

## **REPORT OF THE TASK FORCE ON ADAPTATION TO CROSS-CSD SETTLEMENT IN T2S (TFAX)**

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# Introduction

The Task Force on Adaptation to Cross-CSD Settlement in T2S (TFAX) was launched as a sub-group of the Advisory Group (AG) in September 2011, with the mandate to “Define and document common solutions for adaptation to cross-CSD settlement in T2S based on the available T2S functionality as described in the URD and other T2S scope defining documents, with the aim of increasing the efficiency of cross-CSD settlement for the CSDs and their participants on a non-discriminatory basis.”<sup>1</sup>

At the moment the TFAX has 26 members of various markets and participants (e.g. CSDs, banks, custodians, CCPs). This set-up aims at ensuring a balanced representation of multiple viewpoints and a comprehensive knowledge base for insightful discussions and viable outcomes.

The TFAX constitutes the follow-up sub-group of the Task Force on smooth cross-CSD settlement in T2S. In 2010, the Task Force on smooth cross-CSD settlement in T2S has identified differences in settlement practices and put together a detailed list of issues that may hamper smooth cross-CSD settlement along with details regarding their impact and recommendations on actions. This issue list served as a basis for defining the scope of the TFAX.

A subset of eight issues was selected to be analysed by the TFAX.

- Issue 1: Registration processing
- Issue 2: Tax processing
- Issue 3: CSD ancillary services
- Issue 4.1: Portfolio Transfers
- Issue 4.2: Bond stripping
- Issue 5: CCP instructions
- Issue 6: Issuance practices
- Issue 7: Message fields
- Issue 8: Non-standardised securities

After thorough analysis of the issues, two mini-consultations were conducted to verify the findings as well as to identify major barriers in terms of applicability (e.g. compatibility with national legislation). Overall 31 responses were received in for the first and 27 for the second mini-consultation; the feedback was very positive and added additional insights for the improvement of the analyses and conclusions.

In the course of the analysis, it became clear that one key issue constitutes the core of most topics under analysis: how to transmit and maintain information that is required for various (market-specific) processes

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<sup>1</sup> Mandate of the Task Force on Adaptation to Cross-CSD Settlement in T2S, approved by the AG in September 2011.

related to settlement. This topic is relevant not only for the issues in scope of the TFAX but relates to a wider range of potential issues which CSDs and CSD participants might have to face during their adaptation process and future use of T2S. Consequently, the TFAX examined the issue of transmission and maintenance of information from a generic perspective, in addition to the predefined issue list.

Accordingly, the document is structured into two main parts. In the first part the issues related to the transmission and maintenance of information are examined. Within this section, the generic analysis is presented first, followed by the relevant TFAX issues. The second part deals with the remaining issues in scope of the TFAX's analysis.

## **Part 1: Issues related to the transmission and maintenance of information**

### **1. Transmission and maintenance of information in a cross-CSD context**

The core of many issues related to cross-CSD settlement is the question of a) how to transmit and b) how to maintain information required for a certain process linked to settlement. This question is relevant to the issues of registration and tax processing, portfolio transfers, bond stripping and non-standardised securities. The TFAX analysed two separate tools that can be used to transmit and maintain information. These tools are (i) including additional information in T2S settlement messages, (ii) account segregation i.e. linking securities accounts with specific pieces of information.

The analysis below describes each tool, and identifies its strengths and weaknesses.

The appropriateness of each tool for a specific task depends on the nature of the task, and in particular on the identity of the recipient of the information, and whether the information provided needs to be maintained by each party in the custody chain down to the end investor. Examples of recipients of information are register-maintaining entities (for registration processing), national tax authorities or tax withholding agents (for tax processing), or custodians (i.e. last intermediary) in the event of a portfolio transfer.

#### **1.1 Passing additional information in T2S messages**

In theory, information relating to a specific securities transfer can be passed up the settlement chain by including that information in the securities settlement instruction that is transmitted up the chain and sent to T2S. This section focuses on the implications in the T2S environment, focussing on the cross-CSD aspects to be considered.

