



European Securities and
Markets Authority

Call for evidence

**DLT Pilot Regime and review of MiFIR regulatory technical standards on
transparency and reporting**



Responding to this paper

ESMA invites comments on all matters in this paper and in particular on the specific questions summarised in Annex 1. Comments are most helpful if they:

1. respond to the question stated;
2. indicate the specific question to which the comment relates;
3. contain a clear rationale; and
4. describe any alternatives ESMA should consider.

ESMA will consider all comments received by **4 March 2022**.

All contributions should be submitted online at www.esma.europa.eu under the heading 'Your input - Consultations'.

Publication of responses

All contributions received will be published following the close of the consultation, unless you request otherwise. Please clearly and prominently indicate in your submission any part you do not wish to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure. A confidential response may be requested from us in accordance with ESMA's rules on access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by ESMA's Board of Appeal and the European Ombudsman.

Data protection

Information on data protection can be found at www.esma.europa.eu under the heading '[Data protection](#)'.

Who should read this paper?

This call for evidence is of particular interest for trading venues, securities settlement systems and entities that are considering operating under the DLT Pilot, as well as for market participants that plan to use DLT market infrastructures.



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1 Executive Summary

Reasons for publication

The Regulation on a pilot regime for market infrastructures based on distributed ledger technology (DLT) (“the DLT Pilot”) aims at developing the trading and settlement for ‘tokenised’ securities. The DLT Pilot requires ESMA to assess whether the regulatory technical standards (RTS) developed under MiFIR relative to certain pre- and post-trade transparency and data reporting requirements need to be amended to being effectively applied also to securities issued, traded and recorded on DLT.

This call for evidence seeks feedback from stakeholders on the need to amend the RTS on pre- and post-trade transparency and data reporting requirements in the context of the DLT Pilot. While the text of the DLT Pilot is not yet finalised, a political agreement between the EP and the Council was reached on 24 November 2021. ESMA considers it important to already consult at this stage since the DLT Pilot Regime is likely to start applying in the beginning of 2023, which leaves only little time for the assessment and potential amendments of the RTS.

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Section 3 presents briefly the main elements of the DLT Pilot. Section 4 seeks input from stakeholders on the use of DLT for trading and settlement. Section 5 present the RTS on pre- and post-trade transparency and data reporting requirements and seeks input from stakeholders on the need for amending these RTS. Finally, Section 6 discusses the possibility of regulators directly accessing the DLT.

Next Steps

Stakeholders are invited to provide comments by 4 March 2022. Based on the feedback received, ESMA will reflect whether amendments to the RTS are necessary. Should ESMA conclude that such amendments are necessary, ESMA would consult the public on its proposal in a consultation paper before submitting the final draft RTS to the European Commission for adoption.

2 Introduction

1. The proposal of the European Commission (EC) for a Regulation on a pilot regime for market infrastructures based on distributed ledger technology (DLT) (“the DLT Pilot”) is part of a package of measures proposed by the EC to further enable and support the potential of digital finance in terms of innovation and competition while mitigating the associated risks. The EC’s Digital Finance Strategy includes also the draft Regulation on Markets in Crypto-assets Regulation (MICA) and the draft Digital Operational Resilience Act (DORA).
2. The DLT Pilot aims at developing the trading and settlement for ‘tokenised’ securities, i.e. digital representations of traditional securities and enabling market participants as well as EU regulators to gain experience on new opportunities and issues raised by DLT while ensuring financial stability, investor protection and market integrity. Co-legislators reached a political agreement on the DLT Pilot on 24 November 2021.
3. The DLT Pilot includes a recital requiring ESMA to assess whether the regulatory technical standards (RTS) developed under MiFIR relative to certain pre-and post-trade transparency and data reporting requirements need to be amended to being effectively applied also to financial instruments issued, traded and recorded on DLT.
4. This call for evidence aims at seeking input from stakeholders as to the need for amending the RTS on pre- and post-trade transparency requirements, i.e. RTS 1 (equity transparency), RTS 2 (non-equity transparency), RTS 3 (double volume cap and provision of data) and the RTS on data reporting requirements, i.e. RTS 22 (transaction reporting), RTS 23 (reference data), RTS 24 (order record keeping) and RTS 25 (clock synchronisation).
5. In line with the objective of the DLT Pilot to remove obstacles hampering the use of DLT and to create legal certainty for the use of DLT for trading and settlement, ESMA considers that any potential amendments to the RTS on transparency and data reporting should be assessed against this overall objective. Amendments to the RTS should not result in increasing the regulatory burden for DLT market infrastructures (DLT MIs) compared to trading venues making available for trading standard financial instruments.
6. Lastly, the current requirements in the RTS on pre- and post-trade transparency and data reporting requirements are technology neutral. ESMA considers that, to the extent feasible, this approach should be maintained also for DLT securities and/or DLT MIs.
7. The call for evidence is structured as follow: Section 3 provides a high-level overview of the DLT Pilot as agreed by co-legislators on 24 November 2021, Section 4 discusses the use of DLT for trading and settlement, Section 5 includes ESMA’s reflections on the need

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0594>

for amending the transparency RTS (Section 5.1) and the data reporting RTS (Section 5.2). Finally, section 6 covers the topic of regulatory access to the DLT.

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.

3 Main elements of the DLT Pilot

8. The presentation of the main elements of the DLT Pilot reflects the political agreement reached by the European Parliament and the Council of 24 November 2021. Co-legislators are expected to formally sign off on the file by Q1 2022, which should allow for the publication of the Regulation in the Official Journal in spring 2022. The DLT Pilot will start applying 9 months after entry into force, i.e. in the beginning of 2023.
9. The DLT pilot introduces three categories of DLT market infrastructures (DLT MI): DLT Multilateral Trading Facilities (DLT MTF), DLT Trading and Settlement Systems (DLT TSS) and DLT Settlement Systems (DLT SS). DLT MIs can request limited exemptions from specific requirements in EU legislation (MiFID II, CSDR), provided they comply with the conditions attached to those exemptions and compensatory measures requested by the relevant NCA. The permission to operate a DLT MI may come in addition to an authorisation as a CSD or as an investment firm (or regulated market) or can be granted to new entrants that will have to meet the relevant MiFID II/ CSDR requirements, except those for which the applicant requests, and has been granted, an exemption.
10. A DLT MTF is an MTF as defined in MiFID II operated by an investment firm or a market operator. It may apply for an exemption to be introduced in parallel to MiFID II to allow for direct retail participation to DLT MTFs, provided that appropriate compensatory measures are in place. A DLT MTF and its members or participants may be exempted from the transaction reporting obligations provided that the DLT MTF keeps the relevant details of all transactions executed through its systems and that it grants direct and immediate access to such details to the regulators.
11. A DLT SS is a settlement system, operated by a CSD that settles transactions in DLT financial instruments. It may require exemptions² from some definitions under CSDR (dematerialised forms, transfer orders, securities account) as well as from rules on recording of securities, intermediation, outsourcing, cash settlement or standard link/access, and might not be designated as a system under the Settlement Finality Directive, provided that appropriate compensatory measures are in place.
12. A DLT TSS is a DLT market infrastructure operated by an investment firm or a market operator or by a CSD that combines the activities of both a DLT MTF and a DLT SS.

² Exemption mentioned in this note are without prejudice to the final text published in the OJEU.

13. Only certain DLT financial instruments may be admitted to trading /recorded by DLT MIs. DLT MIs may only admit/record shares of issuers with a market capitalisation below EUR 500 million, bonds with an issuance size below EUR 1 billion and UCITS with assets under management below EUR 500 million. The total market value of DLT transferable securities recorded at a DLT MI may not exceed EUR 9 billion, at which point the DLT MI would have to implement a pre-defined transition strategy. NCAs may set lower thresholds considering the market size and the average capitalization of financial instruments of a given type admitted to trading platforms in the Member States where the services and activities will be carried out.
14. In addition to the conditions attached to the exemptions requested, DLT MIs must comply with specific organisational requirements to mitigate the risks associated with DLT. DLT MIs must also establish a clearly defined and publicly available strategy for transitioning out of or winding down its infrastructure (the ‘transition strategy’), ready to be deployed in a timely manner, in the event that the permission or some of the exemptions granted are discontinued or if the DLT MI voluntary ceases its activities. The transition strategy must set out how members, participants, issuers and clients will be treated in such circumstances.
15. The permission is granted by the NCA for a period of up to 6 years and may be withdrawn where the conditions for operating a DLT MI are no longer met. ESMA will be charged with issuing opinions before the permission is granted.
16. The DLT Pilot is expected to start applying in early 2023, which leaves only a short period of time for ESMA to develop amendments to the RTS including their consultation, and for the EC to adopt these amendments. Therefore, for ESMA to assess the need for amending the RTS in time for the date of application of the DLT Pilot, ESMA has decided to publish this call for evidence already at this stage.
17. The political agreement reached by the co-legislators introduces a technology-neutral wording avoiding references to a specific type of DLT. In particular, the agreed text does not contain the words “*proprietary DLT*” originally mentioned in Recital 28 of the European Commission proposal. Also, Article 6(2) would allow an operator of a DLT market infrastructure not only “*to establish*” but also “*to document as appropriate*”, the rules on the functioning of the distributed ledger it operates, the rules for accessing the distributed ledger and the participation of the validating nodes. The operator should also address potential conflicts of interest and manage risk foreseeing any mitigation measures to ensure investor protection, market integrity and financial stability.
18. By consequence, the political agreement would leave, at least in theory, the door open for unrestricted, i.e. permissionless, DLTs³ that are able to comply with all applicable requirements for DLT MI.

