



European Securities and
Markets Authority

Reply form for the Discussion Paper on the Distributed Ledger Technology Applied to Securities Markets



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 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 under the headings 'Legal notice' and 'Data protection'.



Introduction

Please make your introductory comments below, if any:

<ESMA_COMMENT_DLT_1>

2 September 2016

European Securities and Markets Authority (ESMA)
[103 Rue de Grenelle](#)
75007 Paris
France

Chamber of Digital Commerce
1133 15th Street, NW, 12th Floor
Washington, D.C. 20005
USA

Re: ESMA Discussion Paper on the Distributed Ledger Technology Applied to Securities Markets

Dear Sir or Madam:

The Chamber of Digital Commerce (the **Chamber**) greatly appreciates the opportunity to respond to ESMA's Discussion Paper on the Distributed Ledger Technology Applied to Securities Markets (the **Discussion Paper**).

The Chamber is the world's largest trade association representing an international membership of participants in the digital asset and blockchain industry. Our mission is to promote the acceptance and use of digital assets and blockchain-based technologies and we are supported in this mission by a diverse advisory board who represent the industry globally. Through education, advocacy, and working closely with policymakers, regulatory agencies and industry across various jurisdictions, our goal is to develop a pro-growth legal environment that fosters innovation, jobs and investment. We represent the world's leading innovators, operators and investors in the digital asset and blockchain technology ecosystem, including start-ups, software companies, global IT consultancies, financial institutions and investment firms. For a list of our members, please visit <http://digitalchamber.org/membership.html>.

Our detailed answers to the questions posed in the Discussion Paper are included with this letter. Please do not hesitate to contact us should you wish further elaboration of the points raised.

Respectfully submitted,

Perianne Boring
Chamber of Digital Commerce
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www.DigitalChamber.org
<ESMA_COMMENT_DLT_1>

Q1: 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 Chamber agrees with ESMA's list of possible benefits of distributed ledger technology (DLT). The Chamber believes that DLT has the potential to significantly improve the various business processes within the global securities market by replacing or working side-by-side with existing technologies.

The Chamber believes there is the opportunity to leverage the benefits of DLT in financial processes that are complex, largely manual, involve many counterparties as well as have a supportable business case of risk reduction and/or cost and operational efficiencies. While DLT may not be applicable to every product type or service (for example, cash equities in certain jurisdictions that are currently cleared and settled efficiently, quickly and at very low cost using existing technologies), other processes related to recordkeeping, reporting and settlement and clearing of certain transactions, such as repo agreements, could be handled more efficiently through the use of DLT.

Furthermore, DLT could transform clearing generally into a more efficient process by enabling the automatic calculation of variation margin (through triggers coded into the blockchain), potentially reducing the amount of collateral required to be posted and minimising counterparty risk.

<ESMA_QUESTION_DLT_1>

Q2: Do you see any other potential benefits of the DLT for securities markets? If yes, please explain.

<ESMA_QUESTION_DLT_2>

The Chamber believes the potential benefits of DLT to the global financial markets could be immense. DLT could not only improve business processes and efficiency across the market but also could increase transparency for businesses and regulators. For example, DLT has the potential, if implemented correctly, to:

- reduce risks inherent in financial services, including settlement risk, counterparty risk, systemic risk and operational risk;
- free up capital, e.g., by calculating margin more efficiently and reducing back office costs;
- provide better security for data and data processing;
- promote compliance and regulatory transparency;
- increase efficiency and timeliness of asset processing; and
- reduce the effort and time required for trade reconciliation.

To allow this technology to reach its full potential, however, it is critical that regulation allows DLT to grow and does not stifle its development. This view is shared by many regulators globally who agree not only that regulation should not limit the development of DLT, but also that the regulator's role is to encourage the development of DLT while continuing to pursue their regulatory objectives.

