1. **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**

Introduction and Background

Background Brief

Introduction

1.1 The Association for Financial Markets in Europe ("**AFME**") welcomes the opportunity to comment on ESMA's call for evidence ("**CFE**") on the DLT Pilot Regime (the "**Pilot Regime**") and review of MiFIR regulatory technical standards on transparency and reporting.

About AFME

1.2 AFME represents a broad array of European and global participants in the wholesale financial markets. Its members comprise pan-EU and global banks as well as key regional banks, investment firms, law firms, investors, and other financial market participants. We advocate stable, competitive, sustainable European financial markets that support economic growth and benefit society. AFME[1] is the European member of the Global Financial Markets Association ("**GFMA**"), a global alliance with the Securities Industry and Financial Markets Association ("**SIFMA**") in the US, and the Asia Securities Industry and Financial Markets Association ("**ASIFMA**") in Asia.

1.3 Distributed Ledger Technology ("**DLT**") provides an opportunity to transform the financial markets and improve infrastructure efficiencies. In AFME's view, the digitalisation of capital markets represents a transformation comparable, if not greater, in scale and significance to the shift from physical to dematerialised securities.

1.4 The Pilot Regime is a pioneering piece of regulation that provides the industry with a controlled environment to develop and trial DLT-based financial infrastructure as a step to a fully scaled solution. As such, AFME welcomes the Pilot Regime and ESMA's CFE in determining any amendments and clarifications needed to make the MIFIR transparency and reporting regimes workable under the Pilot Regime.

1.5 AFME represents market participants that will be directly impacted upon the transformation of the financial markets to DLT-based securities, as well as those that may provide market infrastructure solutions in this new environment. For instance, as regards primary issuance of securities, under the current framework, AFME members perform a number of key functions, including acting as underwriter, placing agent, custodian and clearing member. These functionalities could be fundamentally altered in a DLT-based financial market. The same is true for the secondary markets where AFME members perform market making, broker, multilateral system, custodian and clearing member functionalities.

About Ashurst

1.6 Ashurst LLP ("**Ashurst**") has assisted AFME in the drafting of this response. Ashurst is a leading international law firm with a broad financial institution practice across the main financial hubs in Europe, Asia Pacific and the US. Its multi-disciplinary FinTech practice acts for the world's premier financial institutions and emerging FinTech technology innovators. The practice regularly advises clients who navigate the complex regulatory and legal landscape in achieving their digital transformations with particular expertise in deployment of Distributed Ledger Technology to transform wholesale payments and securities markets.

Current and future use cases of DLT in the financial markets

[1] AFME is registered on the EU Transparency Register, registration number 65110063986-76.

1.7 DLT use in primary and secondary markets is still in its nascent stages but has accelerated over the last couple of years. In the primary market, November 2021 saw SIX's Digital Exchange use DLT to issue the world's first tokenised bond that is issued, traded and settled on regulated and supervised financial market infrastructure. In December 2021, AXA Investment Managers purchased €3 million of tokenised bonds from Société Générale. The transaction was completed on the public blockchain, Ethereum. Despite these developments, currently all EU DLT-based securities are only traded over-the-counter ("**OTC**") (such that they are not made available for trading on a regulated market, multilateral trading facility ("**MTF**") or organised trading facility ("**OTF**")).

1.8 The ability of DLT securities to be made available for trading on a regulated trading venue ("**TOTV**") and thus the scale of DLT securities business is primarily limited by the obligation to use a central securities depositary ("**CSD**") to settle transactions in transferable securities that are TOTV. This obligation is set out in Article 3 of Regulation (EU) No 909/2014 ("**CSDR**"). To comply with CSDR, DLT trading venues listing transferable security tokens should perform settlement and delivery through a CSD. Our understanding is that there are, at the moment, no existing EU licensed CSDs which offer the registration and settlement of tokenised securities. Accordingly, an essential facet of the Pilot Regime – and one which has received wholesale support from our members – is that investment firms and market operators would be permitted to register and settle transactions in DLT securities if authorised as a DLT TSS where such securities are admitted to trading on a DLT MTF (under the Pilot Regime) or a traditional MTF. The DLT TSS provides an opportunity for new market infrastructure to bridge the current gap that is currently present so that innovation in this space can continue.

1.9 The lack of any existing offering by an EU CSD to settle DLT securities should not however be considered as a final state. It is our view, and one which we would like ESMA to recognise, that the Pilot Regime does not in and of itself create an obstacle to an existing CSD to act as a DLT securities settlement system in compliance with CSDR (provided that it has received the required authorisation to do so). This is wholly consistent with the pragmatic views expressed by ESMA in its report to the European Commission of 2 August 2021 on the use of FinTech by CSDs.

Use of DLT in the lifecycle of a security

1.10 Where securities are constituted using DLT, this implies that registration and settlement of those securities must take place on the DLT (i.e. the registration of legal ownership and the transfer of such legal ownership) – the precise nature of what the DLT records mean will depend on the specific features of the system design and the local securities laws. Under the Pilot Regime, this will be performed by the DLT SS or the DLT TSS. We note that where we refer to settlement of a transaction as being "on-DLT", this could relate to the securities leg alone or both the securities and the cash leg – the cash leg of a transaction may not necessarily take place on-DLT (however, where it does not, this would not take advantage of the full benefits of DLT). In addition, depending on the way in which the securities are constituted using DLT, all rights and interests may not be fully represented on the DLT - for example if a wallet/private key against which ownership is recorded is that of a custodian, the rights of the client of the custodian (i.e. the ultimate investor) in respect of the security may be represented off-chain.

1.11 Separately, where securities are constituted using DLT, trading may take place on- or off-DLT, depending on the market infrastructure designed and made available. For instance, all aspects of trading (including price making and discovery) up until and including the point of execution may take place off-DLT (i.e. under the current trading models) but as above, settlement will take place on-chain. For example, SIX Digital Exchange ("**SDX**") – the Swiss digital asset ecosystem built by SIX connecting exchanges, MTFs and CSDs – permits trades to take place over-the-counter ("**OTC**") or on traditional trading platforms. OTC transactions can still be routed through the settlement and custody layers of the SIX Digital Exchange.

The Swiss Financial Market Supervisory Authority ("**FINMA**") authorised SDX to operate both a stock exchange and CSD for digital assets in Switzerland.

1.12 Alternatively, all aspects of trading in the relevant security may take place on-DLT – what this would look like will depend on the specific design. For instance, on-DLT trading could completely resemble traditional trading models today or look fundamentally different (e.g. peer-to-peer trading). We note, however, atomic settlement does not prevent settlement from being a distinctly identifiable process from execution of a transaction, even where execution occurs on-DLT.

Peer-to-peer trading

1.13 As well as traditional models, DLT MTFs and DLT TSS can operate a disintermediated model under which brokerage structures are eliminated and natural persons are direct members of exchanges (i.e. engaging in peer-to-peer trading). Retail users will execute transactions directly on the digital exchange and settle directly with another user's wallet. Separate controls and infrastructure will need to be in place to protect retail investors. AFME does not represent participants in connection with retail business and therefore in its response to this CFE will not consider such peer-to-peer arrangements. Nonetheless, it is worth noting that the emergence of disintermediated retail trading may change both the role and boundaries of the wholesale markets – market intermediaries perform legitimate and important functions that provide protection and legal certainties to investors and the markets in which they operate. The loss of such protections and certainties will need to be carefully considered for these models to avoid negative outcomes on investors and/or the markets within which they will operate.

Key considerations

Flexibility should be central to the Pilot Regime

1.14 AFME recognises that the European regulatory framework will play a critical role in DLT uptake, as a balance must be struck between integrating digital finance with existing standards and offering room for innovation. Indeed, while investor protection and transparency should remain central elements of digital finance regimes, DLT has the potential both to: (a) improve efficiencies in settlement cycles; and (b) give rise to entirely new use cases and efficiencies not contemplated by current financial and regulatory systems. Outcomes will very much depend on the specific designs and innovations of DLT-based market infrastructure in the coming months and years.

1.15 Flexibility is therefore the key to the Pilot Regime's success. The Pilot Regime constitutes an environment to test DLT in the financial markets without applying the full weight of current financial market infrastructure regulation. Our members anticipate that, not only would the application of the full range of the current detailed and complex regulation designed for the traditional markets be inappropriate for a nascent segment industry (and potentially stifle innovation and a future deep and liquid market in DLT securities), but DLT implementation and system design could in future far exceed the capabilities of conventional issuance, trading and settlement models. In addition, given that such designs and the optimal use of DLT are yet to unfold, it is critical that the European regulatory framework does not presume specific use cases for DLT. The Pilot Regime represents an excellent chance to understand and plan for future models.

