Securities Identification Number (ISIN), issued by the Association of National Numbering Agencies (ANNA). The DTIF is currently working on expanding the registry to include the issuer information (such as LEI) as well as a link to a white paper where available.

- **Chapter 5**: Regulators should ‘consider how to assure, amongst other things, oversight and verification of ‘on-chain’ and ‘off-chain’ transactions’. See DTIF’s response to question 12.

- **Recommendation 11**: ‘Regulators, in recognition of the cross-border nature of crypto-asset issuance, trading, and other activities, should have the ability to share information and cooperate with regulators and relevant authorities in other jurisdictions with respect to such activities’. See DTIF’s response to question 13.

- **Chapter 8**: ‘Crypto-asset activities may introduce some unique operational and technological risks, including those arising from the underlying DLT used for the issuance, trading and provision of

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³ [esma70-460-111_report_on_the_dlt_pilot_regime.pdf (europa.eu)] (See page 54)
The DTI is an identifier which uniquely identifies a crypto-asset (e.g. a tokenized bond or a digital token) and links it to the relevant distributed ledger. Concretely, the DTI enables regulators to:

- Understand the impact on market participants and the market in the event a blockchain suffers an operational outage or event by enabling regulators to identify:
  - the financial instruments at risk, for example, when Polygon had a performance degradation in February 2023⁴, it was unclear which financial instruments – and how many – were impacted; and
  - the individual trades at risk, for example, when Terra stopped producing new blocks⁵, all settlement on that blockchain was effectively halted.

- Detect market abuse through the identification of market activity and irregular suspicious patterns. The DTI enables the identification of price discrepancies on individual blockchains where a crypto-asset is created and/or traded on multiple blockchains. For example, the Tether USD stablecoin on the Ethereum blockchain might have a different price to the Tether USD stablecoin on the TRON blockchain. Using the DTI, regulators can track the prices of individual crypto-assets as well as grouping for price analytics.

- Detect AML activities: the DTI facilitates the tracking of bridged assets and enables the detection of suspicious activities by authorities.

Other important features of the DTI include:

- It can be used to represent a wide range of crypto-assets – tokenized and native financial instruments represented as security tokens, e-money tokens and asset-based tokens, cryptocurrencies, utility tokens, and digital or virtual assets, in line with the broad term of ‘crypto-asset’ defined within the consultation paper.

- It is agnostic to the technical implementation of the distributed ledger, with token reference data available for both public and private blockchains, and links to underlying assets, if relevant.

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• It is a globally recognised and adopted ISO standard. The DTIF adheres to ISO governance requirements which include cost-recovery and fair, reasonable, and non-discriminatory principles (FRAND).
• It is consistent with the ISIN standard (ISO 6166)\(^6\) which is already embedded within the existing regulatory regimes. The DTI record contains fields to link the DTI to identifiers such as the ISIN and the DTIF includes the corresponding ISIN within these fields.

We have confined our specific responses to questions 8, 9, 12, 13 and 18 as these are directly relevant to the DTIF’s remit.

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

Yours faithfully,

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\(^{6}\) https://www.iso.org/standard/78502.html
Question 8: – Given many crypto-asset transactions occur “off-chain” how would respondents propose that CASPs identify and disclose all pre- and post-trade “off-chain” transactions?

The DTIF agrees with Recommendation 5. Some standards on pre-and post-trade disclosures in traditional financial markets are facilitated using globally recognised identifiers tailored to financial instruments (ISO 6166 International Securities Identification Numbers (ISINs) and ISO 10383 Market Identifier Codes (MICs)). IOSCO and regulators should consider the need for a similar, globally recognised identifier tailored for crypto-asset disclosures and monitoring. The DTIF considers the most appropriate form of trade and transaction transparency for CASP disclosures is the DTI ISO standard to achieve regulatory outcomes similar to those in traditional financial markets.

With a financial instrument issuance in traditional markets, a number of jurisdictions use ISINs to uniquely identify each instrument and MICs to uniquely identify each trading venue. This combined use of ISIN and MIC provides regulators with comprehensive details about the instrument and the trading venue(s) on which it is traded.