The Chairman of the Financial Stability Board (FSB), Mark Carney, stated in his February 2016 letter to the G20 Finance Ministers and Central Bank Governorsⁱ that regulation *"must ensure that it is able to manage any systemic risks that may arise from technological change without stifling innovation."*ⁱⁱ Christopher Woolard, UK Financial Conduct Authority (FCA) Director of Strategy and Competition, echoed Mr. Carney's remarks, adding that for *"any digital development, it's crucial that innovators are allowed the space to develop their solutions."*ⁱⁱⁱ He explained that the *"FCA continues to monitor the development of this technology but is yet to take a stance until its application is clearer."*^{iv} This is supported by the FCA's recent development of the Regulatory Sandbox in which the FCA *"will offer a range of options for firms such as authorisation for testing; no enforcement action letters, and individual guidance and waivers for all firms. Safeguards for consumers and the financial system while testing will be agreed between the businesses and the FCA."*^v

<ESMA_QUESTION_DLT_2>

Q3: 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 Chamber is of the view that the potential benefits of DLT to the global securities market are not dependent on DLT being applied across the entire lifecycle of securities. As DLT develops, new technology may be of greater compatibility or suitability to one or several parts of the lifecycle rather than to other parts due to the functionality of the technology, business appetite to new investment and the ability of the technology to fit within the existing regulatory framework.

As and when the technology exists, it can be implemented in discrete areas of the lifecycle so long as it meets the combined requirements of the industry and the regulatory regimes in place. Again, as included in our answer to Q2, it is important that, while seeking regulatory clarity, the regulatory approach to this new technology does not hinder the ability for the industry to adopt the new technology as it develops (which would in turn stifle new investment in such development).

<ESMA_QUESTION_DLT_3>

Q4: 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 Chamber believes that the impact of DLT could be far reaching across the securities markets and the associated industries. The lifecycles of both over-the-counter and exchange traded derivatives could be positively impacted as well as post trade settlement and payment services.

For example, Setl (based in London), has recently launched its first product, OpenCSD platform, for the post-trade space. OpenCSD is a DLT-based institutional payment and settlement infrastructure which has the potential to settle financial market payments with digital cash linked directly to central banks. (www.setl.io)

Meanwhile, over the last few years, Citigroup has been running a test platform and exploring the use of DLT for various projects, including potentially the launch of "Citicoïn" to assist in cross-border payments.

<ESMA_QUESTION_DLT_4>

Q5: 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>

DLT is already being developed to be utilised by the securities markets.

For example:-

- In the equity trading space, Medici, a subsidiary of Overstock.com (one of the first online marketplaces to accept bitcoin for payment), is currently developing the post-trade blockchain project tØ. This new concept aims to offer a private equities trading platform, and eventually a public equities trading platform, using cryptographically protected DLT to improve the security and efficiency of financial transactions. tØ builds upon DLT and contends that its decentralised nature means that transactions made using it are more equitable, transparent and accessible for all market participants^{vi}.
- In March 2016, the Depository Trust and Clearing Corporation (DTCC) and Digital Asset Holdings (DAH) announced plans to develop and test a DLT-based platform to manage the clearing and settlement of repo agreements. DTCC and DAH have pursued this solution to reduce risk and capital requirements for the repo market by enabling DTCC's Fixed Income Clearing Corporation (FICC) to become the settlement counterparty for repo transactions in real-time which would allow for additional netting and offsetting between counterparties. DLT was chosen because of its capability to share information real-time which

would enable all parties to the trade to view trade details almost immediately after execution, allowing firms to agree trade details faster and potentially resulting in lower risks and costs for counterparties.

- In January 2016, ASX Limited (**ASX**) and DAH announced their partnership to develop a DLT-based solution to address post-trade (clearing and settlement) functionality in the Australian cash equities market. The new technology will provide the opportunity to simplify and reduce the time necessary for post-trade processing as well as reduce risk and back office administration costs whilst potentially settling equity transactions in near real-time.
- In May 2016, it was announced that the State of Delaware in the US is exploring the use of DLT with smart contract technology provider Symbiont in order to automate a number of its processes, including share registry, capital-table management and shareholder communications.
- It was recently announced that UBS, Deutsche Bank, Santander, BNY Mellon, and ICAP along with technology provider Clearmatics have joined together to explore the possibility of using DLT to clear and settle financial trades over blockchain, with the first commercial launch envisioned for 2018. The use of the “Utility Settlement Coin”, or USC, would facilitate payment and settlement for institutional financial markets. USC is an asset backed digital cash instrument implemented on DLT and is convertible at parity with a bank deposit in a corresponding currency and is fully backed by cash assets held at a central bank^{vii}.

