

Digital Token Identifier Foundation (DTIF)

✉ secretariat@dtif.org

17 October 2023

Dear Sir / Madam,

Public Comment on IOSCO's Consultation Report on Policy Recommendations for Decentralized Finance (DeFi)

The Digital Token Identifier Foundation (DTIF)¹ welcomes the opportunity to respond to IOSCO's consultation report 'Policy Recommendations for Decentralized Finance (DeFi)' (hereafter called the 'consultation report') to address concerns related to market integrity and investor protection issues arising from DeFi activities.

The DTIF 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, 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, 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 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

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)

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 efficiencies in activities based on distributed ledger and blockchain technologies. The DTI provides consistent identification of digital tokens and DLT networks, assisting regulators and market participants in managing risks described 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 DLT. Indeed, the European Securities and Markets Authority (ESMA) has proposed the use of the DTI to identify crypto-assets under the European Union’s Markets in Crypto Assets Regulation (MiCA)³, in addition to recommending the use of the DTI under the EU’s DLT Pilot Regime 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: *‘A regulator should seek to require providers of DeFi products and services and other Responsible Persons, as appropriate, to identify and address material risks, including operational and technology risks.’* See our response to question 4.
- Recommendation 6: *‘A regulator should seek to require providers of DeFi products and services and other Responsible Persons, as appropriate, to accurately disclose to users and investors comprehensive and clear information material to the products and services offered in order to promote investor protection and market integrity.’* See our response to question 5.
- Recommendation 8: *‘A regulator, in recognition of the cross-border nature of DeFi products, services, arrangements, and activities, should have the ability to cooperate and share information with regulators and relevant authorities in other jurisdictions with respect to such arrangements, and activities.’* To effectively support cross-border cooperation among authorities, recognition and use of globally recognised standards to identify crypto-assets is paramount. See our response to question 9 for further information.
- Recommendation 9: *‘When analyzing DeFi products, services, arrangements, and activities, a regulator should seek to understand the interconnections among DeFi arrangements, the broader crypto-asset market, and also the traditional financial markets.’* The DTI standard allows digital assets to be mapped to traditional financial identifiers such as ISIN. Authorities and market participants can easily cross-reference and verify token data with the DTI Registry to understand

³ ESMA [second consultation package](#) on technical standards for Markets in Crypto Assets Regulation (MiCA).

⁴ [esma70-460-111_report_on_the_dlt_pilot_regime.pdf \(europa.eu\)](#) (See page 54)

the link to the assets in the traditional markets (if applicable). See our response to questions 4 and 5.

We have confined our specific responses to questions 4, 5 and 9 as these are directly relevant to the DTIF's remit.

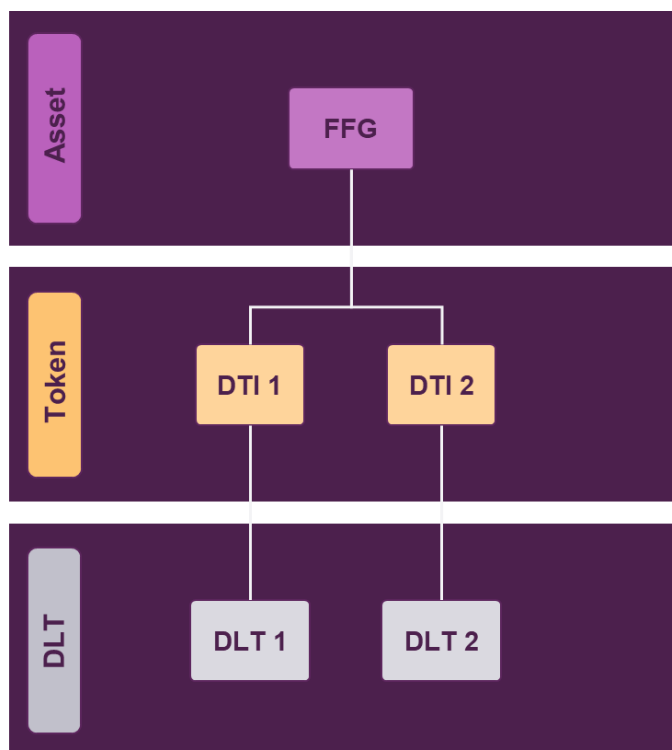
We are at your disposal to answer any questions you may have and would welcome the opportunity to discuss the DTI ISO standard further with you. Please do not hesitate to contact us at secretariat@dtif.org.

Question 4: Do you agree with the risks and issues around DeFi protocols identified in this Report? If not, please provide details. Are there others that have not been described? If so, please provide details. How can market participants help address these risks and/or issues, including through the use of technology? How would you suggest IOSCO members address these risks and/or issues?

