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| 2 June 2016 | ESMA/2016/773 RF |

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| **Reply form for the**  **Discussion Paper on the Distributed Ledger Technology Applied to Securities Markets** |
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| Date: 2 June 2016  ESMA/2016/773 RF |

**Responding to this paper**

The European Securities and Markets Authority (ESMA) invites responses to the specific questions listed in the ESMA Discussion Paper on the Distributed Ledger Technology (DLT) Applied to Securities Markets, published on the ESMA website.

***Instructions***

Please note that, in order to facilitate the analysis of the large number of responses expected, you are requested to use this file to send your response to ESMA so as to allow us to process it properly. Therefore, ESMA will only be able to consider responses which follow the instructions described below:

* use this form and send your responses in Word format (pdf documents will not be considered except for annexes);
* do not remove the tags of type <ESMA\_ QUESTION\_DLT\_1> - i.e. the response to one question has to be framed by the 2 tags corresponding to the question; and
* if you do not have a response to a question, do not delete it and leave the text “TYPE YOUR TEXT HERE” between the tags.

Responses are most helpful:

* if they respond to the question stated;
* contain a clear rationale, including on any related costs and benefits; and
* describe any alternatives that ESMA should consider

**Naming protocol**

In order to facilitate the handling of stakeholders responses please save your document using the following format:

ESMA\_DLT\_NAMEOFCOMPANY\_NAMEOFDOCUMENT.

E.g. if the respondent were XXXX, the name of the reply form would be:

ESMA\_DLT\_XXXX\_REPLYFORM or

ESMA\_DLT\_XXXX\_ANNEX1

***Deadline***

Responses must reach us by **2 September 2016.**

All contributions should be submitted online at [www.esma.europa.eu](http://www.esma.europa.eu) under the heading ‘Your input/Consultations’.

***Publication of responses***

All contributions received will be published following the end of the consultation period, unless otherwise requested. **Please clearly indicate by ticking the appropriate checkbox in the website submission form if you do not wish your contribution to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.** Note also that a confidential response may be requested from us in accordance with ESMA’s rules on access to documents. We may consult you if we receive such a request. Any decision we make is reviewable by ESMA’s Board of Appeal and the European Ombudsman.

***Data protection***

Information on data protection can be found at [www.esma.europa.eu](http://www.esma.europa.eu) under the headings ‘Legal notice’ and ‘Data protection’.

# Introduction

***Please make your introductory comments below, if any:***

<ESMA\_COMMENT\_DLT\_1>

<ESMA\_COMMENT\_DLT\_1>

##### Do you agree with the list of possible benefits of the DLT for securities markets? Please explain, e.g., are these benefits unique to the DLT, are some more important than others, are some irrelevant?

<ESMA\_QUESTION\_DLT\_1>

The most important benefits of DLT for securities markets are:  
- reduced number of intermediaries and participants in all the processes  
- faster settlement times   
- clearance transparency  
- reconciliation will be much more efficient  
- DLT will significantly reduce the $40b per year spent on post-trade processing of securities around the world

- allows issuers to choose their settlement cycle

<ESMA\_QUESTION\_DLT\_1>

##### Do you see any other potential benefits of the DLT for securities markets? If yes, please explain.

<ESMA\_QUESTION\_DLT\_2>

- every security or financial instrument could have a worldwide unique “Serial Number” (similarly as every digital currency such as Bitcoin has its unique addresses and reports in the Coinfirm.io system)  
- Anti Money Laundering processes would be easier because of better visibility and transparency of assets  
- possibility of using smart contracts to open the market of financial instruments for new usages and makes it more attractive to investors

- Single Point of Failure will be eliminated because of the distributed nature of DLT

<ESMA\_QUESTION\_DLT\_2>

##### How would the benefits of the technology be affected, in the case where the DLT is not applied across the entire lifecycle of securities (i.e., issuance, trading, clearing and settlement, safekeeping of assets and record of ownership) but rather to some activities only?

<ESMA\_QUESTION\_DLT\_3>

The Distributed Ledger Technology should be used for the entire lifecycle of securities as limiting it may lead to problems in finding the beneficial owner. For example making only the issuance process clearly visible and neither trading nor clearing processes will cause that the ownership of various instruments may be not known at some points of the lifecycle.  
  
The DLT/Blockchain technology with its complex nature – from the beginning (as Bitcoin’s transaction ledger) has many unique properties which may be lost without using it as a whole.

