

POSITION PAPER

REVIEW OF REGULATION ON IMPROVING SECURITIES SETTLEMENT IN THE EUROPEAN UNION AND ON CENTRAL SECURITIES DEPOSITORIES

From: DekaBank Deutsche Girozentrale

To: European Commission
DG Financial Stability, Financial Services, Capital Markets Union

Subject: European Commission targeted consultation on the review of Regulation on improving securities settlement in the European Union and on central securities depositories

Questions addressed: 17, 18, 19, 20

INTRODUCTION

DekaBank is the fully-fledged securities service provider (Wertpapierhaus) of the German Savings Banks Organisation. As German Bank, we generally refer to the position paper of the German Banking Industry Committee (Deutsche Kreditwirtschaft), which reflects our positions.

With the present additional position paper we would like to additionally address some dedicated issues on part IV of the consultation paper (CSDR and Technological Innovation), based on our practical understanding of specific properties of a DLT-network. For the purpose of this paper, reference is made to permission-based DLTs, i.e. closed systems where only identified participants can propose and validate ledger updates and specifically to the permission-based system known as "Corda".

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Question 17

Do you consider that certain changes to the rules are necessary to facilitate the use of new technologies, such as DLT, in the framework of CSDR, while increasing the safety and improving settlement efficiency?

- ✓ **Yes**
No
The pilot regime is sufficient at this stage
Don't know / no opinion

Response:

a. General remark - Legislation is not technology neutral

In general terms, legislation regulating financial markets infrastructure (EMIR, CSDR, SFD) cannot be considered technology neutral. More precisely, the CSDR is based on an idea of market infrastructure, in which activities such as clearing and settlement are centralised and actors have a "hierarchical" relation to each other. This traditional idea of market infrastructure cannot fully match a DLT context, where data is shared and recorded across multiple data stores (ledgers), which share data records and are collectively maintained and controlled by a distributed network of computerservers (nodes). If legislation regulating financial markets was technologically neutral, it would not mandate market participants to use any particular technology or give a particular technology an advantage over another¹.

b. Pilot regime is not sufficient at this stage

This problem has been partly faced with the Commission proposal for a pilot regime on market infrastructures (COM/2020/594 final, hereafter: the "Pilot regime"). Under the Pilot regime a CSD operating a DLT SSS would be able to benefit from certain exemptions from CSDR rules (e.g. exemptions from the application of the notion of transfer of orders, securities account or cash settlement). In addition, under the Pilot regime a financial institution shall be able to request a licence as DLT MTF and request exemption from the obligation to admit trading of securities recorded with a CSD under CSDR, if the DLT MTF complies with additional requirements.

However, while these efforts are very welcome, in our view there further efforts must be taken at this stage to enable technical developments. First of all, the field of action of the Pilot regime is very narrow. In these regards, we share the feedback on *Financial services – EU regulatory framework for crypto-assets* given by the Association on German Banks². On the one hand, the Pilot regime should cover the whole range of trading activities, including bilateral trading, and all suitable execution venues – MTFs, OTFs and systematic internalisers. On the other hand, illiquid products are unattractive in terms of volume and not suitable for establishing an appropriate and sound EU framework for DLT market infrastructures.

Most of all, the Pilot regime is not completely DLT-suitable neither. As other markets infrastructure regulations, it seems equally based on a centralised system. However, the way transactions are processes and shared with other participants depends on the architecture of DLT platforms.

Corda, for example, is a permissioned network with access control that records, manages and automates legal agreements between known and identified parties. After a validating notary service checks the uniqueness of the input states, it executes verifications and signs the transaction marking the previous states as spent. The requester of the finalisation then broadcasts the signed transaction to all parties involved, and nodes commit it on its ledger accordingly. The communication between nodes is point-to-point, which means that in Corda information is shared only among the involved parties. There is no single central store of data. Instead, each node maintains a separate database of known facts. As a result, each node only sees a subset of facts on the ledger, and no one is aware of the ledger in its entirety³.

¹ The meaning of "technological neutral" is defined in the EU-Commission working document "Impact Assessment for a pilot regime on market infrastructures" (SWD(2020) 201 final).

² <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12089-Finanzdienstleistungen-EU-Rechtsrahmen-f-r-Kryptoanlagen/F1437463>

³ For a description of different DLT platforms, including Corda, see for example the Stella project report

In these regards, the Pilot regime reflects insufficient analysis of properties of a DLT. Since DLT-based settlement systems can be designed in multiple different ways, the activity undertaken by participants in connection with the node may either fall outside the regulatory perimeter (for example, if the node is providing a purely technical service of running the protocol) or it may fall within the regulatory perimeter.

