# ESMA Call for evidence – DLT Pilot Regime and review of MiFIR regulatory technical standards on transparency and reporting.

# Responses from FIX Trading Community

**Introductory Comments**

The FIX Trading Community (FIX) appreciates the opportunity to comment on the ESMA call for evidence on the DLT Pilot Regime. FIX is an industry-led standards organisation with representation from across the industry, including the digital assets/distributed ledger sector.

These responses have been prepared by various FIX working groups with membership drawn from market operators, sell-side firms, buy-side firms and vendors. Our primary objective is to identify areas where standards exist, or could be developed, to simplify and reduce the cost of implementing change. Hence our responses have been focused on questions that cover these topics.

We note that there are areas where we believe continuing analysis and more detailed specification will be required and, where those areas cross with our expertise, we would be glad to assist in this process.

**Q1. Please provide any general observations or comments that you would like to make on this call for evidence, including any relevant information on you/your organisation and why the topics covered by this call for evidence are relevant for you/your organisation.**

The FIX Trading Community, as well as maintaining a number of standards (including the FIX Protocol, used for the majority of trading-related electronic communications in the financial services industry), has a long history of working with regulators and industry participants to assist with the process of implementing regulatory and industry change.

Our role is never to take a position on the appropriateness of regulatory rules, instead focusing on potential challenges arising from the implementation of such rules and making recommendations to assist with such implementation. As such, we have chosen to respond to a sub-set of questions with our responses focused on the use of free and open standards, and non-reliance on any specific technology implementation, to maximize simplification and minimize cost of implementation.

We would like to point out that we are extending the FIX Protocol to support aspects of trading DLT instruments. This includes adding support for the Digital Token Identifier (ISO 24165), as well as supporting the use of other identifiers such as the Financial Instrument Global Identifier (FIGI), which can map to the DTI and/or ISIN, and which can also be used for identifying digital assets. Supporting key identifiers such as these will help to enable the industry to adopt DLT in a standardised manner.

**Q3. What are the key elements supporting the increased use of DLT in the field of financial services? What are the main obstacles, including in the technical standards, for the development and up-take of DLT-based solutions (listing, trading and settlement)? Do you plan to operate a restricted (permissioned) or unrestricted (permissionless) distributed ledger?**

Responding only to the second part of this question, we believe that lack of standards is an impediment to the adoption of DLT and that usage of standards such as ISO 24165 Digital Token Identifiers as well as messaging standards from ISO and FIX will simplify implementation for the industry. We also recommend that regulation and standards be designed to facilitate interoperability, such that DLT financial instruments should be able to trade on multiple DLT MTFs and settle on multiple DLT SSs should industry participants desire this.

**Q5. Please provide an overview of how DLT securities trade in the current market structure (incl. what types of trading system are used, the relevance of secondary market trading)? Do you see any challenges with the current market structure following the application of the DLT Pilot?**

The following is not intended as a complete description of how DLT instruments trade, but we would like to draw your attention to the following characteristics of DLT trading:

* There is a distinction between trading ‘off chain’ (i.e. where the exchanges use conventional (non-DLT) methods but, once an execution has occurred, it is then settled using DLT) and ‘on chain’ (where the trading process itself occurs using DLT).
* There are examples where multiple exchanges can trade the same DLT instrument.
* There are examples where a DLT instrument can be represented on multiple DLTs.

There are similarities between the above and the conventional trading space (particularly interoperability between trading venues) and note that the availability and usage of common rules (e.g. transparency, types of market model and reporting) and standards (e.g. for messaging and data representation) have facilitated competition and product innovation without compromising regulatory oversight or market quality.

**Q7. Transactions: Where are DLT financial instruments traded? Could there be OTC trading in those instruments?**

Yes, we believe the trading of DLT instruments on an OTC basis is in theory possible.

**Q10. Are there any standards (e.g. messaging, identification of accounts/users, product identifiers, reporting, etc.) in a DLT environment that should be taken into account when revising the RTS 1 and 2?**

Aside from the message protocol(s) available (please refer to our response to Q13 for a description of the usage and relevance of the FIX Protocol in this regard), we would like to point out two industry standards that are of direct relevance both to digital assets and RTS 1 and 2:

Firstly, ‘Digital Token Identifiers’ (DTI - ISO 24165), the ISO standard for the unique identification of digital assets. The DTI can identify the specific DLT chain where the DLT financial instrument is priced or traded. This can aid market transparency for DLT financial instruments that trade on multiple DLT chains, by enabling market participants to perform chain-level analysis such as which chain contains the best prices or highest trading volumes. A DTI can also represent a group of functionally fungible tokens in order to assist with aggregation of DLT token data across multiple DLT chains. The combination of these features supports interoperability across DLT Market Infrastructures and across DLT chains (please see our response to Q44 for further information). We would also like to note the existence of other standards that cover digital assets (and which are supported in the FIX Protocol) including the Financial Instrument Global Identifier (FIGI).