³ Unrestricted/permissionless DLT: a DLT network in which virtually anyone can become a participant in the validation and consensus process.



19. When answering the questions in the call for evidence, stakeholders should consider the differences between permissioned⁴ and permissionless DLTs, where applicable, making a distinction between the two types of technologies and the related issues.
20. Based on the feedback received to the call for evidence, ESMA will decide on the need for amending the RTS on transparency and data reporting. Should ESMA decide to propose amendments to the RTSs, ESMA would publicly consult on those changes.

4 Use of DLT for trading and settlement

21. Crypto assets are one of the major applications of blockchain technology in finance. However, provisions in existing EU legislation may inhibit the use of DLT. The DLT Pilot aims at creating an EU framework that enables markets in crypto assets, which qualify as financial instruments (i.e., tokenised financial assets) and the wider use of DLT in financial services.
22. The use of DLT for trading and settlement is new, and in consequence both market participants as well as NCAs and ESMA's have a lack of experience as regards to DLT MI and on potential challenges for operating DLT MIs. ESMA considers it important to have a thorough understanding of the usage of DLT for trading and settlement and, in consequence, on the application of the transparency and data reporting requirements by DLT MIs.
23. ESMA is currently reaching out to stakeholders that are potentially interested in operating a DLT MI to prepare for its future tasks under the DLT Pilot. These exchanges serve to better understand the use of DLT for trading and settlement and to identify potential challenges in relation to listing, trading and settlement using DLT. More specifically, the information gathered on the operation of DLT MIs assists ESMA in assessing whether amendments to the technical standards on data reporting and transparency are necessary for the successful implementation of the DLT Pilot as well as to prepare for the further tasks allocated to ESMA under the Regulation (opinions, Guidelines, regular reporting tasks).

Q2. Please indicate whether you/your organisation is planning to operate a DLT MI under the DLT Pilot and provide some high-level explanation of the business model.

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?

Q4. Would you consider operating a DLT MTF? Would you consider operating a DLT SS without operating at the same time a DLT MTF (i.e. combined infrastructure DLT TSS)? If yes, under which conditions?

⁴ Restricted/permissioned DLT: A network in which only those parties that meet certain requirements are entitled to participate to the validation and consensus process.

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?

5 Reviewing the technical standards for pre- and post-trade transparency and data reporting

24. Recital 41 of the EC proposal for the DLT Pilot requires ESMA to assess whether the RTS developed under MiFIR particularly relative to certain data reporting requirements and pre- and post-trade transparency requirements need to be amended to being effectively applied also to securities issued and traded on DLT. In particular, 'ESMA should take into account the specificities of those financial instruments issued on a distributed ledger technology and whether they require adapted standards which would allow for their development without undermining the objectives of the rules laid down in the regulatory technical standards adopted in application of Regulation EU No 600/2014'.
25. The following subsections present ESMA's first reflections on possible amendments to the RTS on equity transparency (RTS 1⁵), non-equity transparency (RTS 2⁶) and the RTS on the double volume cap mechanism (DVCM) and the provision of information for the purposes of transparency and other calculations (RTS 3⁷) as well as to the data reporting RTS (RTS 22 on transaction reporting⁸, RTS 23 on reference data reporting⁹, RTS 24 on order record keeping¹⁰ and RTS 25 on clock synchronisation¹¹).
26. ESMA will consider amending the RTS, if ESMA receives indications from stakeholders to the call for evidence that such amendments are necessary for the successful application of the DLT Pilot.

⁵ COMMISSION DELEGATED REGULATION (EU) 2017/587 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments and on transaction execution obligations in respect of certain shares on a trading venue or by a systematic internaliser

⁶ COMMISSION DELEGATED REGULATION (EU) 2017/583 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives (Text with EEA relevance)

⁷ COMMISSION DELEGATED REGULATION (EU) 2017/ 577 - of 13 June 2016 - supplementing Regulation (EU) No 600 / 2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on the volume cap mechanism and the provision of information for the purposes of transparency and other calculations (europa.eu)

⁸ COMMISSION DELEGATED REGULATION (EU) 2017/590 of 28 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the reporting of transactions to competent authorities

⁹ COMMISSION DELEGATED REGULATION (EU) 2017/585 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the data standards and formats for financial instrument reference data and technical measures in relation to arrangements to be made by the European Securities and Markets Authority and competent authorities

¹⁰ COMMISSION DELEGATED REGULATION (EU) 2017/580 of 24 June 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the maintenance of relevant data relating to orders in financial instruments

¹¹ COMMISSION DELEGATED REGULATION (EU) 2017/574 of 7 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards for the level of accuracy of business clocks



27. ESMA is currently also carrying out a review of RTS 1 and 2 with the main objective of addressing technical issues that have emerged since the application of these RTS as well as to prepare the ground for the successful establishment of a consolidated tape. The potential amendments of the transparency RTS in the context of the DLT Pilot are a separate exercise from the ongoing RTS 1 and 2 review.

5.1 Transparency

5.1.1 RTS 1 and 2

Instruments and transactions

28. The DLT Pilot covers both DLT shares, UCITS and bonds. Hence, it is necessary to assess whether RTS 1 (shares, UCITS-ETFs) and RTS 2 (bonds) need to be amended.
29. It should be noted that UCITS funds are only subject to the MiFIR transparency regime where they meet the definition of an ETF¹². Hence, UCITS that are not constructed in the form of ETFs are not subject to the MiFID II/MiFIR transparency requirements and not covered in neither RTS 1 nor RTS 2.
30. The questions asked by ESMA aim at gaining more insights on the specific characteristics and the functioning of the type of instruments that will be in the scope of the DLT pilot compared to standard instruments and of the type of transactions that will be out of the scope.
31. RTS 1 and 2 specify transactions that are not subject to the transparency requirements when executed OTC (Article 13 of RTS 1 and Article 12 of RTS 2) and which are subject to a specific post-trade transparency flag when traded on venue. Moreover, Article 2 of RTS 1 specifies transactions not contributing to the price discovery process and which are exempted from the share trading obligation.
32. It is ESMA's understanding that interoperability, i.e. trading of the same DLT financial instruments on more than one DLT MTF or TSS or using more than one DLT SS, is very limited¹³. Moreover, it does appear challenging to trade DLT financial instruments OTC. Therefore, this call for evidence focusses on on-venue trading.
33. In relation to non-price forming transactions covered under Article 13 of RTS 1 and Article 12 of RTS 2, ESMA would like to collect information on the existence of specific non-price forming transactions/technical trades/non-addressable liquidity transactions which are not

¹² "Exchange-traded fund" means a fund of which at least one unit or share class is traded throughout the day on at least one trading venue and with at least one market maker which takes action to ensure that the price of its units or shares on the trading venue does not significantly vary from its net asset value and, where applicable, from its indicative net asset value;" (Article 4(1)(46) of MiFID II).

¹³ See Article 4(2)(b) of the proposal on a DLT Pilot which requires DLT MTF that 'the number of DLT transferable securities recorded on the DLT MTF equals the total number of such DLT transferable securities in circulation on the digital ledger technology at any given time' as well as Article 5(6).

used for 'standard' shares (and UCITS-ETFs) and bonds but are used for DLT financial instruments and should be included in such articles.

34. In relation to Article 2 of RTS 1 which refers to the share trading obligation, there appears to be no need for the definition of certain transaction types that might be exempted from being executed on-venue since it is ESMA's understanding that trading on DLT financial instruments will be on-venue.

Q6. Instrument status: Do DLT financial instruments have different characteristics than 'standard' shares, UCITS-ETFs and bonds? If yes, please elaborate and explain whether these different characteristics call for a different approach for the application of the transparency requirements?

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

Q8. Transactions: Do the lists of transactions in Article 13 of RTS 1 and Article 12 of RTS 2 reflect relevant transaction types for DLT financial instruments? If not, please explain which types of transactions are missing and why they should be added to the lists of transactions.

Q9. Can the current transparency requirements in RTS 1 and 2 be applied for DLT financial instruments (e.g. liquidity assessment, thresholds, flags, reporting fields) or would they need to be adjusted? If not, what should be the appropriate approach?

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?

Liquidity

35. The proposal for a DLT Pilot only covers shares below a certain market capitalisation (EUR 500 million), bonds below a certain issuance size (EUR 1 billion)¹⁴ and UCITS below a certain asset under management size (EUR 500 million).

36. The thresholds agreed by co-legislators and the current approach for determining the liquidity status of shares and ETFs (in Commission Delegated Regulation (EU) 2017/567) and bonds (in RTS 2) are not fully aligned.

37. The liquidity status defined in Delegated Regulation (EU) 2017/567 and RTS 2 determines the transparency obligations for the instruments (defined in RTS 1 for equity and equity-like instruments and RTS 2 for non-equity instruments). In general, illiquid instruments are subject to lighter transparency requirements.

38. The current approach under Delegated Regulation (EU) 2017/567 and RTS 2 works as follows:

¹⁴ The text of the political agreement reached by co-legislators clarifies that corporate bonds issued by issuers with a market capitalisation of less than EUR 200 million at the time of their issuance should be excluded from this threshold.