<ESMA_QUESTION_DLT_5>

Q6: How might your organisation benefit from the introduction of the DLT?

<ESMA_QUESTION_DLT_6>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_6>

Q7: 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>

We have listed a number of examples in our answers to Q4 and Q5 regarding concrete applications currently being developed. In addition, currently, one Chamber member, Block Chain Strategies and Innovations (**BCSI**), is working on a project to digitise and transform an existing credit instrument for use on an alternative trading system. Using smart contracts, this new trading environment will allow for the creation of new credit instruments as well as the transformation/ conversion of existing ones. With a mutualised risk process and a “clearing trust” standing between the trading counterparties, this alternative trading system will be more secure and less prone to failure as it scales in volume.

<ESMA_QUESTION_DLT_7>

Q8: 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>

While the Chamber agrees with the assessment of potential challenges, particularly the discussion regarding data privacy issues, we would like to note that none of these challenges are unique to DLT applications and should be evaluated for all new processes and technologies. In addition, while we are not of the view that compliance with EU data privacy requirements, or any of the potential challenges, makes DLT deployment impossible, current regulatory requirements may foreclose certain lines of DLT development. The right of access and the right to be

forgotten, for example, may impact the deployment of permission-less DLT networks, although there may be innovative governance or technical strategies that could achieve compliance.

Current regulatory text was developed in light of then-existing technologies, and DLT may not readily suit, at first glance, technical requirements in the present regulatory language. For example, the right to be forgotten in the EU General Data Protection Regulation^{viii} (GDPR) may be claimed where “*personal data are no longer necessary in relation to the purposes for which they were collected or otherwise processed.*” While, at the conclusion of a DLT transaction, personal data may no longer be necessary to process that single transaction, the permanent and traceable nature of DLT may necessitate personal data be retained after a single transaction is completed. However, that does not foreclose the potential for an innovative DLT governance strategy that adds pseudonymity for particular participants or transactions, or segregates information, to achieve practical compliance with the spirit of the right to be forgotten.

As DLT technology develops, it may be possible to achieve many of the goals of EU data protection regulation -- the respect for privacy, the ability to access and control information, a more equal standing between data controllers and data subjects -- more effectively than current technology allows. By way of example, on the public internet anyone can post a webpage showing content that infringes on someone’s privacy at any time with often limited attribution. In contrast, a DLT transaction conforms to the content, format, and governing rules of any given DLT network. If a DLT network is designed, deployed, and governed with privacy and data protection in mind, DLT by its nature allows for a greater degree of control, and therefore protection, than the now-familiar public Internet protocol allows.

The regulatory approach chosen should provide for flexibility in order to enable regulation to permit differing methods of compliance with the purpose of the regulation. This will be critical to enable innovation and development of methods to overcome the challenges highlighted in this paper, including data privacy issues.

<ESMA_QUESTION_DLT_8>

Q9: Do you see any other potential challenges? If yes, please explain.

<ESMA_QUESTION_DLT_9>

The Chamber notes that issues can arise when regulatory schemes conflict. By its very nature, DLT networks are transnational and can span multiple jurisdictions and involve participants and organisations from all over the world. Regulatory flexibility will be key to achieve the practical aims of EU (and other jurisdictions’) regulatory requirements while still reaping the benefits of DLT in terms of efficiency, accuracy, and security.