Interoperability of DLT market infrastructure and traditional infrastructures

1.16 The Pilot Regime will lower existing barriers to establishing and operating digital securities markets. However, the Pilot Regime can only do so effectively if it allows for the emergence of hybrid/transitional market architecture. In the near-term, it is unlikely that digital securities will be fully issued, traded and settled exclusively in a DLT environment. Our members consider that market participants may combine on-DLT and off-DLT processes, for example,

to account for the fact that issuers and investors may not have access to the relevant networks. Therefore, the Pilot Regime and any future regulatory framework following the review of the Pilot Regime should facilitate seamless interoperability with traditional financial markets. For example, regulators should assess the ability of developing DLT systems to connect to existing market infrastructure.

1.17 Separately, it is essential that interoperability amongst different DLT market infrastructure is at the core of a future regulatory framework for digital securities. However, consideration of any specific details of interoperability standards under the Pilot Regime (or even any regime immediately succeeding the Pilot Regime) is premature given the nascency of the digital securities markets. However, following the Pilot Regime, regulators should reflect on an outcome of interoperability.

1.18 Ultimately, assuming the deployment of DLT in securities markets proves the success that our members believe it will be, considerations will have to be given to facilitate scaled migration of traditionally issued securities on to the DLT environment. The regulatory system would need both to accommodate the migration process and to promote a harmonised approach at Member State level. This is a topic in its own right with systemic complexities which is best tackled further down the track.

Open access

1.19 In addition to and consistent with the objective of interoperable DLT financial market infrastructure, it is critical that the future regulatory framework ensures open access so that DLT-based market infrastructure can be workable for the financial markets that it relates to. In particular, traditional and DLT trading infrastructure/market infrastructure will need to have access to the DLT settlement systems. For example, for a market participant to be able to execute a transaction in a DLT security on a traditional or DLT MTF, the MTF/participant will need access to the settlement system of the relevant DLT security. If access is restricted – either as a result of the settlement system rules or due to technological inconsistencies – the outcome will be suboptimal and of limited use for the financial markets.

Technological neutrality

1.20 Ultimately, once the DLT securities market has been fully established, instruments that are traded or settled using DLT should be treated in the same manner as equivalent traditional securities. In many ways, DLT securities should function in the market in the same way as traditional securities – however, this is yet to be seen (e.g. whether the fact that a security is traded or settled on chain will become a factor in the secondary markets for instance from a pricing perspective). It follows that, as a future goal, AFME members would support investor protection and transparency standards to be as technologically neutral as possible and only have points of difference where required to enable technology to be used. However, since a market in DLT securities is yet to be established, modifications to and exclusions from such standards are appropriate under the Pilot Regime so as to enable sufficient flexibility for these markets to emerge.

1.21 Our members would argue that it is misleading to focus on the differences between DLT and traditional market infrastructure. There are, in theory, almost limitless DLT configurations.

(a) Some DLT platform functionality could closely resemble existing financial services architecture; others may be unique to a particular digital ecosystem.

(b) Significant differences may also exist between DLT networks. These can relate to the DLT type (e.g. public vs private, restricted vs unrestricted) or to purely technological features (e.g. latency). Any such property of a DLT network could affect reportable characteristics, such as price.

1.22 Rather than designing the final regulatory framework now, however, the Pilot Regime will allow the industry to explore what those features and requirements should look like.

CFE has not addressed the SI and OTC regimes under MiFIR

1.23 ESMA in the CFE has assumed that OTC trading does not currently, and will not in the future, take place under the Pilot Regime and that all trading will be through a DLT MTF. In AFME's view and reading of the Pilot Regime, it does not preclude the possibility of trading in DLT securities to take place off-DLT (i.e. either OTC or through a traditional trading venue) and for the settlement and ownership transfer to take effect through a DLT TSS or DLT SS. From a technological perspective, DLT market infrastructure may be such that all trading is on-DLT or alternatively, trading could be carried out off-DLT – but then settlement would be on-DLT. It is important that this flexibility is retained to ensure that the industry can develop and design the optimal DLT market infrastructure for the financial markets within the test environment of the Pilot regime.

1.24 As a result of this assumption, ESMA has not considered the application of the pre trade transparency regimes applicable to systematic internalisers ("**SIs**") in respect of DLT securities or post trade transparency requirements applicable to investment firms concluding trades off-trading venues. Given that bilateral trading of DLT securities is possible, it is also essential that ESMA considers the transparency regime for SIs and for OTC trading. We set out our recommendations in this regard in response to Q9.

1.25 In particular, given the nascency of DLT securities, AFME considers that only the lightest transparency requirements laid down in RTS 1 and 2 should apply to DLT transactions for the duration of the Pilot Regime. The burden of regulatory compliance could raise barriers to entry of new market participants, impair the ability for depth of liquidity to develop and thereby diminish the utility of the Pilot Regime as a controlled test environment.

Share trading obligation

1.26 The CFE does not address the share trading obligation. We would not expect the share trading obligation to apply during the Pilot Regime, given the expected lack of deep liquidity in DLT shares such that the transactions would likely be non-systematic, ad-hoc and infrequent. It would be helpful for ESMA to provide confirmation/clarification of this expectation, irrespective of the final outcome of the MiFIR review (at least for the period of the Pilot Regime and subject to review following the Pilot Regime).

Market value limit

1.27 The Pilot Regime imposes limitations on the financial instruments admitted to trading on or settled by a DLT market infrastructure ("**DLT MI**"). DLT MI may not admit to trading or record financial instruments where the total market value of such instruments exceeds or reaches EUR 6 billion. There are also limitations on the financial instruments within scope of the Pilot Regime – based on issuance size and market capitalisation of the issuer.

1.28 Our members consider that the market value cap creates a cliff edge that undermines the central objective of the Pilot Regime by making it impossible for DLT MI to achieve scale. In the event that certain DLT securities did reach the threshold, it would be impractical to migrate such a large volume of financial instruments from a DLT market infrastructure to a traditional market infrastructure. The risk of needing to conduct such a migration could disincentivise key market participants as a result. Instead, once in excess of the EUR 6 billion threshold, DLT MI should become subject to increased regulatory and supervisory requirements (rather than excluded from the licensing framework under the Pilot Regime). The cliff edge should be removed.

1.29 We appreciate that the EUR 6 billion limit is written into the Level 1 text and therefore it is not directly within ESMA's gift to change it. Nevertheless, it will be an important consideration for policymakers.

Consistent use of terminology

1.30 It is important that in developing a regulatory framework, there is consistent use of technical terminology. In particular, regarding the use of the terms:

(a) permissioned vs permissionless DLT;

(b) private vs public ledgers; and

(c) DLT vs blockchain.

Permissioned vs permissionless and private vs public ledgers

1.31 There are many different types of DLTs that could be used by market infrastructure under the Pilot Regime. We set out AFME's definition of certain key terms:

(a) permissionless ledgers allow anyone to join the network as a validator node to validate transactions;

(b) permissioned ledgers restrict access, and only certain users can operate nodes to validate transactions;

(c) public ledgers can be accessed by anyone;

(d) private ledgers can be accessed only by authorised users;

(e) unrestricted ledgers allow all participants to create transactions in the ledger; and

(f) restricted ledgers grant access rights to create transactions only to certain users; other participants may be authorised to read only.

1.32 DLTs will display combinations of these features. It is also common for public ledgers to be unrestricted and permissionless, meaning that anyone can join the network, submit a transaction and validate transactions. However, public ledgers may also have private side chains. Further, certain ledgers permit all participants to operate validator nodes, but certain nodes are granted greater validation capacity on the grounds that these are proven and trusted nodes.

DLT vs blockchain

1.33 DLT and blockchain are terms that are often used interchangeably. However, DLT refers to the broad umbrella of distributed ledger technology, which is a technology that enables the secure validation, recording and sharing of data. Blockchain is a subset or "type" of DLT technology. Other types of DLT include directed acyclic graph (DAG), distributed hash table (DHT) and hashgraph.

Blockchain transaction vs execution of a transaction in a security

1.34 The term "blockchain transaction" refers to the recording of an entry on the blockchain through the consensus mechanism of the relevant system. This is distinct and separate from a transaction in the context of the financial markets – i.e. the conclusion of an agreement between parties to buy/sell (or transfer) a financial instrument.

DLT securities outside the Pilot Regime

1.35 Even once the Pilot Regime is implemented, it will be possible for DLT securities to be issued such that these do not make use of DLT market infrastructure under the Pilot Regime. There are two possible scenarios:

(a) a DLT security is "OTC-only" such that it is not made available for trading on regulated trading venues; or

(b) a CSD offers DLT security registration and settlement functionality under the existing CSDR regime.

In these cases, AFME members consider that these DLT securities should be treated in the same manner as DLT securities under the Pilot Regime for the purposes of the MiFIR transparency, reporting and recording regimes. We do not view there to be any reasons as to why there should be distinct treatment or an advantage for DLT security to be issued in or outside of the Pilot Regime.