Secondly, the FIX MMT standard for trade type identification is already heavily used by the industry for handling the requirements of the RTS 1 and RTS 2 trade flag requirements and we recommend that FIX MMT be used for the reporting of digital assets activity as well. Should extensions be required to FIX MMT to support any specific needs of digital assets trading, the FIX Trading Community undertakes to analyse and implement such changes.

**Q13. To what extent would the choice of trading protocols and applications have an impact on the trading of instruments and on the requirements to publish information according to RTS 1 and 2?**

We would like to point out that most activity covered by the scope of RTS 1 and RTS 2 is traded electronically, and that most of this is transacted using the FIX Protocol. The FIX Protocol is also used by the majority of APAs for post-trade transparency for OTC and SI activity and is supported by a significant number of digital assets exchanges.

Our experience is that use of common standards throughout the trading process simplifies the data capture required for transaction-based regulatory reporting such as covered by RTS 1 and RTS 2. Furthermore, given FIX Protocol-based infrastructure is already used by a significant proportion of the market, continued use of the FIX Protocol would simplify the transition to digital assets trading and minimise implementation costs. We would finally like to note that the FIX Protocol is implementation-agnostic, i.e. is not tied to any specific technology or provider of technology.

**Q20. Is it necessary to amend the current fields and flags for post-trade transparency (modifications/cancellations/additions) for their application to DLT shares, ETFs (Tables 2, 3 and 4 of Annex I of RTS 1) and bonds (Annex 2 of RTS 2)? Do you expect any implementation issues on basis of the current fields and flags?**

With reference to RTS 1 Annex I Table 3 and RTS 2 Annex II Tables 2 (the lists of fields for post-trade transparency), we would like to raise the following points:

* Reiterating part of our response to Q3, we recommend that regulation and standards be designed to facilitate interoperability, such that DLT financial instruments should be able to trade on multiple DLT MTFs and settle on multiple DLT SSs should industry participants desire this. We therefore support the use of the DTI where appropriate in order to increase interoperability and to remove any assumptions in the proposed regulations that may limit interoperability in the future.
* Both digital assets and ‘conventional’ assets could in theory be priced in another digital asset (e.g. a cryptocurrency or stablecoin). To accommodate this, we recommend that the data type for the currency fields referenced in these field lists be extended to permit the usage of relevant digital assets (e.g. through use of ISO 24165 Digital Token Identifiers, with the caveat that ISO 24165 does not currently make a distinction between e-money instruments and other types).
* Digital asset exchanges do not at present require MICs so either this needs to become a requirement or the ‘venue of execution’ field for both RTS 1 and RTS 2 needs to accommodate alternative codes. Our recommendation would be to require such exchanges to have MICs as this would be consistent with conventional trading venues.
* Regarding trade flags, we believe it is too early to say conclusively whether any new flags will be required, but research into this space by our working groups has not yet identified anything that would require the creation of new trade flags or changes to the use of existing trade flags.

**Q24. Reporting status and transaction reference numbers (Fields 1 and 2): How will DLT MTF treat cancellations to correct previously submitted information as per Section 5.18 of ESMA Guidelines on transaction reporting being the information stored on DLTs immutable? Is it necessary to amend the current fields 1 and 2 for their application in the context of a DLT environment? Do you foresee any other reporting status other than New and Cancellation in the context of a DLT environment?**

We do not see a need to change the usage of these fields, or associated wording in the ESMA Guidelines on transaction reporting.

**Q25. Trading Venue Transaction Identification, TVTIC (Field 3): Is it necessary to amend the current field for its application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We do not consider there to be an issue with this field in the context of DLT, but it is an area we continue to explore as DLT market infrastructure evolves.

**Q26. Executing entity and submission entity identification codes; MiFID II Investment Firm indicator (Fields 4-6); Buyer details and decision maker (Fields 7-15); Seller details and decision maker (Fields 16-24): Is it necessary to amend the current fields for their application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We do not consider there to be an issue with these fields in the context of DLT, but it is an area we continue to explore as DLT market infrastructure evolves.