The DTIF considers the ISO 24165 DTI to be an important tool for both market participants and regulators to understand unique risk profiles associated with digital tokens and blockchains. IOSCO and other international standard-setting bodies may consider exploring the adoption of a DTI as a globally recognised identifier for tokens and distributed ledgers within DeFi ecosystems. This approach would enhance transparency and enable market participants to make informed decisions when engaging with DeFi products and services.

A DTI provides identification and linkage across three levels:

- **Asset level:** A combination of tokens with the same underlying asset, such as a security with an ISIN. (*FFG = Functionally Fungible Group**).
- **Token level:** A DTI representing a token implemented on a distributed ledger, such as a smart contract. (*Auxiliary Token**). One token can also link to one asset, where no FFG exists.
- **DLT level:** Each distributed ledger is associated with a unique DTI (*Native Token**).



DTI identification levels: Asset, Token, DLT

**As defined within ISO 24165 DTI standard*

The DTI's capability to identify distributed ledger networks, smart contracts at the token level, and group functionally fungible tokens, provides additional market transparency to reduce the below risks discussed in Section 2 E. of the consultation report, among others.

- **Asymmetry and fraud:** Any actor who has access to the internet can generate a smart contract using any title that mirrors currently traded cryptocurrencies or digital assets. Through consistent

identification, investors are less prone to mistakenly acquire undesired tokens. The DTI distinguishes tokens uniquely by relying on objective and publicly verifiable technical attributes of the smart contract.

- **Illicit activity:** The DTI assists market participants and public authorities to unambiguously identify digital assets and DLTs using ISO standards. Specifically, the DTI helps:
 - *Detect market abuse:* The DTI enables the identification of price discrepancies on individual blockchains where a crypto-asset is created and/or traded on multiple blockchains. This can help detect market abuse through the identification of market activity and irregular suspicious patterns. 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.
- **Operational and technology-based issues:** Each DTI contains reference data on the token’s blockchain or DLT network. This enables market participants and regulators to better understand market impacts if a blockchain suffers an operational outage or event. Specifically, a DTI helps to identify:
 - Financial instruments at risk, for example, when Polygon had a performance degradation in February 2023⁵, it was unclear which financial instruments – and how many – were impacted; and
 - Individual trades at risk, for example, when Terra stopped producing new blocks⁶, all settlement on that blockchain was effectively halted.

The 2017 [BIS CPMI report](#) on DLT in payment, clearing and settlement also identified the following DLT-specific risks:

- Operational and security risks
- Settlement issues
- Legal risks
- Governance

⁵ <https://www.coindesk.com/tech/2023/02/22/polygon-blockchain-suffers-apparent-outage/>

⁶ <https://www.coindesk.com/business/2022/05/12/luna-issuer-terra-halts-blockchain-after-week-of-losses/>

- 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. The World Bank’s 2017 report⁷ provides further details on Ethereum forks (Annex: The DAO hack and Ethereum’s forks).

Question 5: Do you agree with the description of data gaps and challenges in the Report? If not, please provide details. Are there others that have not been described? If so, please provide details. How can market participants address these data gaps and challenges, including through the use of technology? How would you suggest IOSCO members address data gaps and challenges?

The DTIF agrees with the principles outlined in Recommendation 6. In a decentralised ecosystem, consistent identification could be provided by utilising technical attributes of a token or ledger, which is the methodology for generating DTIs. The use of the DTI could help market participants address the below data gaps and challenges described in in Section 2 D. of the consultation report.

- **Lack of standardization:** The use of a DTI provides a global, ISO standard for identifying digital tokens and DLTs. (Discussed in our response to question 4.)
- **Off-chain Activity:** 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.

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

Question 9: Are there particular methods or mechanisms that regulators can use in evaluating DeFi products, services, arrangements, and activities, and other persons and entities involved with DeFi? If yes, please explain.

The DTIF agrees with the principles outlined in Recommendation 8. To effectively support the ability to cooperate and share information with regulators and relevant authorities in other jurisdictions, recognition and use of globally recognised standards to identify crypto-assets is paramount. The use of DTIs is an effective mechanism that regulators can use in evaluating DeFi markets in several ways:

1. **Standardisation and interoperability:** The DTI is 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 supports the effective monitoring of cross-border token issuance and trading activities. The DTI standard also facilitates the grouping of equivalent digital tokens into a Functionally Fungible Group when they represent the same digital asset. This capability allows the DTI to support the effective monitoring of cross-border/cross-ledger token issuance and trading activities. A harmonised identification method will help regulators more effectively identify potential risks and prompt enforcement actions when required.