Recommendation for a joint industry and regulator working group

1.36 Owing to the above key considerations, which outline the multitude of possible DLT configurations, there are likely to be inconsistencies during the Pilot Regime in the way that DLT market participants comply with their obligations under RTS 1 to 3 and 22 to 25. Examples of areas where we expect divergence, at least at the start, are in DLT messaging systems, interoperability, completion of fields in regulatory reports, and API standards. Such inconsistencies will be a natural feature of the Pilot Regime and we anticipate that a degree of standardisation will evolve over time – as would be the case in connection with any large scale technological and regulatory implementation projects.

1.37 Nevertheless, it is important that regulators are involved in discussions on standardisation. Regulator input is key to driving progress on consistency in DLT market supervision and transparency. We would recommend establishing a working group jointly attended by industry members and regulators which would run in parallel to the Pilot Regime. The working group would consider examples arising during the course of the Pilot Regime in order to begin developing solutions to questions around DLT flexibility, interoperability, access and regulatory reporting standards.

2. **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.**

2.1 We do not provide a view.

3. **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**

Key elements supporting increased use of DLT in the financial markets

3.1 DLTs are capable of validating and processing large amounts of information at speed. DLTs have an indeterminable number of configurations and as such any given use case will be design-specific. However, common characteristics of DLTs include the use of: (a) consensus mechanisms to validate new data entries and align with existing entries; and (b) cryptography to ensure the immutability and non-repudiation of records, as well as the authorisation of users.

3.2 As regards (a), settlement will take place according to the logic of the smart contracts, which encode the terms and conditions (or parts thereof) of the underlying securities and mechanisms for operationalising lifecycle events. This will embed automated processes. Associated advantages include:

(a) speed of settlement;

(b) simplicity of exercising contractual rights, processing payments and transferring funds;

(c) reduction of risk of error;

(d) streamlining the issuance process and access to capital markets: smaller market players may not bear costs associated with the traditional origination processes in that they may not, for example, require the services of a paying agent;

(e) reducing costs in the secondary markets, improving outcomes for investors: DLT could simplify settlement of transactions and potentially remove the need for certain intermediaries in the settlement cycle, ultimately reducing counterparty risk and costs;

(f) enabling access to secondary markets: under peer-to-peer models, the ability to trade and settle funds directly from one user to another may remove the need for certain intermediaries. AFME members believe that the role of intermediaries in price-formation and market-making will remain critical even in a DLT environment. However, DLT peer-to-peer models may provide another complementary way for buyers and sellers coming together where appropriate; and

(g) AML checks and KYC monitoring processes may also be improved. Users may be assigned a verified digital identity, which is shared with other participants in the network and embedded into the smart contract (such that a non-verified wallet cannot receive the relevant security). This is known as 'white-listing' – though it may not be a complete, or the only, design solution for AML purposes.

3.3 As the validation of transactions is decentralised to a network of nodes, no single entity has absolute control of the ledger (unless this is built into a specific permissioned structure – e.g. through a master node for oversight and correction purposes). This has the following benefits as compared to the traditional framework for securities registration:

(a) system resilience will be greater (e.g. it is far more difficult for data to be tampered with or compromised); and

(b) no single point of failure risk (which exists for the traditional framework with CSDs).

3.4 As regards (b), immutability means that the data is stored in such a manner that makes tampering both impractical and not easily discernible. The cryptographic technologies used achieve an extremely secure method of recording data (which will continue to evolve and improve).

High level main obstacles for the uptake of DLT

3.5 In our view there are a number of reasons why to date there has been limited uptake of DLT in the field of financial services:

(a) ***the need for a CSD for DLT securities that are TOTV*** – as set out in our response to Q1, the ability of DLT securities to be made available for trading on a regulated trading venue and thus the scale of DLT business is limited by the obligation to use a CSD to settle transactions in transferable securities that are TOTV. There are

currently no EU CSDs providing securities settlement in respect of digital securities. This is supported by the fact that all digital bond issuances in the EU to date have been in respect of OTC bonds;

(b) ***lack of harmonisation of regulatory regimes*** – currently there is divergence and inconsistency across the EU as to the regulatory treatment of digital securities. For instance, in a number of EU Member States, there are local regulatory regimes capturing digital securities (e.g. in Germany, Luxembourg and France) – each of these is different in approach and not harmonised. Further, the implementation of DLT market infrastructure may trigger certain regulatory authorisations in one jurisdiction and other authorisations in another (e.g. whether operation of market infrastructure for the settlement of digital securities could trigger a license to operate a payment system). This lack of harmonisation creates complexity and potential conflicts of laws, which makes navigating this landscape challenging;

(c) ***securities laws*** – local securities laws governing the constitution of securities (including how legal ownership vests and transfers), have been designed for traditional securities (except for a few member states that have passed legislation to govern digital securities – e.g. Luxembourg). As a result, there are requirements under existing local securities laws in Member States that could restrict the issuance of certain securities in digital form; and

(d) ***current EU regulatory framework is designed for traditional securities*** – whilst the EU regulatory framework is designed to be technologically neutral, it has been constructed with the traditional financial markets infrastructure in mind. Therefore, there are concepts in regulations that have limited meaning in, and are inconsistent with, DLT environments.

Main obstacles as regards the MiFIR regulatory technical standards

3.6 To the extent possible, regulatory requirements should be technology agnostic and should be based on key principles and calibrated on the basis of objective features of the instrument in question or class of instrument. At the same time, it is also important not to introduce a regulatory regime for digital securities and/or systems at this juncture (i.e. under the Pilot Regime) which could impede both market access (for market operators and/or participants) and secondary market liquidity.

3.7 As discussed later in our response, the full scope of the MiFIR requirements such as the pre- and post-trade transparency requirements for shares and bonds in our view would be disproportionate and discouraging for a market which is nascent and currently has no depth of liquidity. It is very unlikely that during the three years of the Pilot Regime, any digital security will become deeply liquid. This is supported by the fact that there are already safeguards under the Pilot Regime (i.e. as related to market capitalisation and issuance size) which would restrict liquidity. We also do not expect digital securities will be treated by the markets, at least for now, as fungible with traditional securities (e.g. digital securities have different operational features to traditional securities and require the ability to either directly or indirectly interact/engage with DLT market infrastructure). Therefore, a distinct approach for DLT securities under the MiFIR regime during the period of the Pilot Regime (and subject to review following the Pilot Regime) would be appropriate. The full weight of the MiFIR regulatory regime at this stage could serve to restrict the growth of the digital securities markets. AFME would, however, support a future approach, once the digital securities markets are established, where digital securities are treated in the same way as traditional securities.

3.8 In addition, given that off-venue trading is possible under the Pilot Regime and is expected to be necessary to build depth of liquidity and facilitate price formation, the share trading obligation needs to be considered. Given the expected lack of deep liquidity of the DLT securities, a clarification that transactions in such instruments would constitute transactions

which are non-systematic, ad-hoc and infrequent (at least for the period of the Pilot Regime and subject to review following the Pilot Regime) would be appropriate, irrespective of the final outcome of the current MiFIR review.

Immediate expectations for DLT

3.9 DLT shows great potential to improve capital market efficiencies. Quite how this potential will be delivered on is unknowable at this stage. The Pilot Regime is a good construct to explore alternative visions. It is vital that during this exploration phase any commercial deployment of the technology is supervised by regulators, if only to reduce the risk of DLT being discredited by association with financially damaging errors or bad actors.

3.10 At this early stage, AFME considers that both permissioned and permissionless, and public and private distributed ledgers are viable bases for digital financial markets. Private and permissioned distributed ledgers tend to perform better in relation to transaction processing and validation because their consensus mechanisms rely on authorised and identified participants. This in turn requires less computing power. By contrast, there are known problems with 'Proof-of-Work' consensus mechanisms under permissionless blockchains, including the need for significant computing resources and the risk of bad actors joining the network. The openness of permissionless public systems do, however, have enhanced security benefits due to the number of nodes associated with the distributed ledger (due to its high degree of decentralisation). To date, all DLT securities issuances (though limited in number) concerning EU issuers have been on public permissionsless blockchains – indicating that permissionless public systems could be viable.

3.11 However, we believe it is important for the regulatory framework not to restrict system design. Today's disadvantages under permissionless distributed ledgers may be remediated in future through the development of other cryptographic techniques or consensus protocols.

4. **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?**

4.1 Not applicable to AFME.

5. **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?**

How DLT securities currently trade

5.1 DLT securities currently trade on an OTC basis because of the CSDR requirement to settle (and thereby register) TOTV securities with CSDs. As mentioned above, at the moment, there are no authorised CSDs operating designated securities settlement systems for DLT securities nor is there an indication from CSDs that they intend to expand their operations to accommodate DLT securities in the near term. There are also very few number of DLT securities issuances involving EU issuers, namely DLT bonds.

5.2 As a non-EU example, the SDX digital bond provides an important exception to the OTC trading pattern. However, this exception supports AFME's position in that SDX maintains on its distributed ledger a settlement and custody layer that operates as a digital CSD and securities settlement system regulated by FINMA.