**Q27. Transmission of an order (Fields 25-27): Is it necessary to amend the current fields for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We do not consider there to be an issue with these fields in the context of DLT, but it is an area we continue to explore as DLT market infrastructure evolves.

**Q28. Trader, algorithms, waivers and indicators (Fields 57-65): Is it necessary to amend the current fields for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We do not consider there to be an issue with these fields in the context of DLT, but it is an area we continue to explore as DLT market infrastructure evolves.

**Q29. Short selling field (Field 62): Is short selling possible? Does it depend whether it is a DLT MTF or a DLT MTF+DLT SSS? Is it necessary to amend the current field for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields?**

We believe provision should be made for short selling of DLT instruments but do not feel we can answer this question with any great certainty without exploring this topic further.

**Q30. *Transaction details (Fields 28-40):* Is it necessary to amend the current fields for their application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We do not consider there to be an issue with these fields in the context of DLT, but it is an area we continue to explore as DLT market infrastructure evolves.

**Q32. Issuer related fields (Field 5): Is it necessary to amend the current field for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We can see no reason why the LEI would not be the most appropriate field for use in the context of DLT.

**Q33. Venue related fields (Fields 6-12): Is it necessary to amend the current field for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We believe all these fields to be appropriate for use in the context of DLT.

**Q34. Notional (Field 13): Is it necessary to amend the current field for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We believe it would be appropriate to allow ‘notional’ to be expressed in e-money tokens. This may, for example, require the ability for ‘currency’ fields to be expressed in both ISO 4217 currency codes and ISO 24165 digital token identifiers (DTIs).

**Q35. Bonds or other forms of securitised debt related fields (Fields 14 – 23): Is it necessary to amend the current field for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

We believe all these fields to be appropriate for use in the context of DLT.

**Q37. Do you think the definition of “order” is still applicable to the DLT context? Are the order record keeping requirements in Article 25 and related RTS 25 applicable in the DLT context? If yes, how do you envisage to comply with such requirements? If no, please justify your answer.**

We believe that the concept of an ‘order’ is applicable to DLT activity. Regarding RTS 25 order record keeping requirements, we do not consider there to be any issues in the context of DLT, but it is an area we will continue to explore as DLT market infrastructure evolve.

**Q38. Can chains of transmission on DLT financial instruments occur?**

Yes, we believe this is in theory possible.

**Q39. Is it possible to split or aggregate orders? In or out the DLT? Or both?**

Yes, we believe this is in theory possible.

**Q42. Do you think the definition of “transaction” is still applicable to the DLT context?**

Yes.

**Q43. General fields (Fields 1 - 3), ISIN for RTS 1-3: Is it necessary to amend the current fields for the application in the context of a DLT environment? Do you expect any implementation issues on basis of the current fields? Should new fields be added in the context of a DLT environment?**

The addition of the DTI (whether in the General fields section or in a different section) can address the DLT specific challenges associated with identification of DLT financial instruments after a DLT fork event, and can also assist in supporting the evolution of multiple DLT trading and settlement models. Please see our response to Q44 for further details.

We recommend that ESMA also look at the value other identifiers for crypto and digital assets might bring to data quality. The Financial Instrument Global Identifier (FIGI) is one such standard - recently extended for crypto and digital assets. FIGI is capable of mapping to both DTI and ISIN and can bring additional granularity by reason of the hierarchy function that permits allocation at asset, currency pair and trading platform level.

**Q44. Should a new field indicating the DTI be added to RTS 23 and RTS 1-3? What kind of analysis could be performed on a tokenised security by coupling ISIN and DTI information?**

The addition of the DTI in combination with the ISIN provides the following benefits:

* Assist in supporting multiple trading and settlement models:
  + The addition of the DTI enables market participants and public authorities to identify the specific chain associated with any price or trade or settlement. The inclusion of this information is an important element to enable trading and settlement of a DLT financial instrument across multiple DLTs
  + The DTI can also represent a group of DLT financial instruments across multiple DLT chains that are deemed functionally fungible. The inclusion of this information can assist with market transparency by enabling aggregation of the order and market data across multiple DLT chains across the functionally fungible DLT financial instruments.
* Assist with identification of the DLT financial instrument after a “fork” event:
  + In the event of a fork on a blockchain containing a DLT financial instrument, each fork will contain its own copy of the original token representing the DLT financial instrument. The inclusion of the DTI provides the ability to uniquely identify which copy of the token represents the DLT financial instrument after a fork event.

