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Clarification on the T2S functionalities for the settlement of non-T2S issued securities

1. Introduction

As an outcome to the AMI-SeCo in December 2017, it was agreed to clarify the scope of T2S functionalities for settlement of non-T2S issued securities, i.e. securities issued outside T2S, including Eurobonds.

This note intends to provide T2S stakeholders with clarifications regarding the T2S functionalities which enable the settlement of non-T2S issued securities in securities accounts maintained by CSDs in T2S. This analysis is applicable to all non-T2S issued securities, including Eurobonds.

The note covers the necessary technical interactions with the External CSD. However, it does not intend to cover the legal and operational framework that is required outside T2S, which may vary on a case by case basis.

The purpose of the note is to inform AMI-SeCo members of the various settlement scenarios available to T2S CSDs. It does not aim at favouring one business model against the other. Ultimately, the settlement scenario adopted by the various CSDs in T2S should be based on their business, operational and regulatory considerations.

2. Background on T2S functionalities

2.1 Differentiation between cross-CSD and External CSD settlement

Cross-CSD settlement in T2S can be defined as settlement between participants of different T2S CSDs.

A key feature of T2S is the automated generation of realignment settlement instructions designed to make cross-CSD settlement as seamless as intra-CSD settlement. In a cross-CSD scenario, once settlement instructions (referred to as business instructions) sent by CSD participants are matched, T2S derives the realignment chain, i.e. the omnibus and mirror accounts of each Issuer and Investor CSD that need to be credited or debited as a result of the transaction, and creates the realignment instructions to debit and/or credit the relevant accounts maintained by CSDs in T2S. The realignment chain is derived according to the configuration of *Securities CSD Links* and *CSD Account Links* in the T2S static data. CSDs also have

to define each other as eligible counterpart for a cross-CSD transaction to take place[1]. Business instructions and T2S generated realignment instructions are submitted to settlement on an all or none basis to ensure integrity of securities positions across Issuer and Investor CSDs.

The following diagram of the UDFS[2] illustrates the settlement process for a cross-CSD transaction in T2S:

Diagram 1 – Cross-CSD settlement scenario in T2S

Step 1: Business instructions are sent by CSD participants A/B or their respective CSD: SI-A & SI-B
Step 2: Upon matching of business instructions, T2S derives the realignment chain and generates Realignment Instructions according to the Security/Account CSD Links configured in the T2S static data: T2SGR-1, T2SGR-2. Both CSDs have defined each other as eligible counterparts.
Step 3: Upon settlement of business and realignment instructions on an all or none basis, following securities movements are booked: Debit participant A & credit mirror a/c I (S1), debit omnibus a/c CSD A & credit participant B a/c (S2). Settlement of the transaction is complete including realignment of securities accounts positions at the Investor and Issuer CSD.

Cross-CSD settlement, when it involves a CSD outside T2S [3], is referred to as External CSD settlement. The External CSD is defined as a participant of a T2S CSD with a specific party type "External CSD" in the T2S static data. A number of External CSD settlement scenarios exist[4], but a key differentiation is to be made when:

- The External CSD acts as Investor CSD of a CSD in T2S, i.e. defined with type "Investor" in the Security CSD Link for an ISIN; in this case, from a T2S standpoint, the settlement process is similar to cross-CSD settlement between T2S CSDs, where the External CSD has an omnibus account opened at the T2S CSD;

- The External CSD acts as Issuer CSD of a CSD in T2S, i.e. defined with type "Issuer" in the Security CSD Link for an ISIN; in this case, the realignment process in T2S is slightly different than with cross-CSD settlement of T2S CSDs, as realignment instructions are generated against an inter-CSD account. An inter-CSD account is a securities account opened by the investor CSD in its book in order to track the securities positions between T2S and an External CSD, i.e.

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[1] Information about the setup and further references to the UDFS can be found under the following presentation on the T2S website: Link

[2] UDFS Version 2.3, Diagram 101

[3] T2S does not check whether the external depository is a CSD or e.g. a Custodian bank

[4] A few of the most common scenarios are defined in the UDFS v 2.3, page 443, under "External-CSD settlement scenarios"

reflecting the differences in positions between an omnibus account at the External CSD and its corresponding mirror account in T2S. In case the inter-CSD account is credited, this represents a security position to be transferred to the External CSD, in case the account is debited, this represents a securities position to be received from the External CSD. It is a prerequisite for the Investor CSD in T2S to define one inter-CSD account per External CSD for the T2S realignment process to take place.