Some of them are:

- unique way of transferring information with enough computing power for the cryptography to be proven secure (it can be easily lost due to for example using it to protect assets transfers from A to B only, while B may still transfer ownership to C and through it back to A without DLT)

<ESMA\_QUESTION\_DLT\_3>

##### Which activities (e.g., post-trading, other activities), market segments and types of assets in the securities markets are likely to be impacted the most by the DLT in your opinion? How is the DLT likely to modify the way securities markets operate? Please explain.

<ESMA\_QUESTION\_DLT\_4>

The most impacted by DLT may be shares of companies and currency related securities as in today’s systems there is a huge need for many intermediaries. Introducing DLT to all the processes will lead to limiting the number of them significantly.

<ESMA\_QUESTION\_DLT\_4>

##### According to which timeframe, is the DLT likely to be applied to securities markets in your view? Please distinguish by type of activities, market segments and assets if relevant.

<ESMA\_QUESTION\_DLT\_5>

<ESMA\_QUESTION\_DLT\_5>

##### How might your organisation benefit from the introduction of the DLT?

<ESMA\_QUESTION\_DLT\_6>

Our organisation, Coinfirm, analyzes, monitors and provides reports on AML, compliance, fraud, illicit usage and all types of crimes using Blockchain and DLT and would benefit from having better access and a clearer view over payments, owners, companies and organisations involved in trading, lending, borrowing or transferring the securities. And with this knowledge our system will be more efficient and powerful, being a better tool in hands of financial institutions, law enforcement and authorities.

<ESMA\_QUESTION\_DLT\_6>

##### If you are working on a concrete application of the DLT to securities markets please describe it (i.e., which activities, which market segments, which type of assets and for which expected benefits) and explain where you stand in terms of practical achievements in relation to your objectives.

<ESMA\_QUESTION\_DLT\_7>

Coinfirm brings transparency and security to DLT based transactions. We deliver a comprehensive compliance and risk assessment platform. With a focus on Compliance as a Service Coinfirm solves the AML/CFT and counterparty risk management problem for entities operating in this area. Utilizable for almost any potential application of blockchain, the platform provides valuable structured data that puts entities on the safe side in terms of regulatory and fraud risk, therefore creating the foundation for the adoption of digital currencies and blockchain.  
  
We decrypt and analyze blockchain, add data sources from the web, TOR, deepweb etc as well as from our partners. With that data we apply our algorithms and complex queries based on our experience in AML/CFT/Fraud that structure the information into structured and actionable data for users.  
   
We provide not only data but also:  
- Actionable reports providing the necessary information for AML/KYC/CFT Compliance  
- Simple risk ratings that can be integrated into the client’s systems  
- Powerful graph data analysis  
- Complex investigation capabilities

<ESMA\_QUESTION\_DLT\_7>

##### Do you agree with the analysis of the potential challenges? Please explain, e.g., are some more important than others, are some irrelevant in your view.

<ESMA\_QUESTION\_DLT\_8>

<ESMA\_QUESTION\_DLT\_8>

##### Do you see any other potential challenges? If yes, please explain.

<ESMA\_QUESTION\_DLT\_9>

One of the most important challenges of using DLT will be providing information to the outside world in such way that all the transactions may be easily verified without making it possible for criminals to obtain too much data/names/IDs as those could be used in fraud or identity theft.

<ESMA\_QUESTION\_DLT\_9>

##### Which solutions do you envisage for these challenges and where do the current initiatives stand in terms of practical achievements to overcome them?

<ESMA\_QUESTION\_DLT\_10>

The solutions to limit crime, fraud and identity theft are:  
- transaction analysis  
- involved parties monitoring  
- risk reporting  
- structured AML/KYC reports

<ESMA\_QUESTION\_DLT\_10>

##### Do you agree with the analysis of the key risks? Please explain, e.g., are some risks more important than others, are some irrelevant in your view.

<ESMA\_QUESTION\_DLT\_11>  
The most important risks are:

* possibility of private keys being stolen exists if the design of web or native devices applications are not designed in such way to protect users from trojans, hackers and viruses
* risk of money laundering if transactions and usage of account keys is not properly analysed and monitored
* risk of terrorism financing - as above

<ESMA\_QUESTION\_DLT\_11>

##### Do you see any other potential risks? Please explain.

<ESMA\_QUESTION\_DLT\_12>

* in the unlikely event of soft fork or hard fork of DLT there is a possibility of temporary system instability, but it can be minimised by proper monitoring of the chain usage and transaction propagation
* usage of hash functions and encryption algorithms needs to be up to date
* 0day, data breaches, and exploit markets need to be monitored for any potential new information or methods  
  Traditional systems are more vulnerable to hack, DDoS and viruses than DLT but the risks need to be always considered as clients computers will be always a target of various attacks.