39. For shares and ETFs, the current annual liquidity assessment is based on the free float, the average daily number of transactions and the average daily turnover of a share and not on the market capitalisation¹⁵.
40. For bonds, the current approach for newly issued bonds is based on the issuance size of bonds, whereas for other bonds the liquidity assessment is performed quarterly based on the average daily notional amount traded, the average daily number of trades and the percentage of days traded over the period considered.
41. As a consequence of the different approaches under the DLT Pilot and Delegated Regulation (EU) 2017/567 and RTS 2 not all instruments eligible for the DLT Pilot Regime will be considered illiquid in the context of the MiFIR transparency requirements.
42. ESMA does not see any issues as such with this different approach under the DLT Pilot and the liquidity assessment but considered it important to make stakeholders aware of it. Moreover, Delegated Regulation (EU) 2017/567 is a Commission Delegated Act that is not based on a draft RTS. It would hence be the responsibility of the Commission to amend it should this be considered necessary

Q11. Do you anticipate any problems that may emerge from the current liquidity concepts in Delegated Regulation (EU) 2017/567 and RTS 2 for the application of related transparency requirements for DLT financial instruments? Please explain and make proposals on how such problems could be solved.

Pre-trade transparency – trading systems

43. The MiFID transparency obligations apply to trading venues and investment firms. DLT TSS and DLT MTFs would be subject to the MiFID II requirements for MTFs and would hence be in the scope of the MiFIR transparency provisions.
44. As mentioned above, it is ESMA's understanding that the DLT Pilot will cover only on-venue trading. Therefore, any consideration related to off-venue trading (trading executed by systematic internalisers and OTC) are not tackled in the context of pre-trade transparency for the different trading systems.
45. The MiFID pre-trade transparency obligations are calibrated based on the different trading systems that can be operated by a trading venue. Those requirements are defined in Table 1 Annex I of RTS 1 and Annex I of RTS 2.
46. Given that the DLT Pilot allows for DLT TSS and DLT MTFs to provide for direct retail participation with no broker intermediation, this could mean that the trading systems of DLT TSS and DLT MTFs may significantly deviate from the current trading systems used. It is

¹⁵ However, for shares traded on MTFs only and in case the free float information is not available, the market capitalisation can be used as a proxy for the free float.

therefore important to understand whether the different types of trading systems for “standard” instruments differ from those trading DLT financial instruments.

Q12. Are DLT securities traded on different trading systems as ‘standard’ shares and UCITS-ETFs (mostly continuous trading and periodic auctions) or bonds (RFQ, voice trading)? Please explain.

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?

Q14. Do the systems on which DLT financial instruments trade require tailored pre-trade transparency requirements as those per Table 1 Annex I of RTS 1 and Annex I of RTS 2?

Q15. Would the use of restricted (permissioned) vs unrestricted (permissionless) DLT represent any difference in how the pre-trade transparency requirements should be applied?

Pre-trade transparency – waivers

47. Article 4 of MiFIR allows NCAs to waive the pre-trade transparency obligations for equity and equity-like instruments. More specifically, four types of waivers are allowed:

- the reference price (RP) waiver: for systems that match orders based on a trading methodology by which the price of the financial instrument referred is derived from the trading venue where that financial instrument was first admitted to trading or the most relevant market in terms of liquidity, where that reference price is widely published and is regarded by market participants as a reliable reference price. The reference price should be either the mid-point of the current bid and offer prices where the instrument was first traded or the most relevant market in terms of liquidity, or, when this price is not available, the opening or closing price of the relevant trading session;
- the negotiated transaction (NT) waiver: for systems that formalise negotiated transactions which are:
 - a) made within the current volume weighted spread reflected on the order book or the quotes of the market makers of the trading venue operating that system (liquid equity instruments);
 - b) are dealt within a percentage of a suitable reference price (illiquid equity instruments);
 - c) subject to conditions other than the current market price of that financial instrument, which are further specified in RTS 1 (for both liquid and illiquid equity instruments);
- the large-in-scale (LIS) waiver: for orders that are large in scale compared with normal market size;

- the order management facility (OMF) waiver: for orders held in an order management facility of the trading venue pending disclosure.

48. In this context, ESMA would like to further investigate the implementation aspects of these waivers with respect to DLT-shares and UCITS-ETFs. It is ESMA's understanding that a specific DLT financial instrument is unlikely to be traded on different venues. Therefore, the reference price waiver does not necessitate the identification of the venue from which to derive the price. Concerning negotiated trades, ESMA is seeking feedback from stakeholders if the list of transactions subject to conditions other than the current market price might need to be amended to reflect the trading of DLT shares and UCITS-ETFs, for example the case of transactions contingent to the creation of a derivative contract. With regards to the LIS and the OMF waiver, ESMA is seeking feedback whether DLT shares and UCITS-ETFs trade differently in terms of sizes with respect to "standard" instruments and therefore whether the parametrisation of the LIS threshold or of the order size for orders benefitting from an OMF waiver, in particular for reserve orders, might need to be adjusted.

Q16. Is it in your view necessary to make changes to the calibration of waivers for DLT shares and UCITS-ETFs in RTS 1? Do you expect any implementation issues in the application of waivers also taking into account the above considerations?

49. Article 9 of MiFIR allows NCAs to waive the pre-trade transparency obligations for non-equity instruments. As for equity instruments, pre-trade transparency requirements may be waived for orders that are LIS compared with normal market size and orders held in an OMF of the trading venue pending disclosure (Article 9(1)(a) of MiFIR).
50. MiFIR introduces a pre-trade transparency waiver for actionable indications of interest (AIOIs) in RFQ and voice trading systems above a size specific to the instrument (SSTI) which would expose liquidity providers to undue risks and takes into account whether the relevant market participants are retail or wholesale investors (Article 9(1)(b) of MiFIR). The SSTI waiver is only a partial waiver as Article 8 of MiFIR requires a trading venue benefitting from such a waiver to still make available some minimum level of pre-trade transparency information. In such circumstances, the trading venue is required to make public at least indicative pre-trade bid and offer prices which are close to the price of the trading interests advertised through its systems and as further defined in Article 5(2) of RTS 2.
51. Pre-trade transparency obligations may also be waived for financial instruments for which there is not a liquid market (Article 9(1)(c) of MiFIR).
52. Finally, to address some specific trading patterns not initially included in MiFIR, the MiFID Quick Fix in June 2016 extended the non-equity transparency regime by providing for waivers for (i) orders for the purpose of executing an exchange for physical or EFP (Article 9(1)(d) of MiFIR) and for (ii) package orders where at least one component is above LIS or does not have a liquid market, provided that the package order does not have a liquid



market as a whole or where all components are executed on a RFQ or voice trading system and are above SSTI (Article 9(1)(e) of MiFIR).

53. The waivers above are available to DLT bonds subject to meeting the respective conditions.
54. As for equity instruments, ESMA would like to further investigate the implementation aspects of these waivers with respect to DLT bonds and whether the current framework to determine the LIS and the SSTI thresholds might need adjustments to take into account specific characteristics of DLT-bonds trading compared to “standard” bonds.

Q17. Is it in your view necessary to make changes to the calibration of waivers for DLT bonds in RTS 2? Do you expect any implementation issues in the application of waivers also taking into account the above considerations?

Post-trade transparency – deferrals and details to be published

55. The post-trade transparency regime for equity and non-equity instruments defined in MiFIR, requires the publication of information on transactions as close to real time as possible.
56. As close as real time as possible is considered to be within one minute for equity and equity-like instruments and 5 minutes for non-equity instruments.
57. However, deferred publication is also possible for LIS transactions in equity and equity-like instruments and non-equity instruments, for SSTI transactions in non-equity instruments and transactions in illiquid non-equity instruments.
58. In conjunction with the deferred publication in the cases mentioned above, Article 11(3) of MiFIR allows NCAs to provide for an additional discretionary regime of deferred publication of non-equity instruments. Such options entail:
- d) the request of publication of limited details or of aggregated transactions or a combination thereof during the time of the deferral, defined in 48 hours in RTS 2;
 - e) the possibility to allow the omission of the publication of the volume of an individual transaction during an extended period of deferral, defined in 4-weeks hours in RTS 2;
 - f) the possibility, for instruments other than sovereign bonds, to allow the publication of several transactions in aggregated form during an extended period of deferral, defined in 4-weeks in RTS 2;
 - g) the possibility, for sovereign bonds only, to allow the publication of several transactions in aggregated form for an indefinite period.

59. ESMA carried out a preliminary assessment of the fields and flags to be populated when publishing post-trade transparency information. ESMA could not identify any major issues linked to the fields and flags. One potential issue concerns the population of the field 'currency'. Currently, entities are required to publish information on the currency in which a transaction has been undertaken (based on the currency codes provided in RTS 1 and 2). However, DLT MI may settle in e-money tokens, which are not a currency and hence the field 'currency', as well as the current currency codes, may not be appropriate (see Section 5.3.1.5).
60. Furthermore, ESMA is inviting respondents to clarify in which time frame post-trade transparency reports can be considered published as close to real-time as possible (See Section 5.3.1.2 for a more detailed discussion of this topic).
61. In order to better understand the need to calibrate the post-trade transparency regime for DLT-securities, ESMA would like to gather feedback on the following questions.

Q18. What can be considered as close to real-time as possible for the publication of post-trade reports in the context of DLT-securities on DLT MIs?

Q19. Are the current deferral periods for equity and non-equity instruments appropriate for DLT securities? Please, distinguish between DLT shares, ETFs and bonds.

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?