The following diagram illustrates the settlement process in T2S with an External CSD defined as Issuer CSD:

Diagram 2 – Settlement process in T2S with External (Issuer) CSD
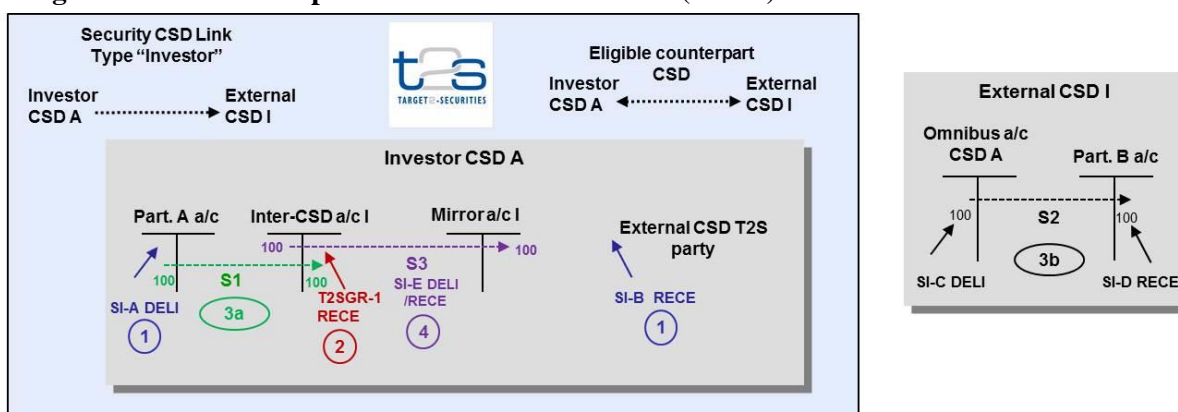
Step 1: Business instruction are sent by CSD participants A / External CSD, or their respective CSD: SI-A & SI-B. SI-B does not include a securities account as External CSD a/c is not in T2S.
Step 2: Upon matching of SI-A and SI-B, T2S derives the realignment chain and generates Realignment Instructions according to the Security CSD Links configured in the T2S static data, in this case: T2SGR-1. Both CSDs have defined each other as eligible counterparts.
At this stage, 2 independent settlement processes must take place to complete the business transaction:
- Step 3a: In T2S, business and realignment instructions settle on an all or none basis, following securities movements are booked: debit participant A a/c & credit Inter-CSD a/c I (S1).
- Step 3b: At the External CSD, settlement is performed based on instructions sent by Investor CSD A and participant B: debit CSD A omnibus a/c & credit participant B a/c (S2). Transfer of securities is completed between CSD participants A and B.
Conditional Securities Delivery (CoSD) may be used to coordinate settlement of the transactions, i.e. ensure settlement in T2S (step 3a) takes place after settlement at the External CSD (step 3b). This functionality is explained in Section 2.2.
Step 4: CSD A sends already matched instruction SI-E to realign the position on the mirror account with the omnibus position at the External CSD: inter-CSD a/c position is back to zero. Realignment is completed in T2S.

2.2 Usage of Conditional Settlement

Conditional Securities Delivery (CoSD) is a T2S functionality which allows to coordinate the settlement of a transaction based on the fulfilment of a settlement condition outside T2S.

In order to use conditional settlement, a CSD needs to define a set of rules in T2S static data based on a set of parameters and values, similarly to restriction rules. On Intended Settlement Date prior to the settlement eligibility check[5], settlement instructions fulfilling the conditions defined in the CoSD rule, will be automatically put on hold (CoSD Hold) and securities and/or cash (as defined within the rule parameters) will be blocked into a specific sub-position[6] and be unavailable for any other settlement

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[5] After matching and generation of realignment instructions in case of cross-CSD transactions
[6] The "COSP" position type is created by the T2S Operator and available to all the CSDs' securities accounts

operations. Blocked securities positions cannot be used for auto-collateralisation nor be submitted to partial settlement. The instructions will have to be released by one or several predefined Administering Parties[7], or cancelled.