Therefore, a DLT-based settlement system should be considered two-layered: The lower layer addresses the network infrastructure and the technical roles of running this infrastructure in a way that maintains the distribution, the integrity, and the ordering of the transactions. The upper layer on the other side addresses the specific financial protocols like securities settlement and the roles associated with it. It should also be clearly stated which roles that we already have in the centralized infrastructure can now be shifted to the decentralized DLT network and which roles still require a centralized legal entity. The point here is that the roles stay same compared to status-quo, however, they got shifted and eventually embodied into DLT.

In addition and for specific issues (such as f.i. dvp or finality of securities settlement), we share vision of the *ECB Advisory Group on Market Infrastructures for Securities and Collateral* (the "AMI-SeCo"): It may turn out to more feasible to discuss how a DLT-system should be designed in order to accommodate regulatory requirements, instead of discussing in a binary manner whether or not DLT can fulfil the regulatory requirements⁴.

Question 18

Would you see any particular issue (legal, operational, technical) with applying the following requirements of the CSDR in a DLT environment?

Please rate each proposal from 1 to 5, 1 standing for "not a concern" and 5 for "strong concern".

Response:

	1	2	3	4	5	
Definition of 'central securities depository' and whether platforms can be authorised as a CSD operating a SSS which is designated under Directive 98/26/EC (Settlement Finality Directive (SFD))					x	
Definition of 'securities settlement system' and whether a blockchain/DLT platform can be qualified as a SSS under the SFD					x	

phase 2, *Securities settlement systems: delivery-versus-payment in a distributed ledger environment*, a joint research project of the European Central Bank and the Bank of Japan

https://www.ecb.europa.eu/pub/pdf/other/stella_project_report_march_2018.pdf

⁴ See Chapter 5 of the AMI-SeCo report: *The potential impact of DLTs on securities post-trading harmonisation and on the wider EU financial market integration*:

https://www.ecb.europa.eu/paym/groups/ami/shared/pdf/201709_dlt_impact_on_harmonisation_and_integration.pdf

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	1	2	3	4	5	
Whether and under which conditions records on a DLT platform can fulfil the functions of securities accounts and what can be qualified as credits and debits to such an account;		x				
Whether records on a DLT platform can be qualified as securities account in a CSD as required for securities traded on a venue within the meaning of Directive 2014/65/EU (MiFID II)		x				
Definition of 'book entry form' and 'dematerialised form'		x				
Definition of "settlement" which according to the CSDR means the completion of a securities transaction where it is concluded with the aim of discharging the obligations of the parties to that transaction through the transfer of cash or securities, or both; clarification of what could qualify as such a transfer of cash or securities on a DLT network/ clarification what constitutes an obligation and what would qualify as a discharge of the obligation in a DLT environment			x			
What could constitute delivery versus payment (DVP) in a DLT network, considering that the cash leg is not processed in the network/ what could constitute delivery versus delivery (DVD) or payment versus payment (PVP) in case one of the legs of the transaction is processed in another system (e.g. a traditional system or another DLT network)			x			
What entity could qualify as a settlement internaliser, that executes transfer orders other than through an SSS				x		

Please explain your answers to question 18 (if needed), including how the relevant rules should be modified.

Definition of 'central securities depository' and whether platforms can be authorised as a CSD operating a SSS which is designated under Directive 98/26/EC (Settlement Finality Directive (SFD))

Response:

a) Definition of 'securities settlement system' - No automatism for DLT platforms to qualify as an SSS

Generally, we believe that a DLT platform could work in a way that the entry of a ownership transfer of securities and of a new owner in a DLT is considered settlement of transactions in the conventional securities world (see below).

Such a DLT-based approach should not per se qualify as a SSS. The initial purpose of Directive 1998/26/EC was to privilege SSS in insolvency scenarios by creating finality for an order i.e. to reduce legal uncertainty during the interim period required for finalizing the transfer. A DLT platform does not run a similar risk, due to the fact that there is no time lack in settlement and settlement can be effected instantly. Accordingly, there is no need to qualify each DLT platform as an SSS.