5.1.2 RTS 3

62. RTS 3 is based on Article 22 of MiFIR which empowers NCAs to require information from trading venues, approved publication arrangements (APAs) and consolidated tape providers (CTPs) for determining the pre- and post-trade transparency requirements and the trading obligation for derivatives, as well as Article 5 of MiFIR introducing the DVCM. Article 22 of MiFIR has been amended in the context of the ESAs review and as of January 2022 ESMA may request data under Article 22 of MiFIR directly from trading venues, APAs and CTP.
63. The DVCM applies to any equity instruments and would hence also cover DLT shares and other DLT equity instruments (UCITS-ETFs). In consequence, DLT TSS and DLT MTFs trading DLT equity instruments would be subject to reporting under the DVCM. Furthermore, DLT TSS and DLT MTFs are trading venues and would hence also be subject to reporting of data for performing the various transparency calculations under MiFID II/MiFIR. Finally, while DLT TSS that are operated by a CSD may not need a separate MiFID authorisation, ESMA considers that Article 22, and in consequence RTS 3, enables ESMA to also request data from such DLT MIs.

64. ESMA carried out a preliminary assessment on whether there is the need for changing RTS 3 and concluded that most of the provisions of RTS 3 do not seem to create issues for operating DLT MIs. However, the same questions on the population of the fields 'currency' and 'instrument identification in RTS 1 and 2 as well as RTS 22-25 are also valid for RTS 3 (see Section 5.3).

Q21. Is it necessary to amend RTS 3 for the purpose of the DLT Pilot? Do you anticipate any problems with the application of RTS 3 under the DLT Pilot?

5.2 Regulatory reporting/record keeping

65. The MiFIR reporting requirements were designed to provide NCAs with a full view of the market when conducting their market surveillance activities, including cross-markets and cross-asset class trading within the EU. To achieve this goal, Articles 26 and 27 introduce a standardised reporting regime in a common format across the EU. The purpose of these requirements is to provide NCAs with an audit trail of trading activity in the financial instruments under their supervision with crucial data elements that include traders/brokers, decision makers, buyer/sellers, traded prices, amounts and accurate timestamps and informs them about all relevant circumstances under which the transaction took place.

66. Each NCA in the EU receives transaction data from the investment firms in their jurisdiction. When the transaction is executed on a trading venue, such venue is responsible for reporting all related transaction data on behalf of the executing firms that are not investment firms subject to MiFIR. This data contains information about each transaction, which, concerning instruments traded on a EU trading venue or where the underlying is traded on such venue, is combined with the reference data related to the instrument in which the transaction is executed that is published by ESMA via the [Financial Instrument Reference Database System](#).

67. An additional set of information that is used by NCAs to conduct their market monitoring activities is the order data collected in accordance with Article 25 of MiFIR. Order data information is not included in the transaction reporting and NCAs can gather such data through requests to the trading venues.

68. The proposal for the DLT pilot covers DLT 'transferable securities' as defined by Article 4 of MiFID II that are issued, recorded, transferred and stored using a DLT. DLT MI or the investment firms executing transactions on those MI cannot request exemptions from any of the following MiFIR RTS on reporting:

- h) RTS 23 on reference data reporting (stemming from MiFIR Article 27)
- i) RTS 24 on order record keeping rules for TVs (stemming from MiFIR Article 25)
- j) RTS 25 on clock synchronisation (stemming from MiFID II Article 50)

69. It should be noted that the political agreement reached by the co-legislators introduces an exemption from the transaction reporting obligation while putting the NCAs in charge of granting such exemption to DLT MTFs, DLT TSSs as well as their members or participants. These DLT MI would be able to benefit from the exemption provided that they keep the records of all transaction details as defined in Article 26(3) that are "*relevant having regard to the system used by the DLT MTF and the member or participant executing the transaction*". When granting the exemption, the NCA will have immediate and direct access to the data on these DLT MI and will need to make this data available to ESMA without undue delay.
70. Given the transaction reporting exemption, ESMA's preliminary view is that ESMA and NCAs efforts should focus on making the DLT direct access and re-distribution provisions operational. An additional set of changes to adapt the relevant parts of RTS 22 on reporting would appear neither efficient nor necessary. Consequently, DLT MTFs and DLT TSSs would need to choose between (a) the full exemption from RTS 22 which will be accompanied with the obligation to record all relevant details on the DLT and to grant direct access to the regulators and (b) the full application of RTS 22. However, the feedback provided to the questions in section 5.2.1 would still be useful for regulators to assess which Article 26 transaction details should be considered as "relevant" for the purpose of DLT MI obligation to keep these data at the disposal of regulators in the context of the exemption from transaction reporting.

Q22. Do you agree with the approach indicated in the above paragraph? Please justify your answer.

5.2.1 RTS 22 on transaction reporting

5.2.1.1 Private individuals

71. With respect to RTS 22, given that purely private individuals that do not qualify as "investment firms"¹⁶ are not subject to any MiFIR reporting rule and that such individuals may be granted access to the DLT MTF and DLT TSS under the Pilot regime, when a transaction executed on a DLT MTF is concluded between two private individuals or between one private individual and an investment firm, the transaction data received under Article 26 may be missing or incomplete.
72. Changes to MiFIR¹⁷ could be considered for the long term, especially in the context of the MiFIR review, but would not solve the issue for the first one/two years of application of the DLT Pilot or even longer. ESMA is currently assessing solutions to address this data gap before the DLT Pilot becomes fully applicable.

¹⁶ According to MiFID Article 4(1), *Member States may include in the definition of investment firms undertakings which are not legal persons [...]*. This provision only apply under specific conditions. This means that also natural persons might qualify as "investment firm" if the conditions foreseen in Article 4(1), second and third paragraphs. These are, for example, private individuals acting as "business", such as sole proprietors.

¹⁷ See Section 4.2 of ESMA Final Report on the review of transaction reporting and reference data: https://www.esma.europa.eu/sites/default/files/library/esma74-362-1013_final_report_mifir_review_-_data_reporting.pdf

73. One option could be to request DLT MTFs to report the transaction on behalf of the private individual as part of the compensatory measure foreseen by Article 4(1)(c) of the pilot regime.
74. ESMA would like to understand what other solutions can be explored to address this data gap before the Pilot Regime becomes fully applicable.

Q23. Private individuals: Do you agree that DLT MTFs and DLT TSS could report transactions on behalf of the private individual as part of the compensatory measure foreseen by Article 4(1)(c) of the pilot regime? Please explain your statement. What other solutions can be explored to address this data gap?

5.2.1.2 Details to be reported

75. Annex I Table 2 of RTS 22 contains the details to be reported according to Article 1 of the same regulation. ESMA would like to gather views on the following main aspects:

Cancellations and corrections

76. Regarding the Reporting status as per Field 1, the MiFIR Guidelines¹⁸ state that “The status of ‘NEWT’ in Field 1 is used for a transaction not yet reported and for a correction of an inaccurate transaction report following a cancellation of the original transaction report. The status of ‘CANC’ is used to cancel transaction reports in non-reportable transactions and to cancel transaction reports that contain errors before making a replacement transaction report.
77. Concerning transaction reference numbers as per Field 2, the same Guidelines state that “it should be unique to the executing Investment Firm for each transaction report. The TRN should not be re-used, except where the original transaction report is being corrected or cancelled in which case the same transaction reference number should be used for the replacement report as for the original report that is being replaced. The TRN should be re-used for any subsequent correction of the same transaction report. It may happen that there is more than one record (new or cancellation) related to the same transaction (with the same transaction reference number and the executing entity identification code) that should be included in a single file. In that case, the order of the records in the file should follow the records processing logic, i.e., that (i) one can only cancel a transaction that has been reported as a new transaction before and has not been cancelled yet and (ii) one can only submit a transaction with the same identification (the same transaction reference number and the executing entity identification code) if the previous report for this transaction has been cancelled”.

Q24. Reporting status and transaction reference numbers (Fields 1 and 2): How will DLT MTF and DLT TSS treat cancellations to correct previously submitted information as per Section 5.18 of ESMA Guidelines on transaction reporting

¹⁸ Section 5.18 of [GUIDELINES ON TRANSACTION REPORTING, ORDER RECORD KEEPING AND CLOCK SYNCHRONISATION UNDER MIFID](#)

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?

Trading Venue Transaction Identification Code

78. Concerning the Trading Venue Transaction Identification Code (i.e. TVTIC), field 3 of RTS 22 prescribes that it should be up to 52 alphanumeric characters, generated by the trading venue and disseminated to both the buyer and the seller in accordance with Article 12 of RTS 24. Article 12 of RTS 24 prescribes that: a) the TVTIC should be maintained for each transaction resulting from the full or partial execution of an order; b) it should be unique, consistent, and persistent per MIC and per trading day; c) its component should not disclose the identity of the counterparties.

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?

Identification of parties

79. In respect of the parties to be identified in the transaction report, the identification method to be used depends on the type of entity. Where the entity is eligible for an LEI, such entity should be identified with a LEI pursuant to MiFIR Article 26(6) and Article 5¹⁹ and 13²⁰ of Commission Delegated Regulation (EU) 2017/590. Where the entity is a natural person, such entity should be identified in accordance with Article 6 and 7 of Commission Delegated Regulation (EU) 2017/590.

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

¹⁹ "An investment firm which executes a transaction shall ensure that it is identified with a validated, issued and duly renewed ISO 17442 legal entity identifier code in the transaction report submitted pursuant to Article 26(1) of Regulation (EU) No 600/2014. 2. An investment firm which executes a transaction shall ensure that the reference data related to its legal entity identifier is renewed in accordance with the terms of any of the accredited Local Operating Units of the Global Legal Entity Identifier System."

