

# “The use of DLT in issuance and post-trade Processes”

## Executive Summary

The European Central Bank and the Ami-SeCo community have been investigating the potential of Distributed Ledger Technology (DLT) and other Fintech solutions in the post-trade area for three last years. A significant part of this work has been carried out through the Fintech Task Force in its evolving composition and mandate.

The TF made an initial assessment of the on use of the DLT followed by an identification of possible use case in post-trade area, answering the growth interest of the industry community in the new technology. As more mature debate is now going on from European Institutions as well as from incumbent market players the task force members considers it is now time to build up on the conclusions reached by the DLT Fintech Task force and continue the contribution to institutional and industry discussion on common language and standards on the use of DLT.

After the publication of the DLT report the TF has continued monitoring the evolution of the use cases and other Fintech initiatives linked to the post-trade area with the aim to identify common market practices gathered through the experiences of the principal market stakeholders and further debate across the TF members. Against this background, the Fintech-TF agreed to look more thoroughly into the practice of using DLT for issuance and post-trade processes.

The DLT has the potential to benefits issuance and post-trade securities; however its ecosystem is characterized by the usage of incomplete and inconsistent definitions as well as a lack of standardized taxonomy. This background leads to an increasing need of clarity for all market stakeholders. Therefore one of the key objectives of this report is to identify a common taxonomy to be used across the industry.

The dynamic changes of the market have prompted the AMIs to launch an analysis of h community of stakeholder from the European post-trade industry in the form of this Fintech-TF.<sup>1</sup> The present report is a result of these efforts. Various market players such as governments, companies, central banks are actively undertaking initiatives in order to investigate and develop potential DLT based use cases. However, growing number of experimentations from different private entities is taking place despite a lack of common standards in terms of protocols, programming languages. This can result in fragmentation in the market, with additional costs and missed opportunities to further progress in the Capital Market Union (CMU) Roadmap.

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<sup>1</sup> In January 2018, the AMI-SeCo Harmonisation Steering Group (HSG) established a Fintech Task Force (Fintech-TF) that continued the work conducted by its former Task Force on Distributed Ledger Technology (DLT-TF) and widened its scope to other innovative technologies that could be useful in securities post-trading.

**This Report tends to streamline and consolidate understanding and knowledge of the practices observed across the post-trade industry and therefore supporting the potential development of shared standards assuring a common interoperability of the material initiatives promoted by the market participants.**

The undertaken work has resulted in the publication of this report, being a follow-up to the work on the use cases identified by the previous DLT Task Force and provide fundamental answers to remaining questions.<sup>2</sup>

The report does not recommend the use of specific technologies, instead it aims to present a clear picture of main implications related to the using of DLT for issuance and post-trade processes.

**Chapter 1 outlines identified practices of securities issuance or recording and post-trade handling in a DLT environment, as well as the key implications for the use of this technology.**

Based on the examples available in the market, the report defines models for securities issuance and recording which leverage DLT in various degrees.

First category includes Native digital assets, which are initially issued and recorded solely on DLT (Model 1 and 2), respectively for public and private trading.

Included in the second category are those assets which rely on the incumbent systems for their issuance and recording; however their subsequent post-trade processes take place with (partial) use of DLT, both as transitory period during a migration from incumbent to DLT-based system (Model 3) or in case of parallel deployment and maintenance of both systems (Model 4).

Third category includes tokenised securities, which are issued and recorded in incumbent systems and then are tokenised and managed via referencing token on Distributed Ledger (DL) (Model 5).

The change from incumbent bilateral system of exchanging information to a shared communication model enabled by DLT as well as use of digital assets and tokens could impact existing roles of capital market players or even require new ones. In addition the use of DLT requires a clear understanding of the nature of digital assets, tokens *vis a vis* current regulatory framework.

The identification of the legal nature of digital assets and creating a common taxonomy is fundamental to drive the applicability of the current regulatory framework i.e. whether they legally qualify as securities or not. This is also key in order to improve legal certainty and reduce the level of fragmentation and regulatory arbitrage.

Any definitions adopted at European Level should not be referred only to the use of a certain technology feature to identify a new category of asset: a technology neutral approach is uniformly shared.

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<sup>2</sup> <https://www.ecb.europa.eu/paym/intro/publications/pdf/ecb.miptopical190111.en.pdf>

Similarly to incumbent system, the aspect of interoperability remains equally important to ensure smooth flow of data and transfer of digital assets or tokens. In case of DLT systems interoperability will need to be ensure both (i) in case of migration from incumbent system to a DLT system, and (ii) In terms of connecting different DLT systems and the incumbent on a more “continuous” basis.

**Chapter 2 covers issuance, recording and redemption in legacy systems and in DLT-based solutions. It highlights that certain identified issuance practices rely on the incumbent system (Model 3, 4 and 5), while other fully on the DLT system (Model 1 and 2).**

Although the market shareholders experimenting with the issuance of native digital assets, it is non-harmonised legislation at EU level and the rights attached to them can contribute to the risk of fragmentation. This means also a common understanding of the relationship between the incumbent system and DLT system or processes such as the tokenisation of assets and their transfer (Model 5).

Structurally the DLT system would require adequate governance structure and accountability network which would be crucial to ensure the integrity of issuance and establish and ensure lawful and well-balance framework.

Chapter 3 covers custody and safekeeping in a DLT system by stressing the consequences of having these processes with the use of the conventional systems (Models 4 and 5) or replacing them entirely (Models 1, 2, 3).

The use of DLT-based system could imply new forms of safekeeping and custody services. In particular, the report highlights the key implications from legal and organizational perspective e.g. regarding the status and function of safekeeping of private keys next to the storing of digital assets itself and would depend on specific business cases.

The use of DLT for asset servicing could result in the greater automation of contracts in case of corporate actions and the improvement of various products i.e. securities lending by solving the challenges of strict market time pressure through process efficiency and faster operational risk management.

DLT network would require a caution setting up of an appropriate regulatory framework and governance rules, in particular to establish a common understanding of what legally the safekeeping in DLT environment means i.e. the differences between the safekeeping of digital assets and private keys.

It would also require a clear division consideration of participants in particular custodians/ sub custodians and FMIs. This includes also their roles, needs objective and the purpose for which those networks are created.

**Chapter 4 describes the process of clearing and settlement of identified business models by describing the processes using the incumbent system (Models 4 and 5) and solely on DLT (Model 1, 2, 3).**

DLT could be used to execute one of the key functions of CSD – to store who owns which part of the security, however it will not prove if the real asset behind the token is existing, what would require further arrangement.

Assets could be settled and traded on one platform such that Delivery-versus-payment (DvP) can happen with a significantly higher efficiency. However, this would additionally require the presence of cash on ledger.

Particularly in the early phase, a clearing and settlement solution involving DLT would require appropriate degree of interoperability bridging DLT and incumbent systems, what could require banks to either automate certain manual processes which could not be otherwise moved to a decentralised ledger.

The Settlement on DLT could reduce the costs for settlement, however it remains still unclear whether the benefits of such settlement outweighs the overall cost of efforts to be taken in order to adopt DLT-based system i.e. the cost of onboarding the counterparties, running the node etc.

In order to address potential risks of failures the DLT system would require a clear accountable party operating the network and providing client services. Many of current DLT initiatives tend to have a central governing authority, similar to the ones played by FMIs of today or banks for their own client networks.