CoSD is typically used in the following scenarios:

- For the settlement of a transaction in a non-T2S eligible settlement currency, where the security is settled in T2S while cash settlement takes place outside T2S;

- In some External CSD settlement scenarios: for example, in order to block securities positions in accounts maintained by CSDs in T2S until the relevant entries/bookings have taken place in accounts in the External CSD(s).

2.3   External CSD settlement scenario: settlement of non-T2S securities between two T2S CSDs

A key consideration of T2S stakeholders is whether non-T2S issued securities can settle as "freely" in T2S as T2S-issued securities, in particular between T2S CSDs.

From a T2S standpoint, such External CSD settlement scenario can be achieved directly between the accounts of two participants with current functionality and without resorting to the CoSD mechanism[8]. Once settlement is performed in T2S, securities are transferred between participants' accounts, while positions booked on the inter-CSD accounts of each Investor CSD represent the positions that need to be realigned with the External CSD. In other terms, settlement of the transaction in T2S can be technically decoupled from settlement at the External CSD.

This is showcased in the diagram below:

Diagram 3 –Settlement of non-T2S issued securities between two T2S CSDs

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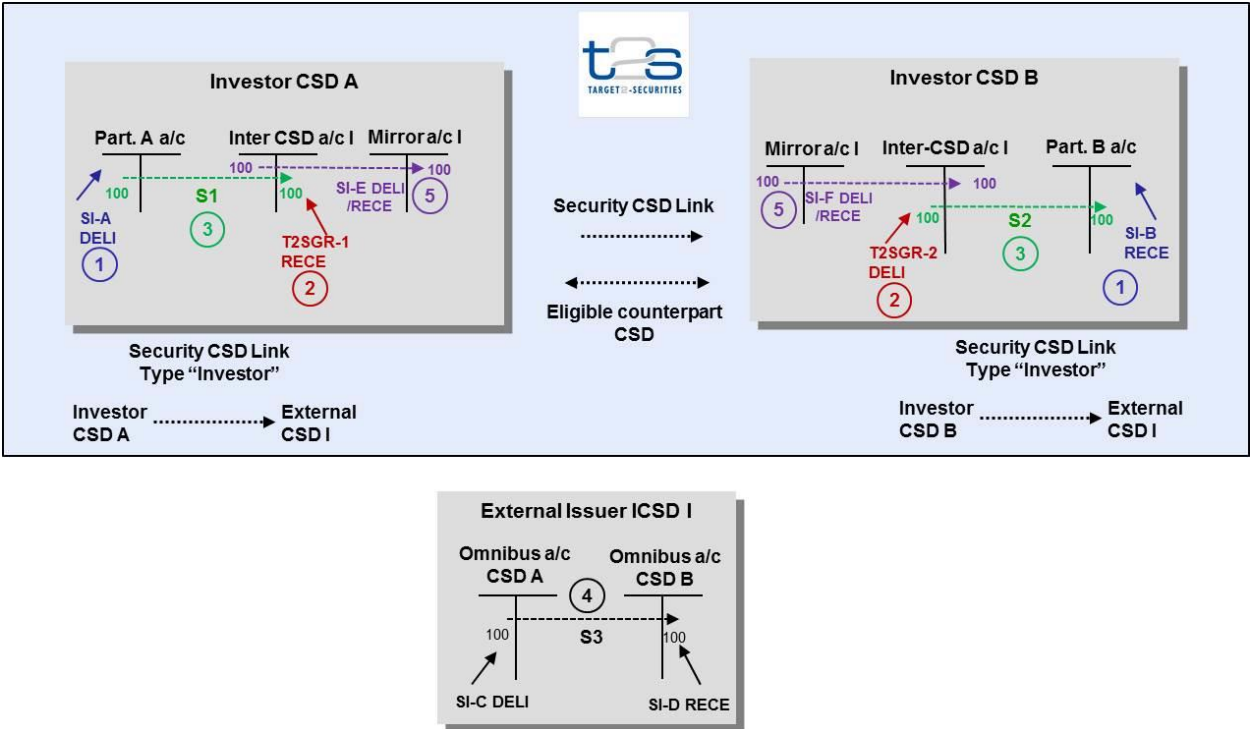
[7] T2S Actors having the necessary privileges to release or cancel the instructions put on CoSD Hold
[8] UDFS v 2.3 p. 443

Step 1: Business instruction are sent by CSD participants A and B in T2S, or their respective CSD: SI-A & SI-B.