However, when financial instruments are issued as digital tokens on distributed ledger technology, the token's identity might not be included in the prospectus used for obtaining an ISIN. As a result, regulators and market participants face challenges in identifying the specific blockchain on which the tokenized instrument is stored and assessing the inherent risk associated with that blockchain.

For non-financial instrument crypto-assets, like 'cryptocurrencies,' it is essential to clearly identify the distributed ledger, just as it is crucial to identify exchanges for security tokens. Understanding the distributed ledger and its settlement chain is vital because it verifies the validity of a transaction and ensures that the person or entity transferring the crypto-asset actually owns it.

The ISO 24165 Digital Token Identifier (DTI) effectively addresses these issues by providing unique identification for the issuance, in conjunction with the ISIN, and by specifying the blockchain on which the token is stored. This way, the DTI establishes a crucial link between the blockchain and the instrument, facilitating tracking of all transfers and ownership information. In addition to providing transparency of tokens ‘on-chain,’ DTIs can also be used to identify and disclose pre- and post-trade ‘off-chain’ transactions. Any token within the DTI scope can be allocated an identifier, independent of whether transactions occur on or off-chain.
Question 9: – Will the proposed listing/delisting recommendations in Chapter 4 enable robust public disclosure about traded crypto-assets? Are there other mechanisms that respondents would suggest to assure sufficient public disclosure and avoid information asymmetry among market participants?

The DTIF supports the proposed listing/delisting recommendations in Chapter 4. Additionally, the use of the ISO 24165 Digital Token Identifier (DTI) standard as a reference point within listing documentation is another mechanism to help market participants, as well as regulators, uniquely identify crypto-assets and connect them unambiguously to the respective distributed ledgers.

Crypto-asset names are not unique, therefore, any disclosures should relate to a distinct identifier - 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. However, by uniquely identifying each token through its technical specifications, the DTI can assist market participants to verify that they are trading and settling the intended crypto-asset.

Additionally, the DTI establishes a connection to any underlying asset and can group multiple tokens representing the same asset across multiple blockchains. This grouping feature enables the monitoring of aggregated position holdings.

Furthermore, the DTI can offer assistance in reporting market data across multiple jurisdictions by utilising this international standard. By doing so, all participants can effectively differentiate between tickers, such as USDP, and promote consistency in reporting practices.

The use of White Papers within the crypto-asset industry is inconsistent. White Papers for blockchains typically define the native token and ledger implementation, while White Papers for stablecoins typically define coin price calculation, legal, and collateral mechanisms. Most smart contracts do not issue White Papers at all. Where White Papers do exist, they provide crucial insights into the underlying principles, technical details, and governance structures and DTI can be linked to them in 1-2-1 mapping.
The DTIF is working with the regulators to standardise the link of a crypto-asset to its White Paper through DTI. By default, DTIs are assigned per implementation – there is a unique identifier per crypto-asset, per DLT on which it has been created. However, the DTI standard also has a concept of Functionally Fungible Group (FFG) DTI which allows a grouping of DTIs based on their characteristics, for example:

- Multiple owner issuance (e.g., TetherUSD)
- Cryptographically wrapped assets (e.g., Wrapped BTC on Ethereum)
- Liquidity pools (e.g., Uniswap)
- Pegged assets (e.g., Binance USD on Ethereum)

Figure 1 shows a hypothetical example of a crypto-asset that has been created on two different DLTs and linked to an associated White Paper. In this case, the DTIF registry will contain identifiers for:

- Both DLTs;
- Both tokens, with links to the relevant DLTs and the White Paper;
- FFG group, grouping both tokens and the White Paper.

**Figure 1. DTI links to White Paper**
Question 12: – Do the market surveillance requirements adequately address the identified market abuse risks? What additional measures may be needed to supplement Recommendation 9 to address any risks specific to crypto-asset market activities? Please consider both on- and off-chain transactions.