As DLT is an inherently global technology, the regulatory response to DLT must be globally coordinated. As stated by the EBA in its 2014 Opinion on Virtual Currencies^{ix}, “*the global, internet-based nature of [this technology] would require a regulatory approach to strive for an international, and ideally global, coordination, otherwise it will be difficult to achieve a successful regulatory regime.*” Accordingly, the Chamber advocates and encourages ESMA to collaborate with other EU regulators and its counterparts in other jurisdictions to develop a consistent regulatory approach that reflects the inherently global nature of DLT.

<ESMA_QUESTION_DLT_9>

Q10: 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>

It is critically important that regulation incorporate flexibility in order to enable the innovation and investment that will be necessary to achieve compliance with EU regulatory requirements. Amendments to data privacy and other regulatory requirements will encourage DLT’s advancement, allowing experimentation and the development of innovative compliance approaches.



In the case of data privacy requirements, a permissioned or semi-permissioned DLT network could be designed and governed in a way that solicits and obtains individual consent, provides the right of access, and/or employs a differential privacy scheme to implement the right to be forgotten while still ensuring DLT transactions can be verified and records are permanent. The technology, as it develops, may become the desired method to meet the goals of the various data-related regulations. The important point is that compliance with EU regulatory requirements can be achieved if there is an environment that encourages innovation and investment in DLT technology. We encourage regulator flexibility to give DLT technologies time to mature and to achieve innovative compliance strategies with regulators as stakeholders in DLT's success.

Several initiatives have been launched by the DLT community with the aim of coordinating the efforts of global industry participants but also regulators for increased collaboration and promotion of DLT in the securities markets. For example:

- The Hyperledger Project, a Linux Foundation Collaborative Project, was created *“to advance blockchain technology by identifying and addressing important features for a cross-industry open standard for distributed ledgers that can transform the way business transactions are conducted globally”*.^x The goals of the Hyperledger Project include creating *“an enterprise grade, open source distributed ledger framework and code base, upon which users can build and run robust, industry-specific applications, platforms and hardware systems to support business transactions”* as well as *“an open source, technical community to benefit the ecosystem of HLP solution providers and users, focused on blockchain and shared ledger use cases that will work across a variety of industry solutions”*^{xi}; and
- The Post Trade Distributed Ledger Group (PTDL) *“has brought together a community who through collaboration will work together to find new ways to improve the post-trade space”*.^{xii} PTDL is composed of nearly 40 financial institutions and market infrastructure participants from around the world and *“connects practitioners, regulators and central banks on a global scale to identify and drive forward activities and position specific recommendations that may leverage distributed ledger technologies’ for the benefit of the post trade industry.”* The aim of the group is to *“explore and identify regulatory and legal themes and research and identify impacts and associated benefits for the wider industry, from the new distributed ledger technologies on the post-trade space.”*

<ESMA_QUESTION_DLT_10>

Q11: 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 Chamber generally agrees with the assessment, noting that all of these potential risks exist today under current systems and technologies. While DLT may create new methods and mechanisms for these risks to manifest themselves, the risks identified are not materially different than those present under the current technologies and governance for securities markets that exist today. Accordingly and as stated above, we suggest the adoption of flexible regulation and focused industry best practices to address and mitigate known risks.

<ESMA_QUESTION_DLT_11>

Q12: Do you see any other potential risks? Please explain.

<ESMA_QUESTION_DLT_12>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_12>

Q13: How could these risks be addressed? Please explain by providing concrete examples, especially for the risks potentially affecting your organisation.

<ESMA_QUESTION_DLT_13>

To address these risks, the Chamber recommends appropriately incorporating DLT products and services into existing or modified legislation and regulation, where appropriate, or drafting new legislation where required.

For example, concerning anti-money laundering, counter terrorism funding, and fraud, the European Commission (the **Commission**) recently adopted a proposal to bring virtual currency exchange platforms (**VCEPs**) and custodian wallet providers (**CWPs**) within the scope of the Fourth Anti-Money Laundering Directive (**4MLD**).^{xiii} This proposed requirement is tailored at two specific use cases of DLT and applies focused regulatory requirements to bring a level of parity between traditional and DLT-based digital currency transactions. It is critically important that, as DLT is employed in securities markets, the same kind of flexible, yet precise, regulatory approach is taken.