²⁰ "Member States shall ensure that legal entity identifiers are developed, attributed and maintained in accordance with the following principles: (a) uniqueness; (b) accuracy; (c) consistency; (d) neutrality; (e) reliability; (f) open source; (g) flexibility; (h) scalability; (i) accessibility. Member States shall also ensure that legal entity identifiers are developed, attributed, and maintained using uniform global operational standards, are subject to the governance framework of the Legal Entity Identifier Regulatory Oversight Committee and are available at a reasonable cost. Investment firm shall not provide a service triggering the obligation for an investment firm to submit a transaction report for a transaction entered into on behalf of a client who is eligible for the legal entity identifier code, prior to obtaining the legal entity identifier code from that client. The investment firm shall ensure that the length and construction of the code are compliant with the ISO 17442 standard and that the code is included in the Global LEI database maintained by the Central Operating Unit appointed by the The Legal Entity Identifier Regulatory Oversight Committee and pertains to the client concerned."

current fields? Should new fields be added in the context of a DLT environment?

Order transmission

80. With regard to the transmission of orders under Article 26(4)²¹, MiFIR provides a possibility for investment firms which transmit orders to be exempted from the reporting obligation provided that, in the transmission of that order, all the details as specified in Paragraphs 1 and 3 of Article 26 are included. Article 4 of RTS 22 details the conditions under which an investment firm is deemed to have transmitted an order, these conditions include the conclusion of a transmission agreement with the investment firm that receives the order.

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?

Trader, algorithms, waivers and indicators

81. In Fields from 57 to 65 of the Annex I of RTS 22 are explained the reporting information for trader, algorithms, waivers and other indicators; notably the codes used to identify the person or algorithm within the investment firm who is responsible for the investment decision and to identify the country of the branch of the investment firm. For what concern the transaction executed under a waiver on a trading venue, the field requires an indication as to whether the transaction was executed under a pre-trade waiver in accordance with Articles 4 and 9 of Regulation (EU) No 600/2014.

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?

Short selling flag

82. For what concern the short selling field, the current regime requires investment firms to report whenever the acquirer/disposer of the financial instrument relating to a transaction is engaging in a short selling transaction. This identification of a short sale is based on the definition given in the Short Selling Regulation²² whereby the net short position is calculated on an end of day basis. Furthermore, as per Article 11(2) of RTS 22, the investment firm engaging in a sell order on behalf of a client shall collect on a best effort basis the

²¹ "Investment firms which transmit orders shall include in the transmission of that order all the details as specified in Paragraphs 1 and 3. Instead of including the mentioned details when transmitting orders, an investment firm may choose to report the transmitted order, if it is executed, as a transaction in accordance with the requirements under Paragraph 1. In that case, the transaction report by the investment firm shall state that it pertains to a transmitted order".

²² [REGULATIONS REGULATION \(EU\) No 236/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2012 on short selling and certain aspects of credit default swaps](#)

information whether or not the client is short selling. This is due to the fact that the person within the client giving the order may not know in real time if the group has acquired a net short position or not.

Q29. Short selling field (Field 62): Is short selling possible? Does it depend whether it is a DLT MTF or a DLT TSS? 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?

Transaction details

83. According to Table 2 of the annex I of RTS22, the transaction details should be reported in the fields from 28 to 40, in particular these are: 28 - Trading date time; 29 - Trading capacity; 30 – Quantity; 31 - Quantity currency; 32 - Quantity currency; 33 – Price; 34 - Price Currency; 35 - Net amount; 36 – Venue; 37 - Country of the branch membership; 38 - Up-front payment; 39 - Up-front payment currency; 40 - Complex trade component id.

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?²³

5.2.2 RTS 23 on reference data reporting

5.2.2.1 Technical arrangements to submit reference data to ESMA

84. With respect to RTS 23, it should be noted that a few changes will become applicable in January 2022 as a result of the ESA review. In particular, these changes stem from the replacement of the references to NCAs in MiFIR Article 27 with references to ESMA. These changes should be considered also for the purpose of this assessment, so DLT MTFs should be expected to report instrument reference data directly to ESMA²⁴.

Q31. What are your views on the arrangements that DLT MTFs would need to establish to ensure the provision of complete and accurate reference data to ESMA? Do you think that the current arrangements described in RTS 23 should be amended to ensure its application in the DLT environment? Do you expect any implementation issues on basis of the current RTS 23?

5.2.2.2 Details to be reported

85. Annex I Table 3 of RTS 23 contains the details to be reported according to Article 1 of the same regulation. ESMA would like to gather views on the following main aspects.

²³ A General question on Currency fields is asked in Subsection 5.3.1.5.

²⁴ Detailed reporting instructions are already available on ESMA website ([MiFIR reporting instructions \(europa.eu\)](https://www.esma.europa.eu/press-news/esma-news/esma65-11-1193-firds-reference-data-reporting-instructions-v2.1.pdf)) and [esma65-11-1193 firds reference data reporting instructions v2.1.pdf \(europa.eu\)](https://www.esma.europa.eu/press-news/esma-news/esma65-11-1193-firds-reference-data-reporting-instructions-v2.1.pdf).

Issuer and venue fields

86. According to Annex I, table 3 of RTS 23, field 5 requires the identification of the issuer of the financial instrument, where applicable, or the operator of the trading venue through the LEI code of issuer or trading venue operator. Operators of trading venues can populate field 5 of Table 3 of the Annex to RTS 23 with their own LEI only where they create or issue themselves the financial instrument to be reported under the MiFIR Article 27²⁵. In all other cases, the LEI of the issuer of the financial instrument will be required. This identification is important to support NCAs in their market monitoring activities and the determination of the NCA responsible for supervising trading activity in a given financial instrument.

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?

87. According to Annex I, table 3 of RTS 23, the fields related to Venue require details of: 6 - trading venue (MIC code); 7- financial instrument short name (FISN); 8 -request for admission to trading by issuer; 9 - date of approval of the admission to trading; 10 - date of request for admission to trading; 11 - date of admission to trading or date of first trade; 12 - termination date.

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?

Notional

88. Field 13 requires details of Notional currency in which the notional is denominated. Section 5.3.1.4 of this Call for Evidence, which relates to “currency fields” should also be considered when assessing this Field.

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?

Bonds and other forms of securitised debt

89. For what concern the fields related to bonds and other forms of securitised debt, annex I, table 3 of RTS 23, demand details of : 14 - total issued nominal amount; 15 - maturity date; 16 - currency of nominal value; 17- nominal value per unit/minimum traded value; 18 - fixed rate; 19 - identifier of the index/benchmark of a floating rate bond; 20 - name of the index/benchmark of a floating rate bond, 21 - term of the index/benchmark of a floating rate

²⁵ See Q&A 3 of [ESMA MiFIR data reporting Q&As](#):

bond; 22 - base point spread of the index/benchmark of a floating rate bond and lastly field 23 – the seniority of the bond.

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?

5.2.3 RTS 25 on clock synchronisation

90. According to MiFID II Article 50 and related RTS 25, Operators of trading venues and their members or participants shall synchronise the business clocks they use to record the date and time of any reportable event. Reportable events are specified in Section 7.1 of ESMA guidelines and include the obligations publish/report and record timestamps included in all RTSs covered by this Call for Evidence. Article 2 of RTS 25 states that “*operators of trading venues shall ensure that their business clocks adhere to the levels of accuracy specified in Table 1 of the Annex according to the gateway-to-gateway latency of each of their trading systems*”, i.e., at a level of granularity at the millisecond or microsecond depending on the latency of the system. With respect to reporting for members or participants of the trading venue under RTS 22, the current requirements for transactions executed on a trading venue is to report the trading date and time of the transaction using the level of granularity specified in Article 3 of Commission Delegated Regulation (EU) 2017/574. These requirements are further clarified in Sections 7 and 5.4 of the ESMA guidelines²⁶.

91. ESMA preliminary view is that no significant issues should be expected with DLT MTF ability to comply with the requirements set in RTS 25.

Q36. Do you agree with ESMA’s assessment that no major amendments to RTS 25 appear necessary for the implementation of the DLT Pilot?

5.3 Common aspects RTS 1/2/3/22/23/24

92. Given the similarity of the data requirements under article 20-21-25-26-27 of MiFIR, ESMA would like to gather views on the following aspects.

5.3.1.1 Definition of order, chains and transmission of orders

93. Pursuant to Article 25(2), the order record keeping requirements apply to operators of Trading Venues in respect of “*all orders in financial instruments which are advertised through their systems*”. They apply in respect of “*orders*” which includes those that are

²⁶[ESMA guidelines on transaction reporting, order record keeping and clock synchronisation.](#)

*active, inactive, suspended, implicit and rerouted orders as well as order modifications, cancellations, and rejections. They also apply to firm and indicative quotes*²⁷.