5.3 The Pilot Regime supports listing digital securities on a DLT MTF/TSS and settling on a DLT SS/DLT TSS, which we view as critical success factors for DLT markets. However, AFME does not believe that all security lifecycle events will necessarily happen on-DLT and that

hybrid models are likely to develop. Under the Pilot Regime, it is possible for market operators to settle OTC trades in DLT securities on DLT SS/DLT TSS.

Challenges with market structure

5.4 Members consider that the Pilot Regime will face the following challenge: establishing interoperability between traditional and digital market infrastructures. This process is fundamental to the long term success of operating a DLT-based financial services business. As such, the industry is already working on solutions to bridge the digital and traditional realms, but timing remains a challenge.

5.5 Accordingly, a requirement for the Pilot Regime to mandate the interoperability of market infrastructure would not be appropriate. Rather, the portability of tokens between the digital and traditional worlds should be an essential but future objective, as discussed more broadly in our response to Q1. That process will take several years and, while not strictly a recommendation applicable to the current contemplated regulatory framework, it should form part of ESMA's evaluation of the Pilot Regime. Work should begin now to reduce friction and fragmentation in the capital markets.

5.6 There are also considerations in respect of cross-chain interoperability. Currently, different token issuers will use different token standards, as well as different DLTs/underlying technology. A common standard for token interface definitions should become an ambition for the industry. We welcome the Pilot Regime as an opportunity to examine the standards that are most suited to the needs of markets and regulators. The industry has been required to develop agreed standards in the past that have not been linked to technology, for example: MTF rules and risk standards for central counterparties.

5.7 At this early stage, we do not consider that it is possible to comment on the challenges with market infrastructure in respect of specific asset classes. DLT affords the possibility to programme and automate all lifecycle events and cashflows relating to a digital security. Challenges that arise in connection with particular asset classes are therefore unlikely to be inherent to DLT. Instead, we would argue that issues specific to an asset class would emerge when DLT architecture seeks to integrate existing administrative, operational, legal and fiscal processes that are external to DLT. For example, tax obligations on transfer.

6. **INSTRUMENT STATUS: DO DLT FINANCIAL INSTRUMENTS HAVE DIFFERENT CHARACTERISTICS THAN 'STANDARD' SHARES, UCITS-ETFS AND BONDS/SECURITISATIONS? IF YES, PLEASE ELABORATE AND EXPLAIN WHETHER THESE DIFFERENT CHARACTERISTICS CALL FOR A DIFFERENT APPROACH FOR THE APPLICATION OF THE TRANSPARENCY REQUIREMENTS?**

Constitution vs characteristics

6.1 We distinguish in this response between the "constitution" and the "characteristics" of DLT financial instruments from a markets perspective under legal and regulatory principles.

6.2 The constitution of DLT shares, UCITS-ETFs and bonds/securitisations differs from standard dematerialised or certificated securities. Constitution of a financial instrument denotes the way and nature in which ownership arises as well as its transferability. The question of ownership is a contested one and varies according to the national securities laws framework in any given jurisdiction. Cross-border transactions open fundamental legal issues because local securities laws are not harmonised. This is one of the reasons why DLT bonds are more common than DLT equities, in relation to which the corporate and property law implications are more prescribed and complex.

6.3 Although ESMA is not concerned with national securities law issues, the Pilot Regime could be affected if local laws: (a) restrict the issuance of securities in dematerialised or digital form; or (b) permit issuance in dematerialised and digital form, but the legal framework for

the custody chain is untested and subject to legal risk. Conversely, certain jurisdictions (such as France, Germany and Luxembourg) have augmented local legislation to ensure that the ownership rights under digital securities are the same as those in conventional instruments.

6.4 Given the current patchwork status of securities laws, we should assume for the purposes of the Pilot Regime that DLT securities will be validly constituted in their jurisdiction of origin and can be transferred from one party to another under applicable property laws.

6.5 From a markets perspective, therefore, digital financial instruments should in theory have the same fundamental characteristics as their traditional counterparts – this would be in the same way that physical financial instruments are not fundamentally different to dematerialised financial instruments. However, this is yet to be determined and as discussed in our response, it is unlikely at least at these early stages, that DLT securities will be viewed as fungible with traditional securities of the same nature and terms.

Application of transparency requirements

6.6 The markets are in a transitional period for DLT securities. Accordingly, DLT securities cannot demonstrate a depth of liquidity, nor are they tested in terms of resilience in the markets. Therefore, our view is that the Pilot Regime should provide for a period during which liquidity can build without being inhibited by regulatory requirements that are inappropriate for a nascent industry. Our members believe that transparency obligations could encumber the liquidity of instruments that are inherently not deeply liquid and are unlikely to become deeply liquid during the course of the Pilot Regime (enforced by the market capitalisation and issuance size thresholds under the regime).

6.7 Further, the configuration of the DLT element(s) may vary from issuance to issuance, or transaction to transaction. System design will be responsible for determining whether order matching, execution and settlement all take place, for example, on-chain on a public ledger, or if certain sub-chains will be private and/or lifecycle events are operated through conventional infrastructure. AFME's members do not necessarily view matched trading as one of the core benefits of DLT: the fact that any architecture is programmable ensures that the main use cases for financial markets are yet to be determined.

7. **TRANSACTIONS: WHERE ARE DLT FINANCIAL INSTRUMENTS TRADED? COULD THERE BE OTC TRADING IN THOSE INSTRUMENTS?**

7.1 Yes. Please see our responses to Q1 and Q5.

7.2 However, we note that where OTC trading in DLT instruments takes place, market participants will need to be able to access (either directly or indirectly) the relevant settlement system (i.e. the DLT TSS or DLT SS) to settle those transactions (e.g. by sending settlement instructions).

8. **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.**

8.1 In accordance with existing regulatory principles, members consider that only price forming transactions should be subject to transparency obligations for DLT trading. Accordingly, transparency requirements under RTS 1 and 2 should not apply to blockchain transactions (or other types of DLT transactions) that take place purely for settlement purposes or where transactions are simply recorded on-DLT for other post-trade processing or administrative purposes.

8.2 The RTS 1 and 2 requirements should apply in respect of price formation (regarding pre-trade transparency) and the conclusion of a market transaction for post-trade transparency (i.e. where the buyer and seller enter into a binding agreement to buy/sell a security) – whether these take place on- or off-DLT for DLT securities. If the DLT is merely used to settle the legal transfer in accordance with the executed transaction carried out in the traditional manner, then the RTS 1 and 2 requirements will not apply or be relevant to the DLT layer (though we note that the DLT settlement may influence the design features of any trading in DLT securities).

8.3 Where transactions in DLT securities occur on-DLT, the execution of the transaction and the settlement of the transaction could be near instantaneous (but not necessarily so depending on the infrastructure design). Despite this, there will still be a legal distinction between the point in time at which the legal contract arises between the buyer and the seller (or transferer and the transferee) and the settlement of the transaction itself. The precise point in time at which execution of the transaction occurs will depend on the specific system design.

8.4 In support of this position, our members consider that the following existing exclusion from post-trade transparency requirements will prove useful in a DLT context:

"*contracts arising exclusively for clearing or settlement purposes*" (article 13(a) RTS 1 and article 12(a) RTS 2, which refer to article 2(5)(b) RTS 22). This may assist in particular DLT TSS and DLT SS operators in circumstances where a trade has been concluded off-venue but routed through the settlement layer of the network.

In relation to the "give-up transaction" or "give-in transaction" exclusions under articles 13(c) of RTS 1 and 12(c) of RTS 2, we refer ESMA to our response to your consultation paper on the review of RTS 1 (equity transparency) and RTS 2 (non-equity transparency) at question 3. AFME does not believe that the current organisation and legal arrangements for give-up transactions in equities are covered by the reference to "clearing or settlement purpose" transactions under Article 2(5) and therefore are also unlikely to prove useful in a DLT context. We have previously submitted to ESMA our proposal to include an amended definition within Article 2, Article 6 and Article 13 of RTS 1."

8.5 There may be other types of recorded DLT transactions as part of the registration, settlement processes and other lifecycle events in respect of the security (which do not constitute the execution of the transaction and are not price-forming), depending on the design structure and the roles and responsibilities and the securities laws of the relevant jurisdiction. Simply because a DLT transaction arises does not mean that: (i) it constitutes the execution of a transaction; or (ii) that a corresponding execution of a transaction has occurred. For example, there may be multiple records on the DLT where there are custody chains, which would all be updated following the execution of a transaction. It is critical that any such blockchain transactions and records do not fall within scope of post trade transparency.

8.6 In addition, where a DLT security is created or a traditional instrument is converted into a DLT instrument (or vice versa), these operations will result in a DLT transaction. Such processes are analogous to conversions of a certificated security to a dematerialised security (or vice versa). Such a process is not and should not be considered a price forming transaction.

