**POC Name**

**Settlement Scenarios**. DLT Technology: Hyperledger fabric

**POC objectives**

…

**Variants: settlement scenarios**

The investor’s custodian: SEC (possibly in turn delegated to a sub-custodian, for non-domestic holdings)

The investor’s cash account holder: CSH

We assume that in all scenarios, the SWIFT infrastructure and protocol are reused.

Quick recap of the analyzed scenarios:

* Scenario 1: (SEC) and (CSH) participate the consensus
* Scenario 2: (SEC) and (CSH) do not participate the consensus, but are member of a settlement system (e.g. Euroclear), which they trust
* Scenario 3: (SEC) and (CSH) do not participate the consensus, but trust a paying agent (nominee) to act on their behalf (possibly itself in turn delegating the custody of securities to a sub-custodian)
* Scenario 4: an hybrid situation in which scenarios (1), (2) or (3) may happen on a given fund

We shall demonstrate only the easiest scenario to implement in this POC (to be defined). The POC “Settlement Scenarios” is intended to further demonstrate the flexibility of our model regarding the diverse approaches to settlement.

In all these variants, we assume that the fund custodian (CUS) participate the consensus.

*Scenario 1*

*Rationale*

Custodians must accept to participate an asset-class specific platform: from their point of view, such a fragmentation may be unacceptable. For funds custodians, the problem only concerns cash to manage inflows to the fund. This might be more acceptable. There are as many investors custodians as banks. This makes many participants: investors whose bank is not a participant would be barred from posting orders. This might curb the adoption of such a platform. On the other hand, their participation to the consensus makes for a more efficient order workflow, since cash and securities transfers may directly validated without further exchanges of messages: the role of transfer agent is no more necessary in this setup (or limited to a fiduciary responsibility).

SEC & CSH participate to the 3 order transitions: ExecuteOrder, InstructOrder and SettleOrder

Additional endorsement logics for SEC & CSH:

**ExecuteOrder**: on the CSH peer node, the chaincode post a local message to the client (note that HL events are not workable for that purpose, one shall code a raw messaging with grpc). The CSH is then free to check the investor’s cash account (for subscriptions) to endorse the order.

**InstructOrder**: the CSH and SEC participate to the endorsement of the instruction details.

Option 1: they do not have to post instructions: the TAG does it already

Option 2: in this situation (e.g. French model), they post their instructions (“teneur de compte conservateur”) and the TAG sits idle.

The idea with these 2 options is to relieve the system from a post-trade reconciliation.

**SettleOrder**: idem

Again, a local message is posted to CSH and SEC, in order to check their own system (i.e: redeemed cash has been received, subscribed securities have been delivered).

This scenario obviously supports a central settlement system in the middle (such as Euroclear or Clearstream).

*Scenario 2*

*Rationale*

In this scenario, only the settlement system invests in connecting to the new platform. Member banks just continue business almost as usual: however, they fully trust a party, such as Euroclear, to execute DVP operations. This scenario is thus probably easier to adopt on a wide scale. Again, the messaging may be carried on by this party or by the TAG (same options available). A possible blocking issue is that banks no more emit orders.

For banks with a distributor role, this is certainly a problem… Unless that they accept to participate to the platform as distributors only.

SEC & CSH do not participate to the 3 order transitions: ExecuteOrder, InstructOrder and SettleOrder

On the other hand, the settlement system they are member of does participate, with a delegation on these roles.

Additional endorsement logics for SEC & CSH remain the same as for scenario 1. Cash account check is however not possible.

*Scenario 3*

*Rationale*

This again is a delegation situation. It is very similar to scenario 2. In this setup however, we do not necessarily pass through a settlement system (which guarantees DVP) and payment instructions may have to be matched against their delivery counterpart (“franco” procedure).

Again, nominees often play a double role as distributor (e.g. platforms such as AllFunds, …).

SEC & CSH do not participate to the 3 order transitions: ExecuteOrder, InstructOrder and SettleOrder

On the other hand, the nominee they are customer of does participate, with a delegation on these roles.

Additional endorsement logics for SEC & CSH remain the same as for scenario 1. Cash account check is however not possible.

*Scenario 4*

The difficulty with this scenario lays in the dynamic decision to adopt the behavior expected by the other scenarios;