94. Furthermore, Article 3 of MiFIR for equity and equity-like financial instruments and Article 8 of MiFIR for non-equity financial instruments (further specified in RTS 1 and 2), require market operators and investment firms operating a trading venue to make public pre-trade transparency information for both, orders and actionable indication of interests. Therefore, the definition of orders is relevant across different provisions.
95. Article 4(4) of MiFID II defines “*execution of orders*”.
96. A chain of reporting occurs when a Firm or Investment Firm does not complete a transaction itself but sends the order to another Firm or Investment Firm for completion (see Section 5.3.1 of ESMA Guidelines). For example, a client that does not want to access directly the DLT MTF/TSS and uses another entity/broker to trade. It remains unclear whether orders can be transmitted within the DLT network, whether a DLT financial instrument can be traded/settled on more than one MTF/TSS and whether OTC trading on the same instrument is possible.
97. Article 4 of RTS 22 defines the conditions under which an IF shall be deemed to have transmitted an order pursuant to Article 26(4) of Regulation (EU) No 600/2014. These conditions include the conclusion of a transmission agreement with the investment firm that receives the order. ESMA would like to understand whether the concept of transmission of an order makes sense in the context of DLT.

Q37. Do you think the definition of “order” specified in paragraph 93 is still applicable to the DLT context? Are the order record keeping requirements in Article 25 of MiFIR and related RTS 24 applicable in the DLT context? If yes, how do you envisage to comply with such requirements? If no, please justify your answer.

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

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

Q40. Does the concept of “Transmission of an order” defined in Article 4 of RTS 22 make sense in the context of DLT? If so, when would you consider an order to be transmitted?

5.3.1.2 Definition of execution and transaction

98. Article 6 of MiFIR for equity and equity-like financial instruments and Article 10 of MiFIR for non-equity financial instruments (further specified in RTS 1 and 2), require market operators and investment firms operating a trading venue to make public post-trade transparency information as close to real time as technically possible. However, in order to

²⁷ See Section 6.1 of [ESMA guidelines on transaction reporting, order record keeping and clock synchronisation](#).



assess such requirements, it is essential to understand when a transaction can be defined to be executed on DLT securities.

99. Article 3 of RTS 22 defines the meaning of “execution of a transaction” by enlisting a series of actions whose performance trigger the reporting obligation for investment firms. None of the listed actions seems applicable to a DLT transaction, thus making unclear when, along the DLT transaction process, the trade shall be reported.

100. To address this issue, ESMA considered the different phases of a DLT transaction, which may be summarised as follows:

- a) Counterparty “X” broadcast the transaction to the network, by digitally signing the transaction.
- b) Participants to the network validate the transaction, by verifying the digital signature.
- c) Participants to the network agree on a consensus, by a majority vote (this majority vote can take different forms, depending on the protocol used).
- d) Consensus is broadcast to the network.
- e) Participants update their records accordingly.

101. From this assessment, it appears that the broadcast of the transaction to the network might be assimilated to Article 3(1) a) of RTS 22 (i.e., “reception and transmission of orders in relation to one or more financial instruments”), while the following phases seem more akin to the clearing and settlement of a non-DLT trade. ESMA is therefore considering to consequently amend Article 3 of RTS 22.

Q41. What do you consider are the phases of a DLT transaction? At what point in time can such a transaction in DLT securities be considered executed? How do you think “broadcast the transaction to the network” should be defined?

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

5.3.1.3 General fields: instrument identification and classification

102. Field 1 of RTS 23 requires the Instrument identification code, which is the code used to identify the financial instrument, the ISIN code. Field 2 requires the full name of the financial instrument. Field 3 requires a complete and accurate CFI code to classify the financial instrument. The ISIN is also required for RTS 1, 2 and 3.

103. In September 2021, ISO published the ISO 24165-1:2021²⁸ and ISO 24165-2:2021²⁹ on Digital token identifier (DTI). The issuance of DTIs has started simultaneously with the publication of the ISO standards. DTI issuance will cover all fungible digital assets which use distributed ledger technology for their issuance, storage, exchange, record of ownership, or transaction validation that not a “fiat” currency (as defined by ISO 4217). The digital token will be identified based on verifiable and unique data about the digital token. The uniqueness criterion is based on the digital token’s origins on the distributed ledger data structure. Also forks information will be included within the uniqueness criterion to distinguish between the original token and the newly created token(s).
104. Such identifier may be taken into consideration also in relation to the International Securities Identification Numbers (ISINs). While the ISIN captures the data elements related to a financial or a digital financial instrument, the DTI will capture the technical aspects of a token in specific data elements such as its genesis block hash, the algorithm behind it, the genesis block UTC timestamp, the DLT type, etc. By coupling the DTI and ISIN information, it should be possible to have a full picture of a tokenized security.
- 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?**
- 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?**
- 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?**

5.3.1.4 Reporting formats, systems and IT infrastructure

105. The previous sections covered the details that should be reported and/or made transparent under the current MIFIR regime and sought industry views on the compatibility of these elements with DLT. As indicated in the introductory part of Section 5, ESMA will consider amending these details only in the event that such amendments are necessary for the effective application of the data reporting requirements to DLT financial instruments.
106. Considering the above objective and given that the data elements in the reporting RTS should be defined in a “technology neutral” manner, ESMA preliminary view is that the introduction of new technologies such as DLT should not have a significant impact on these data elements and that the number of amendments to the existing RTS on reporting should be limited to avoid the undesired effect of making the data on traditional financial instrument not comparable with the data on their “tokenised” equivalent. However, the introduction of DLT might have a significant impact on the format (i.e., syntax) in which the information is

²⁸ <https://www.iso.org/standard/80601.html>

²⁹ <https://www.iso.org/standard/80602.html>

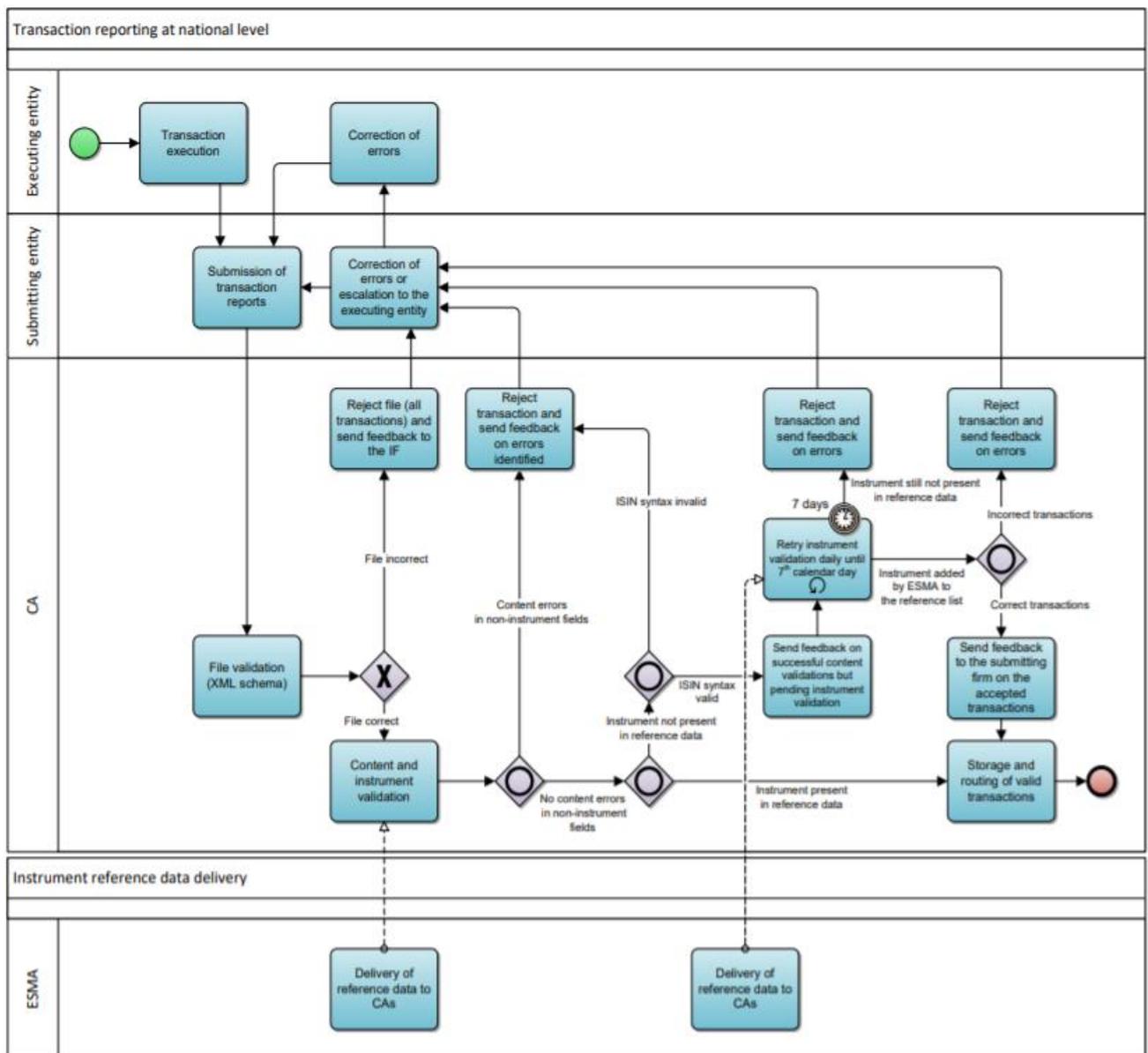


represented as well as the systems to be set up to provide the relevant information to the regulators.

107. Under current rules, trading venues and the investment firms that are members or participants of those venues report all relevant details into a common XML template according to ISO 20022 methodology to their national competent authority, which then performs format, file and content validation checks.

108. In this manner, the national competent authority follows-up with report submitting entities to ensure the quality of reported data. Such interaction between NCAs and report submitting entities is illustrated in the diagram³⁰ below.