Whilst the definition under Directive 1998/26/EC provides for a formal approval of an SSS by the European Commission, national legislation may apply at an earlier stage and catch DLT platforms as it may be difficult to differentiate whether or not they meet the material parts of the SSS definition. A clarification should be sought – if feasible at the European level - that an SSS is created by notification only, in particular seeking for full harmonisation within Europe as different national approaches (which may be stricter in some EU jurisdictions).

b) Definition of 'central securities depository' - Role of the CSD

A CSD, in contrast, is a legal entity that operates an SSS. Clarifying the definition of SSS would enable the change to DLT-based settlement already.

Therefore, definition of 'central securities depository' must not be necessarily modified. However, some of the CSD functions should be open also to certain market participants running a DLT-platform, following the approach of the Pilot Regime. More precisely, under such regime the DLT MTF can be exempted from the book-entry requirement and the recording with a CSD, while the following CSD-functions of are carried out by the DLT MTF itself on its distributed ledger⁵:

- (i) recording the DLT transferable securities,
- (ii) ensuring the integrity of the issues on the distributed ledger,
- (iii) establishing and maintaining procedures to ensure the safekeeping of the DLT transferable securities,
- (iv) completing the settlement of transactions, and
- (v) preventing settlement failure.

⁵ see below, Response under Question 19

Thinking ahead, it should be considered whether transferable securities may be kept in a decentralised ledger not operated by a single CSD but rather responsibility for such decentralised ledger is attributed to a group of responsible entities (e.g. node providers), which are all appropriately regulated. In this case, whilst additional requirements may be considered to be met for the SSS as such, each entity belonging to the group may be subject to slightly lesser regulatory requirements than a CSD.

Alternatively, it could be considered whether the responsibilities of operating an SSS could be taken jointly by a group of primarily responsible entities rather than one single CSD. This would require joint responsibility vis-à-vis third parties but within the group, responsibilities could be allocated within such group.

Whether and under which conditions records on a DLT platform can fulfil the functions of securities accounts and what can be qualified as credits and debits to such an account
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Definition of 'book entry form' and 'dematerialised form'
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Response to both issues:

At EU-level securities accounts are defined by the function they have for issuance, transfer, and servicing of securities, while the legal nature of a securities account and the legal nature and effects of book entries are matter of national law. The AMI-SeCo has identified the following core functions of securities accounts⁶:

- (i) attributing rights in securities (the content of the entitlement represented by the book entry is matter of national law),
- (ii) evidencing ownership rights or interests (depending on national law, either possession or ownership of the securities)
- (iii) transferring securities (settlement).

Based on the above, the substance of a securities account is the provision and maintenance, by an account provider, of a storage of information that records credits and debits of securities positions of a the account holder. In a DLT network the first two functions remain unaffected since the balances are either available directly in the ledger or can be computed by aggregating asset transfers that are recorded in the ledger. The third function, the settlement of securities transactions, requires investors to hold securities in the accounts credited and debited by the relevant account providers. This function can also be met in a DLT-based network of account providers.

Depending on the level of the chain of intermediaries (with CSDs at top level), different regulatory requirements apply to records and accounts as to segregation of the securities of the account holder from those of its clients. In a DLT network it is technologically feasible to meet such regulatory requirements, f.e. by means of point-to-point communication between nodes according to a need-to-know principle or by means of sidechains, which are ancillary ledgers that are able to interact with a main reference ledger.

⁶ See Chapter 2 of the AMI-SeCo report: *The potential impact of DLTs on securities post-trading harmonisation and on the wider EU financial market integration*:
https://www.ecb.europa.eu/paym/groups/ami/shared/pdf/201709_dlt_impact_on_harmonisation_and_integration.pdf

What needs to be considered from a regulatory perspective, is that DLT-based systems can allow technically for decentralisation of transaction validation, which includes ensuring that the transaction has been signed with the appropriate private key prior to its inclusion⁷. In these regards, validating new transactions could be considered as outsourcing of parts of the settlement service (which is among the core services of a CSD) to third parties. Therefore, clarification would be helpful as to how validator nodes in a distributed financial network should be treated in relation to the CSD. This includes clarity on the circumstances (if any), in which the CSD would be considered to be outsourcing the validation function to the validating nodes.

Whether records on a DLT platform can be qualified as securities account in a CSD as required for securities traded on a venue within the meaning of Directive 2014/65/EU (MiFID II)

Response:

The existing definitions of 'book entry form' and 'dematerialised form' would in principle allow for book entry form on a DLT-based system. However, since recording of securities and the settlement of related transactions can take place on a distributed ledger, the book-entry requirements under CSDR could become functionally redundant. Where the system operator of the distributed ledger, is a legal entity different from the CSD, the book-entry requirements under the CSDR would oblige to replicate the recording on the distributed ledger at the CSD level. It would instead be more feasible to allow other market participants to carry out the CSD-functions on the relevant distributed ledger (see below Question 19).