Step 2: Upon matching of SI-A and SI-B, T2S derives the realignment chain according to 2 independent External CSD transactions and generates Realignment Instructions according to the Security CSD Links configured in the T2S static data: T2SGR-1 and T2SGR-2. No Security CSD Link exists between Investor CSDs A and B for this ISIN however they have defined each other as eligible counterpart CSD

Step 3: In T2S, business and realignment instructions settle on an all or none basis, following securities movements are booked: Debit participant A a/c & credit Inter-CSD a/c A/I (S1), debit inter-CSD a/c B/I and credit participant B a/c. Transfer of securities is completed between the CSD participants A and B in T2S.

Step 4: At the External CSD, settlement is performed based on instructions sent by Investor CSD A and Investor CSD B: CSD A omnibus a/c is debited & CSD B omnibus a/c is credited (S2). The process is managed outside T2S. Settlement is completed at the External CSD.

Step 5: CSD A and B send already matched instructions to realign the position on the mirror account with the omnibus position at the External CSD. The inter-CSD a/c positions are back to zero. Realignment is completed in T2S.

However, beyond settlement of the transaction in T2S, there are additional considerations to take into account regarding the book keeping and deferred settlement process at the External CSD.

3. Example: settlement of Eurobonds in T2S

An illustrative example of External CSD settlement in T2S would be the settlement of Eurobonds securities in accounts maintained by CSDs in T2S. The specificity of Eurobonds is that there are two International CSDs (external to T2S) which provide the notary function to the issuers in the context of the Common Depository model. This specific model has its own rules and procedures which take place between the two ICSDs outside T2S, called "the bridge".

These procedures take place outside and independently of the T2S settlement operations. Hence, from a T2S perspective, the fact that there are two issuer CSDs does not impact the settlement process. The potential complexities highlighted further below would also apply for other non-T2S issued securities.

Each T2S CSD can act as direct Investor CSD of an ICSD in order to provide its participants with access to Eurobonds in T2S. Once the necessary static data configuration for External CSD settlement is done in T2S, all settlement scenarios in non-T2S issued securities are possible with the current T2S functionalities:

1. Intra-Investor CSD settlement of a Eurobond in T2S takes place like with any T2S security, between the accounts of the participants of the investor CSD and without the need for further settlement at the ICSD(s), i.e. like intra-CSD settlement. This settlement scenario is already implemented by some CSDs in T2S;

2. Settlement of a Eurobond between a T2S participant and an ICSD counterpart may be performed as described in Diagram 2, with the settlement of the transaction being completed when the securities are delivered to or received from the External CSD. This settlement scenario is already implemented by some CSDs in T2S;

3. Provided the T2S CSDs have defined one of the ICSDs as External CSD, settlement of a Eurobond between participants of different T2S CSDs is performed leveraging the T2S

functionalities, settlement of the transaction in T2S being fully decoupled from the settlement at the ICSD(s). This settlement scenario is not yet implemented by CSDs in T2S;

There are however additional considerations to bear in mind, which are stemming from the decoupling between T2S settlement and settlement at the ICSD, i.e. particularly relevant for scenario 3 and in view of the scalability of the process with multiple CSDs. These relate to the book-keeping and tracking of the securities positions that are booked on the inter-CSD account. Indeed, for each transaction in T2S generating a credit of securities positions on the inter-CSD account, the Investor CSD opening the inter-CSD account in its books needs to know to which counterparty CSD the positions belong and may need to be realigned at the corresponding ICSD.

Let's take several possible variations of scenario 3 into consideration, with the assumption that it should allow exchange of Eurobonds between T2S CSDs without limitations:

3.1   One direct: One T2S CSD act as direct Investor CSD of the ICSDs and gateway for other T2S CSDs

This model would be the simplest from an operational and technical standpoint as a transaction between T2S CSDs would only result in cross-CSD settlement in T2S, without the need for further settlement at the ICSDs.

3.2   Two direct: Two T2S CSDs act as direct Investor CSD of the ICSDs and gateway for other T2S CSDs

In this model, two CSDs act as direct Investor CSD of the ICSDs, while other T2S CSDs choose either of the CSD as their Technical Issuer CSD (i.e. having a relayed link to the ICSDs).

Securities positions booked on the inter-CSD account belong to a single counterpart T2S CSD at one of the ICSDs and reflect the quantity that may be realigned between ICSD counterparts.