9. **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?**

Application of transparency requirements

9.1 As discussed above, under the Pilot Regime transactions in DLT instruments may take place on- or off-DLT either: OTC, on an SI and/or on a trading venue, which may or may not be

a DLT MTF/DLT TSS. In addition, DLT securities are not necessarily different to traditional securities in terms of their fundamental characteristics and may eventually be viewed as fungible (depending on how this works out in the markets). See our responses to Q1, Q5 and Q6. It follows that the transparency regime could theoretically apply to DLT securities traded on- and off-venue in the same way as traditional securities.

9.2 However, given the nascency of DLT securities, AFME believes that a technologically neutral pre- and post- trade transparency regime should only be a future state ambition. AFME considers that only the lightest transparency requirements laid down in RTS 1 and 2 should apply to DLT transactions for the duration of the Pilot Regime. The burden of regulatory compliance could raise barriers to entry of new market participants, impair the ability for depth of liquidity to develop and thereby diminish the utility of the Pilot Regime as a controlled test environment.

9.3 We have structured our response to address the application of transparency requirements to DLT instruments in general terms (sections 1 and 2), before discussing the appropriate approach for the Pilot Regime (section 3 ff.).

Section 1 – application of pre-trade transparency requirements – general

9.4 Price formation. Where the price forming aspects of trading in DLT securities occur in the traditional manner (and settlement is on-DLT), the way in which price formation occurs is the same as for traditional securities.

9.5 However, where trading and settlement occur on-DLT, the price forming part of a DLT operation may not always be easily distinguished from the non-price forming part (however, this depends on system design). For example, a DLT MTF could provide for the near-simultaneous occurrence of order-matching, execution and settlement. It is generally accepted that atomic settlement does not preclude price-discovery transparency as it is possible to publish adequate information about orders, quotes and level of trading interest. However, it is possible that certain concepts under the pre-trade transparency regime would be inappropriate for certain system designs.

9.6 In addition, network participants could initiate combined transactions, such as atomic short sell/borrow transactions. Combined transactions should not be in scope of transparency requirements as it will not be possible to indicate depth of trading interest nor is it clear what information would be included in the post-trade report (for post trade transparency purposes). We discuss the difficulties associated with short selling in section 2 of this response below.

Section 2 – application of post-trade transparency requirements - general

9.7 Members raised the following points for consideration in connection with post-trade transparency:

(a) Point in time the transaction concludes: Where the blockchain transaction corresponds to a particular transaction, it is nonetheless distinct and separate from the actual agreement between the buyer and seller (i.e. the conclusion of the transaction itself). Therefore, the focus for post-trade transparency purposes should be the identification of the point in time the transaction is concluded. Where execution of the transaction occurs off-DLT, then the "conclusion of the transaction" will be the same as for transactions traditional securities. Where trade matching and execution occur on-DLT, the point in time a trade concludes will be system design specific. Whilst clarity on this matter would be helpful, AFME does not believe that this will be possible at this stage due to the variety of system designs that may arise under the Pilot Regime.

(b) Block trade vs allocations. Under the post trade transparency regime, the information that should be made public ought to be the price and volume of the trade that is agreed between counterparties (i.e. the block trade). This is different from the trade allocations (e.g. where a buyside counterparty requests a transaction to settle in parts to multiple different funds). A trade report made for each smaller division of the original trade gives skewed market data for price discovery purposes – i.e. it would provide duplicative data (indicating multiple trades when there is one) and the price would have been made against the original block volume (so does not reflect actual price formation). Currently, the industry reports block transactions – however, even today, there is difficultly in identifying the block trades and reporting this (and post trade data is likely to be contaminated with trade allocations). Under the Pilot Regime, for DLT securities, it is important to note that the blockchain records for settlement purposes (i.e. where ownership of the security is transferred through the crediting and debiting of wallets) will provide information on the transaction at allocation level rather than block level. Therefore, for DLT securities, there will be a challenge in identifying the block level trade for post trade reporting purposes, particularly where the transaction occurs on-DLT.

(c) APAs. DLT can be used to fulfil transparency obligations directly. For example, a node can be made public and publish information on a front-end interface (subject to the block vs allocations issue discussed above). Such use-cases could negate the requirement for approved publication arrangements ("**APAs**") for investment firms where the trades occur off-venue. Notwithstanding this potential DLT functionality, members do not discount the use of APAs, since APAs could equally participate in DLT networks as nodes with access to trade data. Members acknowledge that comments on APAs are not within scope of the CFE, as Level 1 legislation mandates APA use.

(d) Short selling. How short selling works in a DLT context is unclear. DLT inventory is established through consensus mechanisms, meaning that only one inventory can exist per DLT at any given time. However, members believe that short selling may very well be possible depending on the system design features.

Section 3 – non-equities – on-venue pre-trade transparency requirements - waivers

9.8 It will be important to maintain a proportionate approach for DLT securities as the market develops. For the reasons outlined above, AFME members believe that it would be disproportionate to apply the pre trade transparency requirements to DLT non-equity securities during the period of the Pilot Regime. If possible within the EU legal framework, we would recommend that ESMA clarify (as it did for primary market transactions) that the intention of the pre trade transparency regime is not to capture transactions within a regulatory test environment such as the Pilot Regime.

9.9 Alternatively, if such a clarification is not possible, DLT non-equity instruments should be characterised as illiquid given the lack of depth of liquidity and the potential for pre trade transparency to impair the ability for a deep and liquid market to build in this market at this stage – we think it improbable that such liquidity will build during the course of the Pilot Regime. This is supported by the limitations on market capitalisation and issuance size under the Pilot Regime. To this end, we would recommend creating a new class of instruments for DLT non-equity securities for the purposes of liquidity calibrations and threshold calculations under the Pilot Regime. This should be reassessed upon review of the Pilot Regime after three years.

9.10 On this basis, we would expect competent authorities to grant a waiver under article 9(4) MiFIR (see also article 16 RTS 2) for trading venues in respect of DLT non-equity instruments.

Section 4 – systematic internalisers – pre-trade transparency

9.11 As above, AFME recommends that ESMA clarify that the pre trade transparency requirements should not apply to DLT securities during the course of the Pilot Regime (subject to review after the three year period).

9.12 In the event this is not possible, we note that SIs are not required to make public firm quotes in respect of equities and non-equities traded on a trading venue for which there is no liquid market (articles 14(1) and 18(1) MiFIR).

9.13 For non-equities, if ESMA characterises DLT non-equities as illiquid during the period of the Pilot Regime under RTS 2, then the full scope of the pre trade transparency requirements will not apply to SIs.

9.14 As regards equities, as with non-equities, AFME believes that it would be helpful to expressly clarify that DLT equities do not have a liquid market under the Pilot Regime – carrying out complex liquidity calculations in such a nascent area would seem disproportionate. The definition of "liquid market" is set out in article 2(17) of MiFIR and supplemented by further criteria in Commission Delegated Regulation (EU) 2017/567. If it is not within scope of ESMA's CFE to make amendments to the Commission Delegated Regulation or provide clarifications in that respect, AFME considers that DLT equity securities will in any event likely fall within the meaning of illiquid securities using the calibrations under the Commission Delegated Regulation.

Section 5 - equities – on-venue pre-trade transparency requirements - waivers

9.15 For the reasons explained above, AFME believes that it would be disproportionate to apply pre trade transparency requirements to DLT equity instruments at this point in time and could in fact impair the ability of a deep and liquid market to develop under the test environment of the Pilot Regime. To the extent that this is possible under the EU legal framework, we would recommend ESMA clarify that DLT equity instruments do not fall within scope of the on-venue pre trade transparency regime for the purposes of the Piot Regime (such as the clarification made for primary market transactions as not falling within scope of the regime). Unlike non-equities, we note that there is no waiver that allows the disapplication of the on-venue pre trade transparency regime for illiquid equity instruments.

9.16 Reference price waiver. We do not agree with ESMA's statement in paragraph 48 of the CFE that DLT financial instruments are unlikely to be traded on different venues. There would be nothing preventing multiple trading venues (either traditional or DLT-based) from making available a DLT security on their trading venue. In fact, DLT systems could encourage multiple trading venues in a particular DLT security due to the efficiencies of the DLT infrastructure - each DLT MTF could have a node in a DLT TSS/DLT SS, whereby a transaction on the trading venue results in an on-chain transaction in the DLT TSS/DLT SS for settlement purpose.

9.17 Negotiated trade waiver. In principle, DLT-based trading venues can develop systems that formalise negotiated transactions and thereby fall within scope of the waiver. The negotiated trade waiver will apply to off-DLT trading venues matching orders in DLT equities in the same way as today (even though settlement will be on-DLT).

Section 6 – equities – on-venue post-trade transparency requirements

9.18 For the reasons above, members consider that DLT equities should, during the Pilot Regime, be treated as illiquid and therefore within scope of national competent authorities' power to authorise the deferred publication of post-trade reports (as per article 15 RTS 1).