This position is supported by the EBA in its August 2016 Opinion^{xiv} with regard to the Commission's proposed amendments to 4MLD. In its Opinion, the EBA "welcomed the Commission's proposal to bring CWPs and VCEPs within the scope" of 4MLD but cautioned that the Commission and the co-legislators "should ensure that competent authorities have the appropriate tools at their disposal to ensure effective supervision". The EBA acknowledged that VCEPs and CWPs "incur additional, technology-specific risks that makes them distinct" from other activities and has advised that going forward "a separate regulatory regime" or "more far reaching amendments...would be required" to address this new technology. A regime which properly addresses the unique qualities of VCEPs and CWPs, as well as similar technology "would require several years to develop, consult, finalise and transpose". In this regard, the EBA has recommended that Commission and the co-legislators "initiate as soon as possible the comprehensive analysis that is needed for assessing which, if any, regulatory regime would be most suitable" or if a new regime would be most appropriate.

The Chamber also notes that, for operational risks, because of the permanent and immutable nature of DLT, the technology can internalise information more effectively, thereby enabling the more active management of risk. Using DLT, operational risks can be shifted and minimised in innovative ways. This only highlights the critical importance of regulation which is flexible to adapt and respond as new ventures build on the potential of this technology.

<ESMA_QUESTION_DLT_13>

Q14: 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>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_14>

Q15: 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>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_15>

Q16: 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>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_16>



Q17: 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>

[TYPE YOUR TEXT HERE]

<ESMA_QUESTION_DLT_17>

Q18: 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>

The Chamber's membership is of the view that DLT could be used for safekeeping and record-keeping purposes. With respect to the variety of products that could be issued and traded on DLT based platforms, all information needed and collected for issuance, trading, settlement and trade management over the life-cycle of the product could be captured through DLT or other digital smart contracts.

<ESMA_QUESTION_DLT_18>

Q19: 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>

Personal data may be held on or off DLT, depending upon the DLT application. DLT has the potential to significantly improve the efficiency and security of the safekeeping and record-keeping of the ownership of securities. To achieve this, however, it is vital that regulation, *e.g.*, data privacy regulation, does not prohibit private sector innovation in the development of DLT, as this may curtail any benefits DLT could have to these, and indeed other, areas of the securities market lifecycle.

ESMA may have an important role in setting the terms of managing consent to process personal data for securities record-keeping purposes. The Chamber suggests that ESMA work with peer regulators, other global bodies and private industry to understand the end goals of both securities record-keeping and data privacy requirements in order to determine appropriate compliance standards. This will require regulator flexibility and a stakeholder-based engagement model.

Whilst EU Data Protection regulations are a current example of existing legislation that may need to be individually addressed and appropriately amended in light of DLT advances, there almost certainly will be others that will become apparent in time. The Chamber notes the recent announcement that the European Parliament is considering allocating €1 million from its budget to create a task force *"staffed with regulatory and technical experts, in order to build up technical expertise"* in the field of DLT.^{xv} This DLT task force *"could provide the expertise necessary properly to counter risks without stifling innovation by means of premature regulatory intervention"* as well as *"aim at identifying standards for best practice and developing stress tests for applications that are set to be comes systemic as well as developing use cases for the application of the technology"*. The Chamber supports this initiative and is of the view that not only is such collaboration necessary but also that such collaboration should be properly funded. Sufficient allocation of financial resources and human capital at the national, international and supranational levels of government will help to ensure a collaborative regulatory approach suitable to the functioning and cross-border growth of DLT.

<ESMA_QUESTION_DLT_19>

Q20: Do you think that the DLT will be used for regulatory reporting purposes? Please explain, with concrete examples where appropriate.

<ESMA_QUESTION_DLT_20>



<ESMA_QUESTION_DLT_20>

Q21: If the DLT is used for regulatory reporting purposes, how could compliance with the applicable regulatory requirements be ensured?