Euroclear and Clearstream groups have been working on a solution that is based on this model. They presented an outline of this solution in the last Ami-Seco in December 2017, published on the T2S website[9].

Their proposal leverages the existing legal and operational/technical arrangements between the ICSDs stemming from the "bridge" interoperable link and relies on the role of Clearstream Banking Frankfurt (CBF) and Euroclear France (EF) as direct Investor CSDs to the ICSDs for other T2S CSDs. This allows seamless settlement of Eurobonds between T2S CSDs that decide to use the proposed model.

In this proposal, the Inter-CSD account has the legal nature of a custody account of the other T2S CSD (referred by CBF and EF as cross-CSD account), which in turn holds a position of the External CSD. Settlement of the transaction in T2S therefore does not require prior settlement[10] at the ICSD(s).

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[9]   http://www.ecb.europa.eu/paym/initiatives/shared/docs/4178b-ami-seco-2017-12-07-item-2-cross-csd-eurobonds-workshop-ami-seco-6-december-2017-final-presentation.pdf

[10] Settlement at the ICSD is only performed for other purposes such as in case of upcoming Corporate Actions

3.3 All direct: More than two T2S CSDs act as direct Investor CSD of the ICSDs

From a book-keeping perspective, all securities positions would be booked and comingled on the same inter-CSD account by T2S, as one inter-CSD account is defined per External CSD[11] (here ICSD), regardless of the number of T2S counterparts CSD at the ICSD where positions may need to be realigned. Hence, when only two CSDs act as direct Investor CSD, as described in Section 3.2, the inter-CSD account is holding securities positions for a single CSD. As soon as there would be three or more CSDs acting as direct Investor CSD for Eurobonds in T2S, there would be comingling of assets belonging to multiple CSDs on a single securities account. Addressing this issue would require that CSDs build additional processes to organise proper segregation of those assets per CSD that is ICSD counterpart, such as systematic transfers on segregated securities accounts.

For the tracking of the securities positions that may need to be realigned between ICSD counterparties, the complexity would also increase with the number of T2S CSDs acting as Investor CSDs. Indeed, the T2S business instructions inform the counterparty CSD where the securities need to be delivered in T2S. Each CSD would need to keep a mapping outside T2S to determine in which ICSD the counterpart CSD to the T2S transaction holds its omnibus account, and record for each transaction where the securities positions need to be realigned.

3.4 Combination: More than two T2S CSDs act as direct Investor CSD of the ICSDs and some other T2S CSDs as indirect Investor CSDs

In a mixed configuration where more than two CSDs would act as direct Investor CSDs while some other CSDs would act as indirect Investor CSD (i.e. having a relayed link to the ICSDs), on top of the complexity highlighted in Section 3.3, additional information would need to be exchanged outside T2S, as the direct Investor CSD would not necessarily receive the business instruction and hence counterpart CSD information from T2S, as shown in the diagram below.

