How Can Collateral Management Benefit from DLT?

To mobilize securities into this system, a client needs to transfer securities to the TTP at the custodian level. From that moment onwards, the TTP maintains the securities for the client and any movement of the representing tokens on the DLT Layer will only change the rights and obligations at the TTP level without affecting the Custody Layer.

The TTP and its clients can maintain accounts with different custodians and are hence able to mobilize and combine client holdings from different depository locations into one token. This facilitates the efficient move of collateral tokens on the DLT Layer.

From a service point of view, some of the functionalities the TTP may need to cover include:

- creation of accounts and ongoing due diligence for custodian banks;

- creation and "loading" of tokens on receipt of securities in traditional systems;

- instantiating and maintaining the link of either (1) a single security (one ISIN) or (2) multiple securities (basket of ISINs) to a token;

- inventory reporting of securities linked to any token;

- recording of token transfers amongst participants;

- redemption of tokens combined with back-delivery of securities on the Custody Layer;

- maintaining and applying eligibility rules for securities generally acceptable to the TTP;

- related to baskets: securities eligibility, valuation rules, triggering of margin calls according to applicable rulebooks.

For the purpose of this paper it is assumed that the TTP will operate as a registered and appropriately licensed legal entity in a specified jurisdiction and is bound to a transparent rulebook. This rulebook will, among other things, specify the rights and obligations of the TTP and the participants as well as the nature and functioning of the Collateral Token Layer that is connected to the TTP. The role and the duties of the TTP are very much dependent on the type of assets and the legal nature of the tokens in question.

4.4 Collateral Token Layer

The Collateral Token Layer is a DLT-based peer-to-peer network which maintains the registry of issued tokens and tracks token transfers. The peer-to-peer network consists of multiple nodes which provide the hardware and software necessary for participants to access and use the network. When a token is transferred from one participant to another on the distributed ledger, rights to the underlying collateral (i.e. securities) are also transferred to the new owner according to the TTP rulebook.

4.4.1 Application Functionalities

To enable a full token lifecycle, there are multiple functionalities which should be implemented in the analyzed system. The TTP needs to be capable of issuing tokens, while preventing other users from using this function. After creation, all participants must have the ability to transfer their tokens.