To facilitate public authorities' market surveillance of the crypto-asset market and to align with supervisory practices in the traditional financial market, the use of a consistent token identifier should be considered.

Within traditional financial markets, ISIN and MIC codes identify the *what* and *where* of a transaction respectively, facilitating regulators' ability to detect and investigate market abuse. In the crypto-asset market, a digital asset may be issued on multiple DLTs and traded or settled on multiple DLT market infrastructures. The identifiers used in traditional markets do not alone enable public authorities to identify the specific DLT on which a digital asset was issued, traded or settled. However, the DTI, as an identifier designed to cater to the specific features of the crypto-asset market, can identify the specific DLT on which a token was issued or where a transaction took place: it provides the link between the digital asset and the DLT.

As noted above, the DTI can also facilitate regulators' ability to detect market abuse through the identification of market activity and irregular suspicious patterns. The DTI enables the identification of price discrepancies on individual blockchains where a crypto-asset is created and/or traded on multiple blockchains. For example, the Tether USD stablecoin on the Ethereum blockchain might have a different price to the Tether USD stablecoin on the TRON blockchain. Using the DTI, regulators can track the prices of individual crypto-assets as well as group them for price analytics.
Question 13: – Which measures, or combination of measures, would be the most effective in supporting cross-border cooperation amongst authorities? What other measures should be considered that can strengthen cross-border cooperation?

The DTIF agrees with the principles outlined in Recommendation 11. To effectively support cross-border cooperation among authorities, recognition and use of globally recognised standards to identify crypto-assets is paramount. The use of DTIs can enhance cross-border cooperation among authorities in several ways:

1. Standardisation and interoperability: The DTI as a uniform, international identification system which ensures consistent recognition of digital tokens and ledgers across borders. Authorities can easily cross-reference and verify token data with the DTI Registry.

2. Data sharing and transparency: The standardised format of the DTI enables authorities to exchange information on tokens more effectively. The DTI provides foundational reference data within a harmonised regulatory framework.

3. Efficient regulatory oversight: The DTI will support the effective monitoring of cross-border token issuance and trading activities. A harmonised identification method will help regulators more effectively identify potential risks and prompt enforcement actions when required.

See questions 8, 9, and 12 for further information.
Question 18: – Are there particular ways that CASPs should evaluate these [unique technology/cyber/operational risks related to crypto-assets and the use of DLT] risks and communicate these risks to retail investors? If so, please explain.

The DTIF considers the ISO 24165 DTI to be an important tool for both institutional and retail investors to understand unique risk profiles associated with digital tokens. IOSCO and other international standard-setting bodies may explore the adoption of a DTI as a globally recognised identifier for tokens issued and listed through CASPs. By providing investor access to a consistent token identifier and associated risk profile metadata on CASP user interfaces, both retail and institutional investors would have an effective communication channel to understand these additional risks more clearly. This approach aims to enhance transparency and enable investors to make informed decisions when engaging with different crypto-assets.

The 2017 BIS CPMI report on distributed ledger technology in payment, clearing and settlement identified the following DLT-specific risks:

- Operational and security risks
- Settlement issues
- Legal risks
- Governance
- Data management and protection

Each DLT has a different combination of these risks. Different asset issuers may issue their tokens on different DLTs, resulting in stakeholders needing to understand the DLT-specific risks associated with each token. The DTI provides a link between the crypto-asset and the DLT, to enable market participants and regulators to understand and monitor these risks for each crypto-asset.

Blockchain DLTs also present a unique risk if a hard fork were to occur on the chain where a crypto-asset resides. In this case, the original token will have new ‘copies’ on both forks. It will be important to identify unambiguously which fork and token represents the ‘real’ crypto-asset. The DTI performs this identification, because following a hard fork, each ‘copy’ of the token receives its own DTI, thereby allowing unambiguous identification of which one is the ‘real’ crypto-asset. See the World Bank’s 2017 report which provides further details on Ethereum forks (Annex: The DAO hack and Ethereum’s forks).

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7 World Bank, 2017. *Distributed Ledger Technology (DLT) and Blockchain*, p. 41.