Diagram 4 – Availability of information for settlement process at the ICSD

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[11] There can only be a unique combination of CSD participant, inter-CSD a/c, and mirror a/c per external CSD (see UHB v2.2, business rule DAC2003)
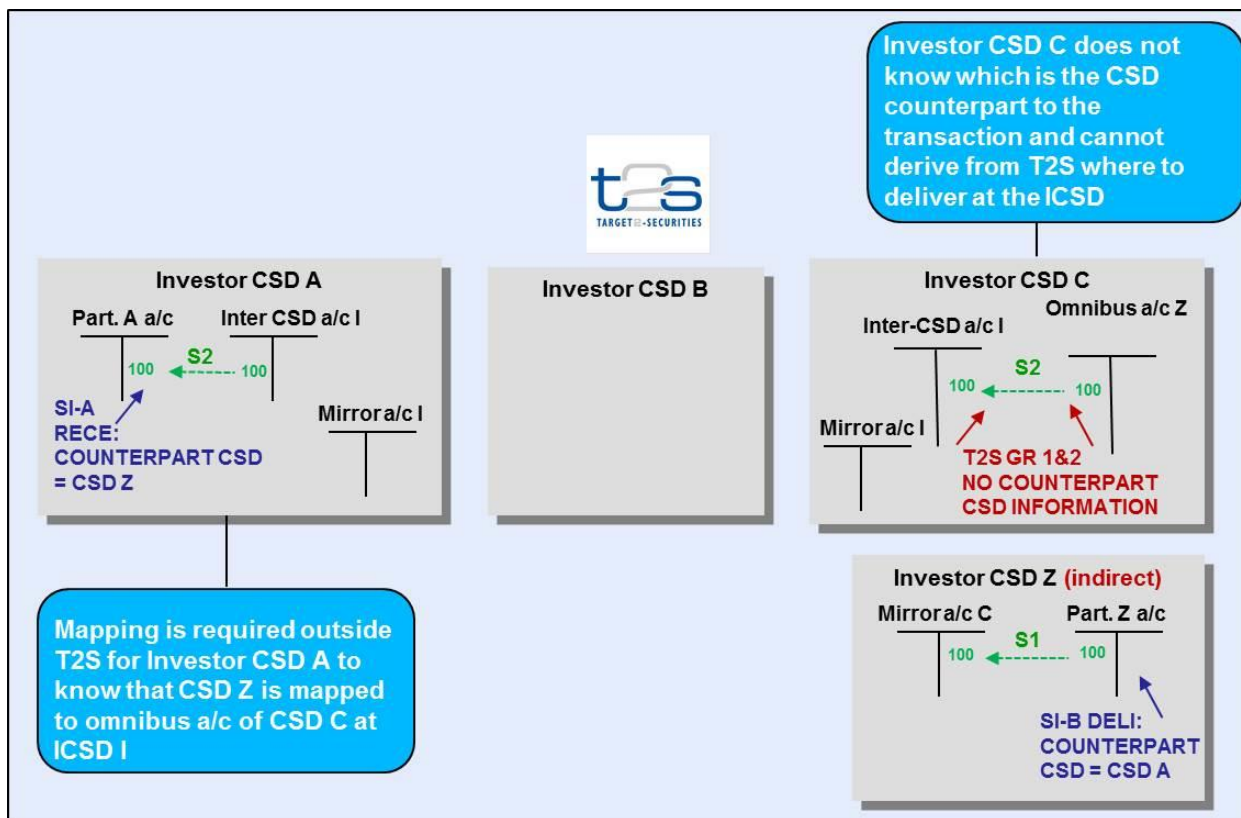
In order to facilitate the settlement process at the ICSD(s) between T2S CSDs acting as ICSD counterparties in scenarios 3.2 and 3.3, it could also be envisaged to enhance the T2S software. A couple of options have been identified by Clearstream and Euroclear groups as part of their analysis: one would be to have the possibility to configure one inter-CSD account per counterparty at the ICSD, as this would allow segregation of securities positions per CSD that is ICSD counterpart and de facto provide the necessary information for settlement between ICSD counterparties. However, such change would add a lot of complexity to the T2S realignment process, hence it should be carefully evaluated if there is a business need to go in this direction.

It could also be investigated whether the allegement functionality at the ICSD could be leveraged (in the example above, to provide information to CSD C).

4. Conclusion

T2S with its current set of functionalities supports the settlement of securities issued outside T2S, including Eurobonds, with External CSD settlement configuration. Each CSD in T2S can act as Investor

CSD of the External CSD and provide access to its participants to settle those securities, facing the following choice:

- Act as direct Investor CSD (direct CSD link with the External CSD)
- Act as indirect Investor CSD (relayed CSD link) by becoming Investor CSD of another T2S CSD that is acting as direct Investor CSD

Ultimately, the choice is for each T2S CSD to consider its business model as well as the relevant contractual and technical arrangements which may be required outside the T2S framework. Nevertheless, it must be highlighted that, with regards to settlement of non-T2S issued securities between T2S CSDs, the complexity of the settlement process outside T2S increases depending on the number of T2S CSDs acting as Investor CSD and configuration of the links (direct versus relayed). This complexity can be handled in two ways:

- Putting in place more complex processes outside T2S;
- Alternatively, enhancements within T2S to facilitate these processes are also possible if deemed justified by T2S CSDs, removing dependencies between CSDs in the choice of an Investor model.

Indeed, individual decisions of CSDs have collective implications on the level of complexity of the settlement process outside T2S for CSDs in T2S. In practice, nothing prevents T2S CSDs from co-ordinating the way in which they access securities issued outside T2S. At the same time, how to access securities issued outside T2S remains an individual business choice of a T2S CSD, the change of which cannot be enforced by a collective decision.