Definition of "settlement" which according to the CSDR means the completion of a securities transaction where it is concluded with the aim of discharging the obligations of the parties to that transaction through the transfer of cash or securities, or both; clarification of what could qualify as such a transfer of cash or securities on a DLT network/ clarification what constitutes an obligation and what would qualify as a discharge of the obligation in a DLT environment

Response:

Practically a programmable DLT is capable of technically reassembling all features that are known in a centralized system. Since we already have settlement systems that handle securities settlement, exactly the same processes can be rebuilt in a DLT. So the main difference between a DLT-based and a centralized system does not lie in the data- and process-model, but rather in the fine-granular write/read access control and decentralized operation of the network.

Decentralized operation primarily means an equal distribution of power/influence in the network of all, or in a permissioned DCP a group of responsible entities. This would foster the growth of the network because competitors have technical means to collaborate with each other as responsible partners in operating a DLT but without having to give up their independence.

⁷ As a matter of completeness, DLT-based systems can allow technically also for decentralisation of order placement and consequently conjunction of trade and post-trade, as recognised under the Pilot regime.

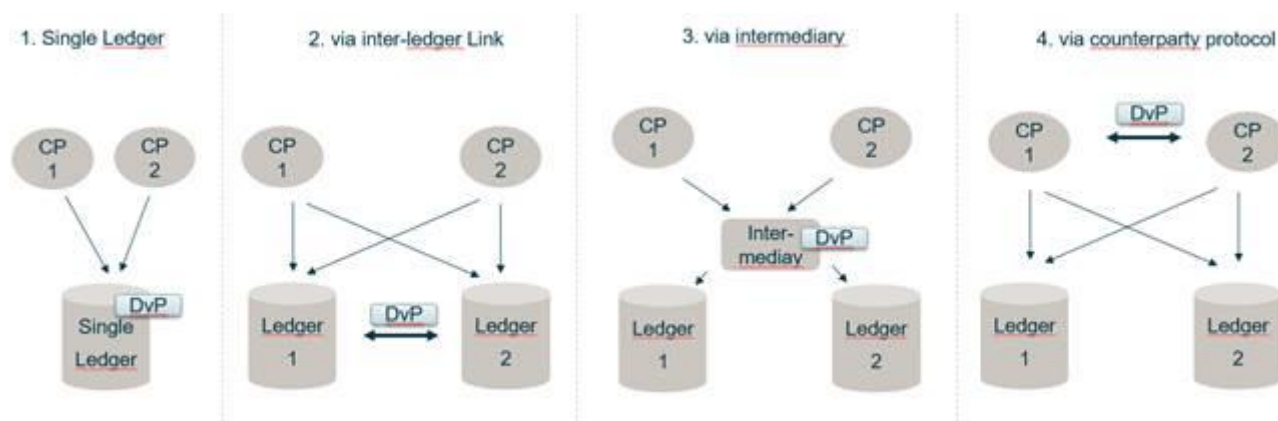
The basic primitives in a DLT-based settlement network would be:

- Identity – the legal entity acting in the DLT-settlement network
- Account – one or more accounts owned by an identity, Container for Assets.
- Asset – description and unique identifier for a specific asset (could be securities, cash, or apples...)
- Transaction – signed by an Identity (authentication/authorization via Public/PrivateKey) describing an atomic change in the system

What could constitute delivery versus payment (DVP) in a DLT network, considering that the cash leg is not processed in the network/ what could constitute delivery versus delivery (DVD) or payment versus payment (PVP) in case one of the legs of the transaction is processed in another system (e.g. a traditional system or another DLT network)

Response:

Under Article 40(1) of the CSDR "a CSD shall settle, whenever practical and available, the cash leg of the securities transaction through accounts opened with a central bank". Otherwise, when this option is not practical and available, under Recital 44 of the CSDR "a CSD should be able to settle through accounts opened with a credit institution established under the conditions provided [...] and subject to a specific authorisation procedure and prudential requirements [...]".