Section 7 – non-equities – on-venue post-trade transparency requirements

9.19 For the reasons above, members consider that DLT fixed income securities should, during the Pilot Regime, be treated as illiquid and therefore within scope of national competent

authorities' power to authorise the deferred publication of post-trade reports (as per article 11(1)(b) MiFIR and article 8 RTS 2).

Section 8 – all DLT securities (equity and non-equity) – details for the purposes of post-trade transparency (Table 3 Annex I RTS 1 and Table 2 Annex II RTS 2)

9.20 ISIN. At this point in time, it is unlikely that DLT securities would be considered as fungible with traditional securities, by virtue of the constitution of the DLT security and the embedded features in the smart contract. As such, DLT securities would require their own ISINs. In addition, the Pilot Regime presents an opportunity to test the real-world impact and determine whether DTI information should be coupled with the ISIN (as considered further in the response to Q45).

Transaction time. As mentioned in our response to Q8, the reported transaction time will depend on when a transaction is deemed to be "executed" (i.e. the agreement between buyer and seller being concluded). The definition of "execution" will be contingent on the specific DLT system and associated trading system (either off- or on-DLT).

9.21 Price and price currency. DLT instruments could potentially be traded on fiat or digital currency prices. Equally, their price can be expressed in fiat or digital currency. Notably, DLT instruments may need to be settled using a specific form of digital money (for atomic swap purposes), which would be embedded in the smart contract. This may be relevant information to include as part of the post trade report.

Section 8 – all DLT securities (equity and non-equity) – flags (Table 4 Annex I RTS 1 and Table 3 Annex II RTS 2)

9.22 Members recommend the inclusion of a specific flag for the DLT Pilot Regime. It would be helpful for market users to have this information available so that it is clear that a particular security has been issued through market infrastructure under the Pilot Regime.

10. **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?**

10.1 We believe that it is too early to provide a meaningful response to this question. It will become clearer over the course of the next few years how DLT users will transmit data about prospective and concluded transactions, both to other market participants and regulators.

11. **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.**

11.1 See Q9.

12. **ARE DLT SECURITIES TRADED ON DIFFERENT TRADING SYSTEMS AS 'STANDARD' SHARES AND UCITS-ETFS (MOSTLY CONTINUOUS TRADING AND PERIODIC AUCTIONS) OR BONDS/SECURITISATIONS (RFQ, VOICE TRADING)? PLEASE EXPLAIN.**

12.1 Currently, DLT securities tend to trade on an OTC basis so it is not possible to provide an overview of existing DLT trading systems. The exception is the SIX hybrid bond issuance, under which the digital tranche was issued/listed and traded within an entirely digital environment maintained by SDX, while the traditional tranche was issued/listed at SIX Swiss

Exchange AG. Both tranches are regulated by FINMA. We commented on SDX in our response to Q1 and Q5.

12.2 As discussed in Q1, Q3 and Q5, DLT securities could be traded on- or off-DLT systems (either on a trading venue, through an SI or OTC). Therefore, for non-DLT executed transactions (but settled through DLT), traditional trading systems would be used. Where matching and execution occur on-DLT, all the traditional trading systems could in principle be made to work on-DLT. For example, it is possible to programme an order book exchange and automated market system into the distributed ledger itself. However, where order matching and execution occur on-DLT, more novel trading systems could also be developed (e.g. the disintermediated peer-to-peer trading models). This will very much depend on the specific system design.

13. **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?**

13.1 As discussed in response to Q1 and Q9, given the nascency of DLT securities, AFME believes that a technologically neutral pre- and post- trade transparency regime should only be a future state ambition. AFME considers that only the lightest transparency requirements laid down in RTS 1 and 2 should apply to DLT transactions for the duration of the Pilot Regime. As regards pre trade transparency, we consider the application of the pre trade transparency requirements to DLT securities under the Pilot Regime to be disproportionate for a market that currently has little to no depth of liquidity. The Pilot Regime is intended to be a test environment so that DLT market infrastructure can develop in a controlled and flexible manner. The pre trade transparency requirements presume an established market and trading standards and, as such, could counteract the development of a deep and liquid market if applied to DLT securities under the Pilot Regime.

13.2 Nonetheless, the trading protocols in RTS 1 and 2 remain relevant to DLT securities – trading in DLT securities may occur on trading systems on- or off-DLT. Where order matching/handling occurs off-chain (i.e. through traditional means) and settlement takes place on-DLT, the requirements under RTS 1 and 2 in respect of the trading protocols remain the same. Where execution occurs on-DLT, novel trading systems may arise – however, it is not yet possible to contemplate what these trading systems and protocols will look like. It is critical that the RTS do not prescribe these protocols so that the optimal DLT-based trading protocols can be developed in the controlled environment of the Pilot Regime. In our view the "other trading systems" row, in the interim period should address new trading systems and protocols that arise.

14. **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?**

14.1 The trading systems listed under Table 1 Annex I of RTS 1 and Table 1 of Annex I of RTS 2 should be sufficient for the purposes of the Pilot Regime and do not require tailoring. The traditional trading systems should still be applicable for DLT securities. However, it is not possible to contemplate the specific unique trading systems that may arise in a DLT environment and calibrate accordingly. Therefore, the "any other trading system" row in the tables should, in the interim period, address new trading systems and protocols that arise.

15. **WOULD THE USE OF RESTRICTED (PERMISSIONED) VS UNRESTRICTED (PERMISSIONLESS) DLT REPRESENT ANY DIFFERENCE IN HOW THE PRE-TRADE TRANSPARENCY REQUIREMENTS SHOULD BE APPLIED?**

15.1 We do not see a reason for there to be a difference. Please see our response to Q6 on the characteristics of DLT securities.

16. **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?**

16.1 See our response to Q9.

17. **IS IT IN YOUR VIEW NECESSARY TO MAKE CHANGES TO THE CALIBRATION OF WAIVERS FOR DLT BONDS/SECURITISATIONS IN RTS 2? DO YOU EXPECT ANY IMPLEMENTATION ISSUES IN THE APPLICATION OF WAVERS ALSO TAKING INTO ACCOUNT THE ABOVE CONSIDERATIONS?**

17.1 See our response to Q9.

18. **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?**

18.1 As discussed in our response to Q9, the "conclusion" of a transaction on-DLT will not necessarily occur at the same time as the settlement of the transaction. Even if execution and settlement are instantaneous, these will remain separate processes. How quickly a post-trade report can be generated will in turn be contingent on the technology that facilitates publication. Where transactions are executed in traditional off-DLT environments but settled on-DLT, the concept of "as close to real time as technically possible" will have the same meaning as today.

18.2 What is "as close to real time as technically possible" therefore depends on the system design.

19. **ARE THE CURRENT DEFERRAL PERIODS FOR EQUITY AND NON-EQUITY INSTRUMENTS APPROPRIATE FOR DLT SECURITIES? PLEASE, DISTINGUISH BETWEEN DLT SHARES, ETFS AND BONDS/SECURITISATIONS**

19.1 In AFME's view, the deferral regimes for equity and non-equity instruments are appropriate for DLT securities.

20. **IT IS 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/SECURITISATIONS (ANNEX 2 OF RTS 2)? DO YOU EXPECT ANY IMPLEMENTATION ISSUES ON BASIS OF THE CURRENT FIELDS AND FLAGS?**

20.1 See our response to Q9.

21. **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?**

21.1 DLT MTFs and DLT TSSs should be able to provide the information stipulated by RTS 3.

21.2 It may also be possible for competent authorities/ESMA to instead access directly all relevant data for transparency calculation purposes from the DLT market infrastructure (e.g. by operating a node on a DLT network). See also our response to Q22.

21.3 In any case, we refer to our response to Q6 and Q9, in which we set out our view that competent authorities would not require this information for transparency calculation purposes, assuming that ESMA agrees that DLT securities should be classed as illiquid during the period of the Pilot Regime.

22. **DO YOU AGREE WITH THE APPROACH INDICATED IN THE ABOVE PARAGRAPH? PLEASE JUSTIFY YOUR ANSWER**

22.1 We do not agree. There should be the option to submit a transaction report that is appropriate for the DLT securities without having to provide direct access to regulators. Whilst we support national competent authorities having direct access to the system used by the DLT MTF/DLT TSS, certain system designs may be incompatible with the format required by RTS 22. In addition, there may be issues from a privacy perspective to include personal data (as required by RTS 22) on certain DLT systems (depending on the specifics of the system design).

22.2 Therefore, AFME considers that it should be possible to make a transaction report as per RTS 22 (e.g. by submitting reports using existing file formats) and for this option to be made viable by amending RTS 22 as necessary to make it appropriate for DLT securities.