<ESMA\_QUESTION\_DLT\_12>

##### How could these risks be addressed? Please explain by providing concrete examples, especially for the risks potentially affecting your organisation.

<ESMA\_QUESTION\_DLT\_13>

* All holders of private keys should be both warned and protected   
  They should be provided with all the needed information on how to keep, store and use their credentials including private keys
* Protection means that all the data validation (authorising) points and nodes should be monitored and regularly updated with the newest stable version of used software

<ESMA\_QUESTION\_DLT\_13>

##### Do you think that the DLT will be used for one of the scenarios above? If yes, which one(s)? If no, please explain?

<ESMA\_QUESTION\_DLT\_14>

<ESMA\_QUESTION\_DLT\_14>

##### If the DLT is used for one of these scenarios, how compliance with the regulatory requirements attached to each scenario could be ensured?

<ESMA\_QUESTION\_DLT\_15>

<ESMA\_QUESTION\_DLT\_15>

##### Do you think that the DLT will be used for one of the scenarios above? If yes, which one(s)? If no, please explain?

<ESMA\_QUESTION\_DLT\_16>

<ESMA\_QUESTION\_DLT\_16>

##### If the DLT is used for one of these scenarios, how could compliance with the regulatory requirements attached to each scenario be ensured?

<ESMA\_QUESTION\_DLT\_17>

<ESMA\_QUESTION\_DLT\_17>

##### Do you think that the DLT will be used for safekeeping and record-keeping purposes? Please explain, with concrete examples where appropriate.

<ESMA\_QUESTION\_DLT\_18>

Yes, there are many possible ways of safekeeping and record-keeping using DLT.  
The most important are:

* notarised documents
* asset ownership
* property and land ownership
* testaments
* statements of intent
* information about the beneficence of insurance

<ESMA\_QUESTION\_DLT\_18>

##### If the DLT is used for the safekeeping and record-keeping of ownership, how could compliance with the regulatory requirements be ensured?

<ESMA\_QUESTION\_DLT\_19>

##### Compliance with regulatory requirements can be ensured by:

* monitoring and enforcing the usage and abiding by the new rules in new DLTs as soon they are created and proposed because making changes in already implemented software will be much more difficult

<ESMA\_QUESTION\_DLT\_19>

##### Do you think that the DLT will be used for regulatory reporting purposes? Please explain, with concrete examples where appropriate.

<ESMA\_QUESTION\_DLT\_20>

Regulatory reporting is being made easier and more convenient with DLT analytics such as Coinfirm.io which allows obliged entities to comply with the newest rules and standards by monitoring, flaging and anticipating illicit/criminal usage.

<ESMA\_QUESTION\_DLT\_20>

##### If the DLT is used for regulatory reporting purposes, how could compliance with the applicable regulatory requirements be ensured?

<ESMA\_QUESTION\_DLT\_21>

<ESMA\_QUESTION\_DLT\_21>

##### Do you think that the DLT could be used for other securities-related services than those already discussed, in particular trading and issuance?

<ESMA\_QUESTION\_DLT\_22>

* DLT could be also used for:  
  - crowdfunding  
  - peer-to-peer lending  
  - factoring  
  - prediction markets
* derivatives trading
* proof of ownership services
* proof of time (timestamp) services

<ESMA\_QUESTION\_DLT\_22>

##### Do you see potential regulatory impediments to the deployment of the DLT in securities markets?

<ESMA\_QUESTION\_DLT\_23>

<ESMA\_QUESTION\_DLT\_23>

##### Should regulators react to the deployment of the DLT in securities markets and if yes how? If you think they should not do so please justify your answer.

<ESMA\_QUESTION\_DLT\_24>

Regulators should react to deployment of the DLT in the securities markets in the following areas:  
- more efficient KYC rules  
- Higher AML standards  
- possibly reducing some of margin/collateral requirements  
- automatic reporting and more transparent rules for the supervision for market authorities

<ESMA\_QUESTION\_DLT\_24>