DvP in a DLT environment is straightforward when the securities leg and the cash leg are settled in the same ledger and are governed by the same DLT protocol (variant 1 in the figure), or when settlement in two different ledgers can be linked by means of (variant 2) direct technical link between the ledgers, (variant 3) by an intermediary connected to both ledgers, or by (variant 4) an escrow-based protocol services⁸. As stated in the AMI-SeCo report, DvP can be achieved even when the cash leg and the securities leg of a transaction are not processed simultaneously and the cash leg is instead netted into a single position and settled at the end of the settlement cycle⁹.

⁸ An escrow service allows a transfer commitment to be made (or a token to be immobilised) in a distributed ledger until another transaction (or token transaction) takes place in another compatible ledger.

⁹ See the AMI-SeCo report: *The potential impact of DLTs on securities post-trading harmonisation*

For a detailed analysis of ways in which DvP can be conceptually designed and technically achieved in a DLT environment drawing on existing DvP models as well as innovative solutions that are being discussed for distributed ledgers, reference is made to the Second Stella Report of the European Central Bank and the Bank of Japan¹⁰.

What entity could qualify as a settlement internaliser, that executes transfer orders other than through an SSS

Assuming that entry of ownership transfer of securities and of a new owner in a DLT system could be considered settlement in the legal sense, the question is if such DLT-based settlement needs SFD protection (and needs to be qualified as SSS) or if it can occur outside a SSS. We believe that the instant settlement that would be technically feasible on a DLT platform reduces the relevance of SFD protection. Therefore, a DLT-based settlement should not per se qualify as a SSS.

Question 18.2

Do you consider that any other changes need to be made, either in CSDR or the delegated acts to ensure that CSDR is technologically neutral and could enable and/or facilitate the use of DLT?

Response:

- Yes
- No
- ✓ **Don't know / no opinion**

Question 18.3

If yes, please indicate the provisions and make the relevant suggestions.

Question 19.

Do you consider that the book-entry requirements under CSDR are compatible with crypto-assets that qualify as financial instruments?

and on the wider EU financial market integration

https://www.ecb.europa.eu/paym/groups/ami/shared/pdf/201709_dlt_impact_on_harmonisation_and_integration.pdf. For a detailed description of different DvP models (i.e. gross-gross, gross-net and net-net), reference is made to the report produced by the Bank of International Settlements, Delivery versus payment in securities settlement systems, 1992 (<http://www.bis.org/cpmi/publ/d06.pdf>).

¹⁰ *Securities settlement systems: delivery-versus-payment in a distributed ledger environment* – Stella project report phase 2, a joint research project of the European Central Bank and the Bank of Japan https://www.ecb.europa.eu/pub/pdf/other/stella_project_report_march_2018.pdf

Response:

- ☐ Yes
☒ **No**
☐ Don't know / no opinion

Question 19.1.

Please explain your answer to question 19.

Response:

The book-entry requirements under CSDR would be compatible in principle with crypto-assets that qualify as financial instruments. However, given that the recording of such crypto-assets and the settlement of related transactions can take place on a distributed ledger, the book-entry requirements under CSDR would be functionally redundant. It would oblige to replicate the recording on the distributed ledger at the CSD level. Instead, a model comparable to the Pilot regime would be more suitable.

Under the Pilot regime, there is a role shift from the CSD to the DLT MTF: Once exempted from the book-entry requirement and the recording with a CSD, the DLT MTF takes over the functions of recording the crypto-assets on its distributed ledger, ensuring the integrity of the issues on the distributed ledger, establishing and maintaining procedures to ensure the safekeeping of the DLT transferable securities, completing the settlement of transactions, and preventing settlement fails.

Question 20

Would you see any particular issue (legal, operational, technical) with applying the current rules in a DLT environment?

Please rate each proposal from 1 to 5, 1 standing for "not a concern" and 5 for "strong concern".

Response:

	1	2	3	4	5	
Rules on settlement periods for the settlement of certain types of financial instruments in a SSS			X			
Rules on measures to prevent settlement fails			X			
Organisational requirements for CSDs				X		
Rules on outsourcing of services or activities to a third party					X	
Rules on communication procedures with market participants and other market infrastructures			X			

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	1	2	3	4	5	
Rules on the protection of securities of participants and those of their clients				X		
Rules regarding the integrity of the issue and appropriate reconciliation measures		X				
Rules on cash settlement					X	
Rules on requirements for participation				X		
Rules on requirements for CSD links				X		
Rules on access between CSDs and access between a CSD and another market infrastructure				X		
Rules on legal risks, in particular as regards enforceability					X	