22.3 We also note that the transaction reporting requirements under RTS 22 apply to EU investment firms executing transactions and only apply to MTFs where the firms executing the transactions are not directly subject to the MiFIR transaction reporting requirements. Therefore, direct access to the transaction data in respect of which the DLT MTFs/DLT TSS are directly required to transaction report would provide regulators with a limited set of transaction data (which is arguably of limited value). Instead, if regulators have direct access to data in respect of all transactions executed on the DLT MTFs/DLT TSS, then investment firms executing these transactions should not need to separately and additionally transaction report. Similarly, if regulators have direct access to the transactions settled on the DLT TSS/DLT SS (which may include OTC/SI trades or non-DLT MTF transactions in DLT securities), then for the same reasons, investment firms executing the transactions should not have to additionally transaction report. If investment firms are required to transaction report in these cases, it would provide the regulators with duplicative data and diminish the value of the direct data access.

23. **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?**

23.1 We agree that this would be a sensible solution. Non-DLT MTFs currently report transactions for third country counterparties. This approach would therefore be consistent with current requirements. ESMA will, however, need to consider the application of each of the transaction reporting fields for these reports.

24. **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 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?**

24.1 Currently, a "cancellation" or an "amendment" of a transaction occurs prior to settlement when an error has occurred as regards the recorded details of a transaction. These are typically detected during the post-trade processes – such as during confirmation with the counterparty. Once a transaction has settled (such that the security has been delivered), the concept of cancellation or amendment is no longer relevant. Rather if an error has been detected post-settlement (which is highly unlikely given the post trade processes that take place before settlement occurs) then a rectification can only take place through subsequent

transactions being entered into. However, these would not qualify as cancellations or amendments.

24.2 In a DLT environment, such "cancellations" or "amendments" again can only occur prior to settlement (i.e. before validation of the DLT transaction and recording on the ledger – as at that stage, ownership in the DLT security has already been transferred). Given the simplification of the post-trade processes that DLT achieves, we expect far fewer cancellations or amendments to take place.

24.3 Nonetheless, we envisage that would be possible for errors to occur where transaction is executed off -chain but there is an error in the inputting of information into the DLT settlement system (prior to settlement taking place). In this case:

(a) if a transaction report has not yet been made, we agree that it is appropriate for a transaction report not to be made in accordance with section 5.18.1 of the ESMA Guidelines on Transaction Reporting, Order Record Keeping and Clock Synchronisation ("**Transaction Reporting Guidelines**"). This will apply if a post-trade publication is made and the post-trade publication is cancelled before any transaction report is made; or

(b) if a transaction report has been made, the approach regarding cancelled trades under RTS 22 for traditional securities equally applies to DLT securities – i.e. the submission of a cancelled report and submission of a new report. We consider that using NEWT and CANC statuses in Field 1 of the transaction report will be equally applicable to DLT securities where execution takes place off-chain and settlement has not yet been recorded on the DLT.

24.4 If a transaction is executed (on- or off-chain) and a DLT transaction takes place to transfer the DLT security, i.e. settlement has occurred, then as with traditional securities that have been settled, the concepts of cancellation or amendment are not meaningful. There has already been a transfer of ownership. However, if (in the very unlikely event) an error was detected after settlement occurred, then the only way to rectify the error would be to reverse the transaction – which would involve entering into an equal and opposite transaction. Such reversal transactions should not be considered to be "cancellations" under RTS 22 and should be reported as separate transactions.

25. **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?**

25.1 It should be equally possible for an operator of a DLT MTF/DLT TSS to maintain an individual TVTIC for each transaction resulting from the full or partial execution of an order that has gone through its matching system, as per section 5.4.1 of the Transaction Reporting Guidelines.

26. **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?**

26.1 In a DLT environment, there should be no difference as regards the completion of fields 4-6, 7-15 and 16-24 specified in RTS 22.

27. **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?**

27.1 We do not expect there to be any difference.

28. **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?**

28.1 Field 59: We do not expect there to be any differences (subject to ESMA's views on the applications of waivers in accordance with Q9). We note that a DLT SS/DLT TSS is only involved in settlement and does not constitute an algorithm for the purposes of Field 59 (since the DLT SS/DLT TSS has not executed transactions). However, a DLT MTF/DLT TSS that matches and executes transactions will be an algorithm for such purposes.

29. **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**

29.1 It is in principle possible to permit short selling of a DLT security. However, this would depend on the specific features of the distributed ledger system - for instance consideration of the following will be relevant: (a) its systems for inventory management; (b) the details of the smart contract code relating to the recording of the transfer on the ledger (e.g. whether a delay is built into the authentication step); or (c) whether it permits settlement to take place if the transferring wallet does not contain sufficient securities.

30. **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?**

30.1 In relation to Field 28, we refer to our response to Q41.

30.2 In connection with Fields 33, 34, 38 and 39, we refer to our response to Q9. If the DLT security has been purchased using a digital currency, then it will need to be possible to record this in the transaction report. If the DLT security is purchased using fiat currency but settled using digital money (i.e. through an atomic swap), it may be relevant to record this in the transaction report.

30.3 We do not anticipate there being any differences in the completion of the other fields.

31. **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?**

31.1 The following will need to be considered:

(a) an ISIN will need to be generated – which will require ANNA templates;

(b) a new optional field for DTI specification may be relevant;

(c) CFI identification code of digital assets together with ESMA validation rules specific to digital assets may be needed; and

(d) the ESMA FIRDS schema would need to be updated to reflect any changes to reported fields.

32. **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?**

32.1 Yes. There is an existing issue with ESMA validating field 5, whereby the first report of the instrument to ESMA is treated as the effective "golden source" against which all other reports for that ISIN are compared. We expect this issue to be further exacerbated due to the potentially higher number of RTS 23 reports being made.

33. **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?**

33.1 The ISIN Gateway is a dependency for FISN. Where a FISN is not possible, we would suggest adding a field for DTSN ("digital token short name") which represents the DLT security - which is in alphanumeric basic Latin characters.

34. **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?**

34.1 We do not expect there to be difference for field 13. However, DLT securities will be governed by the logic of smart contracts, which could predetermine entire lifecycle behaviour from the moment the security is created. Smart contracts could, for example, prescribe payment methods and settlement cycles. To the extent that a particular kind of digital money is necessary to settle transactions in the particular kind of DLT security – such that it is embedded in the smart contract related to the DLT security – this may be an important attribute of that particular security and thus ought to be reported as part of reference data.

34.2 In terms of the data reported, there may be a dependency on:

(a) ISO standards for digital money; and

(b) ANNA instrument templates to accommodate digital money – to be made available via the ISIN Gateway.

35. **BONDS/SECURITISATIONS 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?**

35.1 We do not expect any of the current fields to be amended.

35.2 In addition, however, AFME considers that it is important for DLT securities registered and settled using market infrastructure under the Pilot Regime to be flagged under a separate DLT Pilot Regime field in reference to data reporting. This will enable the financial markets to clearly distinguish between DLT securities under the Pilot Regime, as well as enable competent authorities to monitor market behaviours during the Pilot Regime.

36. **DO YOU AGREE WITH ESMA'S ASSESSMENT THAT NO MAJOR AMENDMENTS TO RTS 25 APPEAR NECESSARY FOR THE IMPLEMENTATION OF THE DLT PILOT?**

36.1 We do not provide a view.

37. **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.**

37.1 We consider that the concept of an 'order' should remain the same whether the handling of orders is done on- or off-chain.

38. **CAN CHAINS OF TRANSMISSION ON DLT FINANCIAL INSTRUMENTS OCCUR?**

38.1 Yes.

38.2 Where order handling and execution takes place off-DLT (but settlement is on-DLT), chains of transmission operate in the same way as for traditional securities.

38.3 Where order handling and execution is on-chain, the systems can be designed so that orders can be transmitted within the DLT network.

38.4 The handling of orders should be distinguished from the settlement cycle, as explained in our response to Q41. If there is a chain of transmission, settlement can take place:

(a) on a back-to-back principal basis through the chain; or

(b) directly to the investor wallet/initial broker wallet (where the transmission chain operates on an agency basis).

38.5 In each case, it is possible for a DLT developer to programme a workable structure. It is likely that entrants to digital markets will explore transmission chains as part of their system design phase.

39. **IS IT POSSIBLE TO SPLIT OR AGGREGATE ORDERS? IN OR OUT THE DLT? OR BOTH**

39.1 Yes. We believe that this is a system design point. The splitting or aggregation of orders, whether inside or outside the DLT, represent fully programmable options.

40. **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?**

40.1 Yes. Please see our response to Q41 in respect of the distinction between handling of orders and settlement.

41. **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?

41.1 Execution of a transaction occurs at the point in time the counterparties enter into a legal agreement to buy and sell the relevant security. Where transactions are executed either off- or on-DLT but settled on-DLT, the concept of execution of a transaction is the same as for traditional securities. Members consider that it is important not to conflate execution with settlement.

41.2 For on-DLT executed transactions, settlement will take place when the participants update their records and/or the chain state is updated. Execution is a distinct and separate legal concept and occurs at a different point in time to settlement. Determination of when execution of a transaction takes place when on-DLT will be a system design issue (and we expect there to be differences depending on the design details). We note that even when the execution of a transaction and settlement occurs near instantaneously, settlement remains a distinct legal and operational/technological process.