Therefore, in addition to the instances already cited by ESMA in this consultation, the inclusion of the DTI in RTS 23 and RTS 1-3 would add value as well.

**Q45. Is the ISIN sufficient to ensure uniqueness of a given tokenised financial instrument? Is there any element of the DTI standard that you consider should be added as a separate field in RTS 23 and RTS 1-3?**

The DTI enables identification of the DLT that is used for trading and settlement of any given DLT financial instrument. Its addition to RTS 23 and RTS 1-3 helps remove assumptions embedded in these regulations about the specific DLT trading and settlement models that the market may ultimately adopt. Additionally, after a fork event, the DTI will enable unambiguous identification of the DLT financial instrument. For these reasons, in addition to the instances already cited by ESMA in this consultation, the inclusion of the DTI in RTS 23 and RTS 1-3 would add value.

Please also see our answer to Q43 in terms of making an assessment on how combinations of relevant other identifiers (including the FIGI) could bring value to the unique identification of digital assets in reporting when used in combination with ISIN and DTI.

**Q50. Do you/your organisation plan to offer settlement of DLT securities in e-money tokens? If yes, what would be the most appropriate way for reporting these transactions? Do you agree with ESMA’s proposal on how to populate the currency fields when the financial instrument is priced in e-money tokens?**

We believe that it is possible that both DLT and non-DLT instruments could potentially settle in both e-money tokens and fiat currencies and advise that these scenarios be catered for in regulation. We recognise the concern that some e-money tokens may in theory be highly volatile/illiquid and hence, where used for regulatory reporting or calibration, may introduce instability in the data. As such, using a fiat currency as a proxy may be a workable solution but we advise that the actual token used plus the exchange rate used to convert to the fiat currency also be provided in such cases.

**Q51. Do you consider it possible that transactions in DLT securities could be settled in different currencies and/or different e-money tokens? If yes, please explain what would be the most appropriate way for converting such transactions in EUR.**

Yes we believe this is possible (and also the possibility that non-DLT instruments may settle in e-money tokens). We therefore advise that a solution be developed for converting to EUR for the purposes of RTS 3 and, given our members’ deep understanding of both the DLT environment and the implementation details of MiFIR, we would be happy to assist in the formulation of such a solution.

**Q58. Taking into consideration the variety of technologies available in the DLT world, what is, in your opinion, the most efficient way to admit regulators as regulatory observer participants? Please explain your answer.**

We would like to refer to our response to Q59 describing how use of free and open standards simplifies implementation.

**Q59. Do you have any suggestion to ensure interoperability among DLT MTFs, DLT TSS and the regulators as described in Paragraph 126? Please explain your answer.**

Experience has shown us how the usage of free and open messaging and data standards simplifies implementation, reduces costs and risk, and lowers barriers to entry for new business models or new entrants. The high adoption levels of standards such as ISO 20022 and the FIX Protocol indicate a high level of interoperability between market participants (and their regulators) and strongly recommend that the usage of such standards be a focus for the DLT environment.

We would also like to draw your attention to FIX Orchestra. This is a standard for defining meta-data for standards. It is developed and maintained by the FIX Trading Community and used for defining the FIX Protocol. It has potential use more broadly in regards to standards definition and provides benefits in terms of having a common schema (i.e. is agnostic to the standards it is being used to define) and is designed to be machine-readable.

**Q60. Do you have any suggestion to ensure interoperability among different DLT MTFs and/or DLT TSS as described in Paragraph 127? Please explain your answer.**

We would like to make a similar point to that made in our response to Q59. The usage of free and open data standards simplifies implementation, reduces costs and risk, and lowers barriers to entry for new business models or new entrants.

Additionally, the use of the DTI can assist in interoperability in the following use cases:

* In the case of the same DLT financial instrument trading on multiple blockchains, the addition of the DTI enables market participants to identify the specific chain associated with any price or trade and therefore enhances market transparency by enabling analysis of best prices per chain. Regulators will also be able to take into account the chain where a given trade occurred when performing their market abuse monitoring function.
* Where DLT financial instruments on different chains are deemed to be functionally fungible, a DTI can also be issued to represent the group of DLT financial instruments. The DTI in this case can enhance market transparency by enabling aggregation of the order and market data across multiple chains and across the functionally fungible DLT financial instruments.