³⁰ Annex I, ESMA/2016/1452 Guidelines on Transaction reporting, order record keeping and clock synchronisation under MiFID II



109. ESMA wonders whether, considering the features of DLT transactions, such set up would still be meaningful for ensuring the quality of data related to transactions executed on DLT MTFs or DLT TSS.

Q46. Traditional reporting systems - RTS 22/23: Does the setting up of the traditional reporting systems as illustrated in Annex 1 of the ESMA Guidelines on transaction reporting³¹ make sense in the context of the pilot regime?

³¹ <https://www.esma.europa.eu/document/guidelines-transaction-reporting-order-record-keeping-and-clock-synchronisation-under-mifid>

Q47. Execution and IT infrastructure - RTS 22/23: Does the fact that execution takes place on a DLT has an impact on the investment firm’s reporting system and requires setting up of separate/new IT infrastructures?

110. ISO 20022 is a methodology for creating financial messaging standards. It is widely spread and accepted across the financial industry, and it is used for several reporting regimes under EU law. The ISO 20022 method is based on three separate layers: the first layer provides the business information or data element to be reported, such as “the LEI of the buyer”; the second layer provides logical messages or the description of the detail to be reported such as “the buyer identification”; and the last layer deals with syntax or format in which the information should be reported, such as “XML”. ISO 20022 is used to create common, machine-readable schemas to be used by authorities and reporting counterparties. Such common schemes enable to embed some data quality validations in the schema, allowing for first verification of data at the point of report generation.
111. It is the standard used for MiFIR transaction reporting³², and it has recently been chosen as the standard for reporting under Article 4 SFTR³³. ESMA also recommended its adoption for EMIR reporting in the context of the revision of the EMIR technical standards³⁴. In view of aligning reporting regimes across several pieces of EU law, and to enhance the possibility of cross-referencing data collected under different frameworks, it might be beneficial to maintain the use of ISO 20022 to the reporting of transactions executed on DLT MTF. However, there might be certain technical and practical issues ESMA should consider.
112. In addition, it should be considered that ISO 20022 can support multiple syntaxes for the same message definition (e.g., XML, JSON, or other formats). While XML is the format applied in the current MIFIR reporting regime, ESMA would like to seek industry views as to whether different formats might be more suitable to the DLT while keeping exactly the same common business definitions and logical messages according to the common ISO 20022 methodology.

Q48. ISO standards 20022 and RTS 22/23: Can ISO 20022 be implemented and used by DLT MTFs or DLT TSS and/or their members/participants to comply with the reporting required under Article 26 and 27 of MiFIR. Do you think ISO 20022 would represent an opportunity or an issue for DLT MTF? Please explain your statement.

Q49. XML template of RTS 22/23: do you think that different formats might be more suitable to the DLT while keeping the common ISO 20022 methodology? If yes, please explain what the most appropriate format would be and for which reasons.

³² Article 1, Commission Delegated Regulation (EU) 2017/590 and Commission Delegated Regulation (EU) 2017/585

³³ Article 1, Commission Implementing Regulation (EU) 2019/363

³⁴ See Section 4.2.1. of Final Report on Technical standards on reporting, data quality, data access and registration of Trade Repositories under EMIR REFIT available at: <https://www.esma.europa.eu/file/110916/download?token=C9MdQON4>

5.3.1.5 Currency fields

113. RTS 22/23: Currency fields related to transferable securities that fall within the Pilot regime scope require 3 letter currency code, as defined by ISO 4217 currency codes. Following the development of the DLTs, ESMA understands that certain financial instruments traded on a MTF DLT may be priced in other means than fiat currencies. It is worth mentioning that, according to the EC proposal, the settlement of payments may be carried out through central bank money where practicable and available, or where not practicable and available, through commercial bank money, including commercial bank money in a token-based form, or in e-money tokens. Such practices would be incompatible with the reporting requirements for currency fields since ISO 4217 does not include any reference than the one related to fiat currencies.
114. Currency information is also to be provided in the post-trade transparency reports for equity and equity-like instruments (Table 3 Annex I of RTS 1) and non-equity instruments (Table 2 Annex II of RTS 2). Furthermore, Article 8(3) of RTS 3 provides for the conversion of transactions into Euro should a financial instrument be traded in more than one currency. Based on ESMA's preliminary assessment, it does appear very unlikely that a DLT security could be traded on several DLT MTFs using different settlement mechanisms. It therefore does not appear necessary to convert transactions reported in e-money tokens to EUR.
115. A potential temporary solution to report currency fields when the financial instrument is priced in e-money tokens would entail populating the currency fields with the fiat currency on which the e-money token³⁵ refers to in order to maintain a stable value.

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?

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.

6 Regulatory access to DLT and exemption from reporting

116. The European Parliament proposed a potential exemption from the reporting obligation under Article 26 of Regulation (EU) No 600/2014 (MiFIR) for an investment firm or market operator operating a DLT MTF and its members or participants. In that case, "*the DLT MTF shall keep at the disposal of ESMA the relevant details of all transactions executed through its systems. The records shall contain all the details specified in Article 26(3) of Regulation*

³⁵ Article 3(1)(4) of MICA proposal: 'electronic money token' or 'e-money token' means a type of crypto-asset the main purpose of which is to be used as a means of exchange and that purports to maintain a stable value by referring to the value of a fiat currency that is legal tender.

(EU) No 600/2014 that are relevant having regard to the system used by the DLT MTF and the member or participant executing the transaction. The DLT MTF shall also ensure that ESMA has direct and immediate access to those details. In order to access the records, ESMA shall be admitted to the DLT MTF as a regulatory observer participant. ESMA shall ensure that all competent authorities referred to in Article 4(1)(26) of Directive 2014/65/EU have access to all of the details of transactions they need to fulfil their respective responsibilities and mandates.”³⁶

117. The political agreement reached by the co-legislators maintains the transaction reporting exemptions while putting the NCAs in charge of granting such exemption to DLT MTFs, DLT TSSs as well as their members or participants. When granting the exemption, the NCA will have immediate and direct access to the data on DLT MI and will need to make this data available to ESMA without undue delay.
118. With respect to RTS 23, given that all DLT MTFs and DLT TSS will be required to make instrument reference data available directly to ESMA (see Section 5.2.2.1), ESMA considers that the same system could also be leveraged for ESMA accessing the quantitative and qualitative data for the purpose of performing the various transparency calculations under Delegated Regulation (EU) 2017/567 and related RTS 1-3.
119. Given that the transaction reporting exemption was included in the final DLT Pilot Regime, ESMA’s preliminary view is that ESMA and NCAs efforts should focus on making the DLT direct access and re-distribution provisions operational. An additional set of changes to adapt the relevant parts of RTS 22, 23 on reporting would appear neither efficient nor necessary. Consequently, DLT MTFs and DLT TSSs would need to choose between (a) the full exemption from RTS 22 which will be accompanied with the obligation to record all relevant details on the DLT and to grant direct access to the regulators and (b) the full application of RTS 22.

Q52. What are your views on the arrangements that DLT MTFs and DLT TSSs would need to establish to grant direct and immediate access to transaction data to regulators by admitting them as regulatory observer participants? Do you expect any implementation issues in relation to the obligation to make MiFIR transaction data available to the NCAs and MiFIR transparency/reference data to ESMA?

120. Several aspects would need to be explored to ensure that regulators could efficiently extract the information needed for transaction reporting as well as for the publication of the financial instruments reference data and for the performance of the transparency calculations (liquidity assessment; thresholds for waivers and deferrals, SMS and tick size)³⁷ and of the DVC publication as per RTS 3. Namely, ESMA would like to understand whether there is any technical impediment in recording on the DLT all the details described in Table II of the Annex to RTS 22 (see Section 5.2.1.2) and Table III of the Annex to RTS 23 (see Section 5.2.2.2) as well as all the reference data and transparency data necessary

³⁶ https://www.europarl.europa.eu/doceo/document/A-9-2021-0240_EN.pdf

³⁷ As specified in Delegated Regulation (EU) 2017/567 RTS 1, 2, and 11.

to perform the transparency (Article 2 of RTS 3) and the DVC calculations (Article 6 RTS 3).

121. In particular, technical impediments could be assessed in relation to the following aspects:

Scalability of the system and use of ISO 20022

122. If the transaction reporting exemption is granted, the DLT MTF or TSS will be required to record the details specified in Article 26(3) of Regulation (EU) No 600/2014 of all transactions executed through its systems. These details are specified in the Table II of the Annex to RTS 22. The size of the information that has to be stored in the distributed ledger may have a negative impact in terms of scalability of the system and the related congestion risk depending on the type of governance model and technology that the DLT is using.

Q53. Is it technically feasible to store on the DLT the details of the transaction according to ISO 20022 methodology in order to enable regulators to pull that data directly into a readable format without any transformation of the data? Do you believe that the use of ISO 20022³⁸ could have a significant negative impact in terms of scalability of the system and the related congestion risk? If yes, please justify your answer and specify if the impact is dependent on the type of governance model and technology that the DLT is using.

Q54. Can all information to be reported under MiFIR Article 27 pursuant to Table III of the Annex to RTS 23 be recorded on the DLT according to the ISO 20022 methodology? Please explain your answer also in relation to scalability impact at DLT level.

Q55. Can all data necessary to perform the transparency (Article 2 of RTS 3) and DVC (Article 6 of RTS 3) calculations be recorded on the DLT according to the ISO 20022 methodology? Please explain your answer also in relation to scalability impact at DLT level.