42. **DO YOU THINK THE DEFINITION OF "TRANSACTION" IS STILL APPLICABLE TO THE DLT CONTEXT?**

42.1 Yes. See our response to Q1 and Q41. Please note that the concept of a "transaction" under financial services regulation should not be confused with "DLT transaction" and "blockchain transaction" which have specific technical meanings within DLT systems.

43. **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?**

43.1 We refer to our response to Q9 above. AFME members believe that DLT securities should have separate ISINs at this point in time.

44. **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?**

44.1 We refer to our response to Q9 above. DLT securities should have separate ISINs that indicate that they were created under the Pilot Regime. However, a separate field in RTS 23 reports indicating whether a security is a DLT security issued under the Pilot Regime would be helpful.

45. **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?**

45.1 As set out in response to Q9, at this point in time, it is unlikely that DLT securities would be considered as fungible with traditional securities, by virtue of the constitution of the DLT security and the embedded features in the smart contract. As such, they would require their own ISINs. This ISIN could potentially encompass DLT aspects – our understanding is that ANNA is conducting work in this area. However, the details are yet to be determined. Therefore, whilst AFME sees the benefit of the DTI being made public and available, it may not be appropriate to couple the DTI and ISIN (i.e. make changes to the relevant ISO standards so that DLT information is included in ISIN codes) or to include the DTI into the reporting framework.

45.2 As regards the ISIN of DLT securities, it is worth noting that (based on our understanding) the SIX digital bond issued on SDX has a different ISIN to the conventional tranche listed on the SIX Swiss Exchange. We believe that this ISIN does not, however, make explicit the digital provenance of the SDX bond.

45.3 The DTI standard comprises several elements that do represent important market factors, as described in our response to Q1, Q9, Q30 and Q34. It is too early to tell what information will be most relevant to competent authorities supervising market conduct and market participants (e.g. investors) consuming the data. Other unique codes may also assist with identifying digital securities: for example, smart contracts will have their own numeric identifiers that embed information about the product they govern.

45.4 For the time being, RTS 1 to 3, 22 and 23 should provide for specific Pilot Regime fields and flags. These would record that a DLT security has been issued using DLT market infrastructure under the Pilot Regime and nothing further. Whether such fields/flags or additional DLT-based fields would be helpful post-Pilot Regime is yet to be determined.

46. **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?**

46.1 Yes. Please note, however, that if a blockchain transaction has already been validated, the executing entity may not be able to reverse the transaction. Another entity on the network would need to do so.

47. **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?**

47.1 As discussed in our response to Q1 and Q5, the execution of a transaction in a DLT security may not take place on-DLT. In that case, if executed by an SI or OTC, then the existing reporting infrastructure for post-trade transparency (i.e. APAs) remains appropriate.

47.2 We have mentioned in our response to Q9 where the transaction is executed on a DLT system, then there may be a reduced need for an APA. Alternatively, the APA could have a node on the system. We note, however, the issue regarding block trades and allocations discussed in response to Q9.

48. **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.**

48.1 We do not provide a view.

49. **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.**

49.1 We do not provide a view.

50. **DO YOU/YOUR ORGANISATION PLAN TO OFFER SETTLEMENT OF DLT SECURITIES IN EMONEY 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?

50.1 Members believe that it is possible to offer settlement of DLT securities in e-money tokens.

50.2 In general, e-money tokens will be regulated by the EU Electronic Money Directive ("**EMD**") and the EU Markets in Crypto-Assets Regulation ("**MiCAR**"). According to these, e-money is always denominated in an official fiat currency. Hence, we expect that the currency fields will be populated in the same way as they are today.

50.3 Other than e-money, the cash-leg may be settled using forms of other digital money (where the cash leg is on-DLT) as well as traditional payment rails, including:

(a) through systems that connect the RTGS-System of the Eurosystem to smart contracts. The Deutsche Bundesbank, together with the Deutsche Börse Group and the central bank of Italy, has undertaken projects to test blockchain-based securities settlement systems (Project Blockbaster). The Swiss Central Bank, in collaboration with SIX, has also gained experience in building a bridge between smart contracts and RTGS-settlement systems (Project Helvetia I); and

(b) central bank money in the form of a wholesale central bank digital currency ("**CBDC**") provided by the Eurosystem (See also the Swiss Project Helvetia II).

50.4 As indicated in our above responses, however, it is important, to be able to indicate that digital money is used as the means of exchange if this is the case. If the digital money is only used for settlement purpose, then if this is embedded into the smart contract of the DLT security, this is also useful information to report.

50.5 At this stage we would not be able to provide a comprehensive list of digital money. On this basis, a generic indicator that a digital currency is applied would be more appropriate rather than changing existing currency fields.

51. **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.**

51.1 Yes - this is possible.

51.2 We are unsure why the settlement currency/digital money would need to be "converted" into EUR from a transaction reporting perspective. Rather it is the conversion of EUR into the settlement currency that could be relevant – since the trade could be agreed in EUR and settled in the relevant "other" currency/digital money. For instance, if the cash leg is on-chain, then settlement in a particular digital money of the cash leg will be encoded into the smart contract. Where funds are not available in the relevant digital money, other funds will need to be converted accordingly.

51.3 The difference between the currency in which a security is purchased as compared to the settlement currency is no different from today, such that a security can be traded in one currency but settled in another.

51.4 In line with our response to Q50, further, we would not expect there to be impact on the currency fields even where multiple currencies are involved. Central bank projects are already underway to explore how DLT can deliver cross-currency settlement (e.g. Project mCBDC). The Pilot Regime could therefore provide an opportunity to experiment with different currencies in DLT-based capital markets instructions.

52. **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?**

52.1 Please see our response to Q21 and Q22. AFME supports national competent authorities and ESMA having direct access to the system used by the DLT MTF/DLT TSS to access MiFIR transaction data, MiFIR transparency data and reference data. We believe that granting such access (e.g. through a node) could introduce significant efficiencies in terms of data sharing with regulators. However, it is important that the data obtained from the system is appropriate and reflects the information required. As discussed in response to Q9, if for example blockchain records of settled transactions are used by regulators for post trade transparency purposes, this may not represent block level trades but allocations and therefore, would not provide useful price discovery information to persons consuming the data (e.g. investors). We also note that in certain instances, all the data required may not be on the DLT (and may be contained elsewhere off-chain) – e.g. where wallets are recorded against the custodian's name only.

52.2 There should, however, be the option to submit and make reports through the traditional routes but that are appropriate for the DLT securities without having to provide direct access to regulators. Certain systems may not be compatible with providing information on the DLT system in the relevant format or from a permissibility perspective (e.g. privacy considerations). For this to be possible, the information requirements will need to be amended to make them appropriate for DLT securities.

53. **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**

53.1 In AFME's view, the key point does not relate to format but to the degree of standardisation at the level of the smart contract signature. ESMA and competent authorities will need to work with the industry to achieve this and it may not be possible during the period of the Pilot Regime. The Pilot Regime is intended to act as a controlled environment for the innovation of DLT market infrastructure and to test different design structures. We do not think it appropriate at this stage for regulatory standards to precede and dictate design structures.

54. **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.**

54.1 We do not provide a view.

55. **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**

55.1 We do not provide a view.

56. **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.**

56.1 We do not provide a view.

57. **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.**

57.1 In AFME's view, the use of DLT will modify the way that regulators engage with market data. With DLT, regulators could theoretically be able to carry out real time monitoring in the form of immutable records. DLT could also play a role in the centralisation of the data – for instance if all DLT MTFs have nodes on a DLT SS/DLT TSS, the recording of execution of transactions and settlement will occur seamlessly on the single DLT system – this would mean that regulators may not need to gather large amounts of data as compared to today. Therefore, rather than consider the impediments to data gathering and access, we consider that DLT would enhance ESMA/competent authority access to data.

58. **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.**

58.1 The most efficient way to admit regulators will depend on the details of the design of the DLT market infrastructure, the system and trading protocols used.

59. **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**

59.1 The use of DLT in the financial markets is in its early stages. We would not recommend standardising technologies and creating interoperability standards before market standards and practices have developed. However, the industry believes that interoperability is of critical importance and should be a focus area upon review of the Pilot Regime.

60. **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.**

60.1 We would expect a DLT security issued on a particular DLT TSS or DLT SS to remain on that system for registration and securities settlement purposes. Whilst the DLT instrument may trade on multiple DLT MTFs, the registration and settlement would nonetheless be carried out by the original DLT TSS or DLT SS.

60.2 In addition, where market participants are not members of a particular DLT MTF/DLT TSS, they may access the systems through indirect participation arrangement (as is the case for CSDs today).

60.3 As above, the industry believes that interoperability is of critical importance to achieve the optimal benefits of these new technologies and should be a focus area upon review of the Pilot Regime. However, we would not recommend standardising technologies and creating interoperability standards before market standards and practices have developed.