<ESMA_QUESTION_DLT_21>

The potential benefits DLT could have in the securities market lifecycle are vast and this could apply to regulatory reporting by streamlining the process as compared to current systems, while maintaining regulatory compliance. DLT has the potential to eliminate or considerably reduce the risk of misreporting and misinformation resulting from data stored in multiple databases. With this technology, all participants would contribute to one single DLT which would then be viewed by the market and the regulators in real time and be subject to robust fact checking by counterparties, thus providing more accurate data and achieving the regulatory goal of reporting. Accordingly, it is critical that regulation does not hinder future innovation, discourage further investment in innovation and/or restrict the utilisation and incorporation of DLT into the securities markets.

<ESMA_QUESTION_DLT_21>

Q22: 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 used for securities related services, including the issuance of securities and for the launch of new trading environments.

As noted in our response to Q5, DLT already is being used in other areas of securities-related services, including the trading and issuance of securities. The tØ project, in particular, highlights the significant efficiencies that can be gained for securities markets by employing DLT, as well as a successful example of regulator engagement in the use of DLT in securities markets.^{xvi}

At the end of 2015, Nasdaq reported the first documented issuance of private securities on the Blockchain.^{xvii} DLT technology allowed Nasdaq to streamline and secure a cumbersome administrative function (record of ownership). Their platform, Linq, could one day enable new companies to quickly raise capital and for investors to achieve liquidity on the secondary market. Linq demonstrated the potential for DLT to digitally track the ownership of private companies, quickly settle trades without paper certificates, and permit companies to plan flexible and innovative equity offerings.

In addition, Nasdaq is developing an e-Residency platform (electronic identity system) utilizing a DLT-based e-voting service in order to allow shareholders of companies listed on Nasdaq's Tallinn Stock Exchange in Estonia to vote in shareholder meetings.

<ESMA_QUESTION_DLT_22>

Q23: Do you see potential regulatory impediments to the deployment of the DLT in securities markets?

<ESMA_QUESTION_DLT_23>

As DLT develops it has the potential to improve the provision of existing services as well as allow the provision of new types of services that were not previously possible (or even imagined). It is clear that this will bring with it the potential for regulatory impediments to emerge that reflect regulations inappropriate for DLT that were drafted and implemented without taking this technology into account. As the Financial Markets Law Committee commented in its recent paper on virtual currency, "*shoe-horning a modern payment technology like virtual*

currencies into concepts defined by Victorian legislation...would seem to be retrogressive and, without amendment, precluded by the legislation itself".^{xviii} Accordingly, such barriers and others similar should be amended and removed consistent with regulatory objectives.

We suggest regulators take a broad and collaborative view with respect to DLT. DLT has the potential to become the preferred technology for achieving both commercial and regulatory goals but as it is very early days in its development, DLT requires times and flexibility to develop. As discussed in our response to Q19, European regulators should cooperate to craft new and revise existing regulations (*e.g.*, data protection) to allow for the growth of new technology. The Chamber is of the view that the foremost regulatory impediment would be the risk of imposing new regulation relating to DLT too early, which could hinder future innovation, discourage further investment into innovation and/or restrict the utilisation and incorporation of DLT into the securities markets.

The Chamber recognises that a balance must be struck between allowing DLT to flourish whilst ensuring consumer protection and market integrity and providing clarity and guidance to market participants. Therefore, at this stage, the regulatory strategy should provide the utmost regulatory flexibility for DLT to develop whilst still maintaining consumer protection and market integrity.

The Chamber agrees with the approach taken by the FCA with regard to their Project Innovate which was launched in 2014. With Project Innovate, the FCA seeks *"to ensure that our regulatory regime supports the development of innovative products and services that can improve the lives of consumers. Regulatory barriers, both in the UK and at EU level, can distort competition and discourage new entrants to the market denying consumers the benefits of both new services and improved services from current providers. Project Innovate seeks to identify barriers to innovation and work to resolve these without compromising the standards of consumer protection."*^{xix} (emphasis added)

<ESMA_QUESTION_DLT_23>

Q24: 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>

As noted in our answer to Q23, the Chamber advocates that regulators should not be too quick to act individually to respond with prescriptive legislation to the uptake of DLT in the securities market. There are potential legal issues as well as regulatory issues (*e.g.*, what uses of DLT may be equivalent to regulated activities/services, anti-money laundering procedures and data protection) with DLT that will not be fully understood until the technology has sufficiently developed and matured.