Q56. Do you see any issue with obtaining the data elements required by RTS 22 and 23 from external databases like GLEIF, ISO 4217 list (currencies), ISO 10383 (MIC) or ANNA-DSB (ISIN) before the data is permanently stored into the distributed ledger? Please explain your answer.

Encryption and decryption of data

123. Distributed ledgers rely on the extensive use of encryption techniques. These techniques serve many purposes: they are used to define the participants to the network; they guarantee the privacy of certain data sets (e.g., the identity of the individuals using the network); they enable a seamless circulation of information (e.g., the chain of transactions which is shared with the entire network); they serve to validate transactions

and agree on a consensus; finally, they are meant to prevent cyber-attacks. Two critical elements compose these complex encryption techniques: public/private keys and hash functions. Different securities layers of encryption mechanisms may also have a negative impact in terms of scalability of the system and the related congestion risk depending on the type of governance model and technology that the DLT is using.

124. Among others, admitting the regulators as regulatory observer participants could raise new challenges in terms of data access and keys management. Regulators would need to be able to pull a data set directly from a DLT MTF and DLT TSS. In that context, the DLT MTF and DLT TSS should give regulators direct access to the DLT and to the details of all transaction stored in it. To do so, a strong key management framework should be implemented between the regulators and the DLT MTF or DLT TSS.

Q57. Do you see any major impediments for the regulator as a regulatory observer participant to pull large size of encrypted data from the distributed ledger? Please explain your answer in the context of encryption of data and key management, and in relation to any scalability impact at DLT level.

Governance

125. As stated in the political agreement, regulators should be admitted as regulatory observer participants with direct and immediate access to the details of the transactions stored on the DLT. Such scenario should exclude the possibility for any regulator to be considered a validator node. In order for a regulator to become the regulatory observer in the DLT, it is important to set up a clear governance model together with all the relevant technical specifications and functions of the systems. Also, it is crucial to determine the level of access of the regulator to the DLT.

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.

System interoperability

126. Having more than one DLT MTF or TSS may lead to the use of different technologies that will certainly function in different ways. Such scenario would entail the set-up of different technical specifications and functions for each technology used in relation to the regulatory observer participant role. Both regulators and the DLT MI should find the most effective and efficient way to standardise the process of admitting regulatory observer participants.

127. DLT financial instruments are defined as 'financial instruments, issued by means of DLT'. Such definition would permit DLT financial instruments to be issued on a DLT and then transferred and stored on another DLT. This would be possible where interoperability between the two DLTs is ensured, e.g., the two DLT MTFs and/or DLT TSS utilise the same type of DLT. The DLT world is currently moving towards interoperability with several



projects in the pipeline and it is crucial to understand if and how this evolution may impact DLT MTFs and DLT TSS.

Q59. Do you have any suggestion to ensure interoperability among DLT MTFs, DLT TSS and the regulators as described in Paragraph 126126? Please explain your answer.

Q60. Do you have any suggestion to ensure interoperability among different DLT MTFs and/or DLT TSS as described in Paragraph 127127? Please explain your answer.

Annexes

6.1 Annex I

Summary of questions

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.

Q2. Please indicate whether you/your organisation is planning to operate a DLT MI under the DLT Pilot and provide some high-level explanation of the business model

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?

Q4. Would you consider operating a DLT MTF Would you consider operating a DLT SS without operating at the same time a DLT MTF? If yes, under which conditions?

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?

Q6. Instrument status: Do DLT financial instruments have different characteristics than 'standard' shares, UCITS-ETFs and bonds? If yes, please elaborate and explain whether these different characteristics call for a different approach for the application of the transparency requirements?

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

Q8. Transactions: Do the lists of transactions in Article 13 of RTS 1 and Article 12 of RTS 2 reflect relevant transaction types for DLT financial instruments? If not, please explain which types of transactions are missing and why they should be added to the lists of transactions.

Q9. Can the current transparency requirements in RTS 1 and 2 be applied for DLT financial instruments (e.g. liquidity assessment, thresholds, flags, reporting fields) or would they need to be adjusted? If not, what should be the appropriate approach?

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?

Q11. Do you anticipate any problems that may emerge from the current liquidity concepts in Delegated Regulation (EU) 2017/567 and RTS 2 for the application of related transparency requirements for DLT financial instruments? Please explain and make proposals on how such problems could be solved.

Q12. Are DLT securities traded on different trading systems as ‘standard’ shares and UCITS-ETFs (mostly continuous trading and periodic auctions) or bonds (RFQ, voice trading)? Please explain.

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?

Q14. Do the systems on which DLT financial instruments trade require tailored pre-trade transparency requirements as those per Table 1 Annex I of RTS 1 and Annex I of RTS 2?

Q15. Would the use of restricted (permissioned) vs unrestricted (permissionless) DLT represent any difference in how the pre-trade transparency requirements should be applied?

Q16. Is it in your view necessary to make changes to the calibration of waivers for DLT shares and UCITS-ETFs in RTS 1? Do you expect any implementation issues in the application of waivers also taking into account the above considerations?

Q17. Is it in your view necessary to make changes to the calibration of waivers for DLT bonds in RTS 2? Do you expect any implementation issues in the application of waivers also taking into account the above considerations?

Q18. What can be considered as close to real-time as possible for the publication of post-trade reports in the context of DLT-securities on DLT MIs?

Q19. Are the current deferral periods for equity and non-equity instruments appropriate for DLT securities? Please, distinguish between DLT shares, ETFs and bonds.

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?

Q21. Is it necessary to amend RTS 3 for the purpose of the DLT Pilot? Do you anticipate any problems with the application of RTS 3 under the DLT Pilot?

Q22. Do you agree with the approach indicated in the above paragraph? Please justify your answer.

Q23. Private individuals: Do you agree that DLT MTFs could report transactions on behalf of the private individual as part of the compensatory measure foreseen by Article 4(1)(c) of the pilot regime? Please explain your statement. What other solutions can be explored to address this data gap?

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?

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?

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?

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?

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?

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?

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?

Q31. What are your views on the arrangements that DLT MTFs would need to establish to ensure the provision of complete and accurate reference data to ESMA? Do you think that the current arrangements described in RTS 23 should be amended to ensure its application in the DLT environment? Do you expect any implementation issues on basis of the current RTS 23?

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?

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?

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?

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?

Q36. Do you agree with ESMA's assessment that no major amendments to RTS 25 appear necessary for the implementation of the DLT Pilot?

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.

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

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

Q40. Does the concept of “Transmission of an order” defined in Article 4 of RTS 22 make sense in the context of DLT? If so, when would you consider an order to be transmitted?

Q41. What do you consider are the phases of a DLT transaction? At what point in time can such a transaction in DLT securities be considered executed? How do you think “broadcast the transaction to the network” should be defined?

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

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?

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?

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?

Q46. Traditional reporting systems - RTS 22/23: Does the setting up of the traditional reporting systems as illustrated in Annex 1 of the ESMA Guidelines on transaction reporting make sense in the context of the pilot regime?

Q47. Execution and IT infrastructure - RTS 22/23: Does the fact that execution takes place on a DLT has an impact on the investment firm’s reporting system and requires setting up of separate/new IT infrastructures?

Q48. ISO standards 20022 and RTS 22/23: Can ISO 20022 be implemented and used by DLT MTFs or DLT TSS and/or their members/participants to comply with the reporting required under Article 26 and 27 of MiFIR. Do you think ISO 20022 would represent an opportunity or an issue for DLT MTF? Please explain your statement.

Q49. XML template of RTS 22/23: do you think that different formats might be more suitable to the DLT while keeping the common ISO 20022 methodology? If yes, please explain what the most appropriate format would be and for which reasons.

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?

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.

Q52. What are your views on the arrangements that DLT MTFs and DLT TSSs would need to establish to grant direct and immediate access to transaction data to regulators by admitting them as regulatory observer participants? Do you expect any implementation issues in relation to the obligation to make MiFIR transaction data available to the NCAs and MiFIR transparency/ reference data to ESMA?

Q53. Is it technically feasible to store on the DLT the details of the transaction according to ISO 20022 methodology in order to enable regulators to pull that data directly into a readable format without any transformation of the data? Do you believe that the use of ISO 20022 could have a significant negative impact in terms of scalability of the system and the related congestion risk? If yes, please justify your answer and specify if the impact is dependent on the type of governance model and technology that the DLT is using.

Q54. Can all information to be reported under MiFIR Article 27 pursuant to Table III of the Annex to RTS 23 be recorded on the DLT according to the ISO 20022 methodology? Please explain your answer also in relation to scalability impact at DLT level.

Q55. Can all data necessary to perform the transparency (Article 2 of RTS 3) and DVC (Article 6 of RTS 3) calculations be recorded on the DLT according to the ISO 20022 methodology? Please explain your answer also in relation to scalability impact at DLT level.

Q56. Do you see any issue with obtaining the data elements required by RTS 22 and 23 from external databases like GLEIF, ISO 4217 list (currencies), ISO 10383 (MIC) or ANNA-DSB (ISIN) before the data is permanently stored into the distributed ledger? Please explain your answer.

Q57. Do you see any major impediments for the regulator as a regulatory observer participant to pull large size of encrypted data from the distributed ledger? Please explain your answer in the context of encryption of data and key management, and in relation to any scalability impact at DLT level.

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.

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.

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.