Accordingly, regulators should work together with international bodies such as IOSCO and the FSB to coordinate efforts to understand the new technology and then, as the technology matures and the key issues have been identified and examined further, develop international standards and best practices for DLT and other financial and regulatory technology. With global standards in place, then national regulators should use this coordinated effort as the basis for the development of local legislation and legal treatment.

Any regulation implemented prior to the maturation of the use of DLT in the securities markets would risk limiting innovation with respect to DLT and thus significantly restrict the potential benefits to investors and customers that this promising technology could bring.

Our view is consistent with other regulators. For example, the UK FCA intends to help innovators by putting them *"in touch with regulators when they seek to do business in other jurisdictions; establish memorandums of understanding with key international regulators; and give help to non-UK innovators interested in entering the UK market."*^{xx}



Thank you for your consideration.

<ESMA_QUESTION_DLT_24>

ⁱ FSB Chairman Mark Carney's letter to the G20 Finance Ministers and Central Bank Governors, dated 22 February 2016, ([link](#)).

ⁱⁱ In the US, this view is also shared by US Commodity Futures Trading Commission (CFTC) Commissioner J. Christopher Giancarlo. In his March 2016 speech before the DTCC Blockchain Symposium, Commission Giancarlo stated that "[g]overnments and regulators should avoid undue restrictions, support a predictable, consistent and simple legal environment and respect the "bottom-up" nature of the technology and its development in a global marketplace." (CFTC Commissioner J. Christopher Giancarlo, before the Depository Trust & Clearing Corporation 2016 Blockchain Symposium, "Regulators and the Blockchain: Do No Harm", 29 March 2016 ([link](#))).

ⁱⁱⁱ Christopher Woolard, FCA Director of Strategy and Competition, 22 February 2016 ([link](#)).

^{iv} *Supra* note iii.

^v *Supra* note iii.

^{vi} tØ ([link](#)).

^{vii} Deutsche Bank Press Release, "Utility Settlement Coin concept on blockchain gathers pace" 24 August 2016 ([link](#))

^{viii} Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, OJ L 119, 4.5.2016, p. 1–88.

^{ix} European Banking Authority EBA/Op/2014/08 "EBA Opinion on 'virtual currencies'" 4 July 2014 ([link](#))

^x <https://www.hyperledger.org/about>

^{xi} <https://www.hyperledger.org/about/charter>

^{xii} <http://www.ptdgroup.org/>

^{xiii} Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC.

^{xiv} European Banking Authority EBA-Op-2016-07 "Opinion of the European Banking Authority on the EU Commission's proposal to bring Virtual Currencies into the scope of Directive (EU) 2015/849/" 11 August 2016 ([link](#))

^{xv} Committee on Monetary Affairs, European Parliament, 2014-2019 "Budget Amendments- 2016 Budget" 2016/2047(BUD)) 29 August 2016. ([link](#))

^{xvi} Overstock applied for, and was granted, permission from the U.S. Securities and Exchange Commission to issue publicly-traded stock via the Bitcoin Blockchain ([link](#)).

^{xvii} Nasdaq Press Release, "Nasdaq Linq Enables First-Ever Private Securities Issuance Documented With Blockchain Technology", dated 30 December 2015 ([link](#)).

^{xviii} Financial Markets Law Committee (FMLC) "Issues of Legal Uncertainty arising in the context of virtual currencies" July 2016 ([link](#)).

^{xix} FCA Call for Input: Regulatory barriers to innovation in digital and mobile solutions published 17 June 2015 ([link](#)).

^{xx} FCA FS16/2: Feedback Statement on Call for input: Regulatory barriers to innovation in digital and mobile solutions published 9 March 2016 ([link](#)).