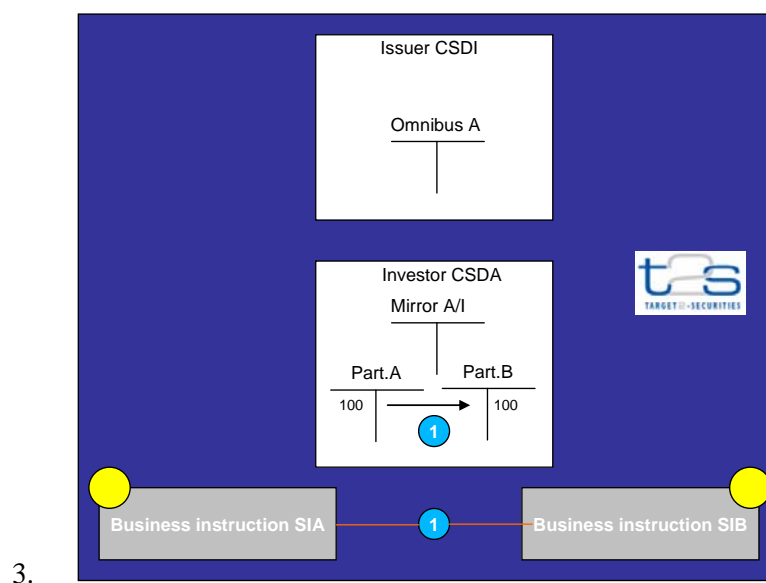
For the design of the T2S functionality and usage of ISO messages, the scope has been focused on settlement processing only and in the spirit of avoiding implementing additional national specificities into the system (“lean T2S”). However, the ISO messages used in T2S contain a variety of additional fields, which are not used by T2S for processing but nevertheless can be filled by CSDs and CSD participants. CSDs requiring additional information for other processes might consider using these fields to retrieve the information from their participants.

In a cross-CSD context, the additional information (i.e. information not required for settlement in T2S) would need to be passed through the T2S settlement chain to the issuer CSD or another investor CSD in the chain. The CSD or CSD participant can fill in the required fields in the settlement instruction. If these fields are copied from the settlement instruction into the realignment messages, this will transport the details up the settlement chain.

However, passing information via T2S messages bears three major drawbacks:

1. The fields used in the T2S settlement messages are not always available in the realignment messages (for more details refer to UDFS v1.2.1). Thus it will not always be possible to pass the fields up the realignment chain to the recipient of the information.
2. Passing on information via realignment messages does not work in all settlement scenarios. For example, when a transfer of securities takes place within an Investor CSD holding a single omnibus account with the Issuer CSD (i.e. Intra-Investor-CSD settlement), it is impossible to pass through any additional information to the Issuer CSD through T2S. There is no realignment instruction that the issuer CSD could access and thus no possibility for the issuer CSD to receive the required information from T2S. For some types of information, the Issuer CSD is a necessary transmission channel to the recipient of the information; this can be the case, for example, for communication to register maintaining entities. Similarly, there are settlement scenarios occurring outside T2S, which also cannot be handled (e.g. transfers between end-investors under the same nominee account). As a result, a separate process to pass on this information outside T2S would be necessary. Hence, any solution relying on passing on additional information as part of the settlement instructions sent to T2S will be insufficient and will always need to be complemented by a process outside T2S.

**Figure 1: Settlement within an Investor CSD**



4. The CSDs acting as point of centralisation will require that all involved CSDs and intermediaries adopt particular practices e.g. for filling in the T2S settlement messages or for adequately setting up relevant T2S static data objects and rules. If this happened in a non-standardised way it would impose major complexities on the market participants involved. In a situation where multiple markets impose different or contrasting requirements for multiple additional processes on their participants, this will render the information gathering and maintenance process highly complex.

Consequently, a certain degree of harmonisation across the T2S markets would be necessary before requiring participants to fill in certain fields for different purposes.

**The TFAX recommends not using T2S settlement messages to pass on additional details through the settlement chain. Additional information requirements should be handled outside T2S.**

## **1.2 Account segregation**

Account segregation (i.e. using multiple securities accounts and/or differentiating positions within a securities account) can be used as a tool to transmit certain types of information. The tool works by associating a specific securities account, or a specific position type within a securities account with a specific piece of information (e.g., a registration name or a tax identification number). When a securities transfer instruction affects a position on a securities account, the account provider is able to identify the piece of information associated with that position. For example, if a securities account at an Issuer CSD is associated with a specific entity or person to be registered, then a receipt of securities on that account could allow the Issuer CSD to pass on the new registration name to the registrar.

Account segregation is a tool that is widely used. It is used by securities account holders with respect to their securities accounts at their securities account providers for a variety of different reasons. In addition, it may be imposed by legislators, regulators, issuers or securities account providers.

### **1.2.1 Objective and Rationale of Account segregation**

Account segregation can be used to achieve a multitude of objectives in different areas:

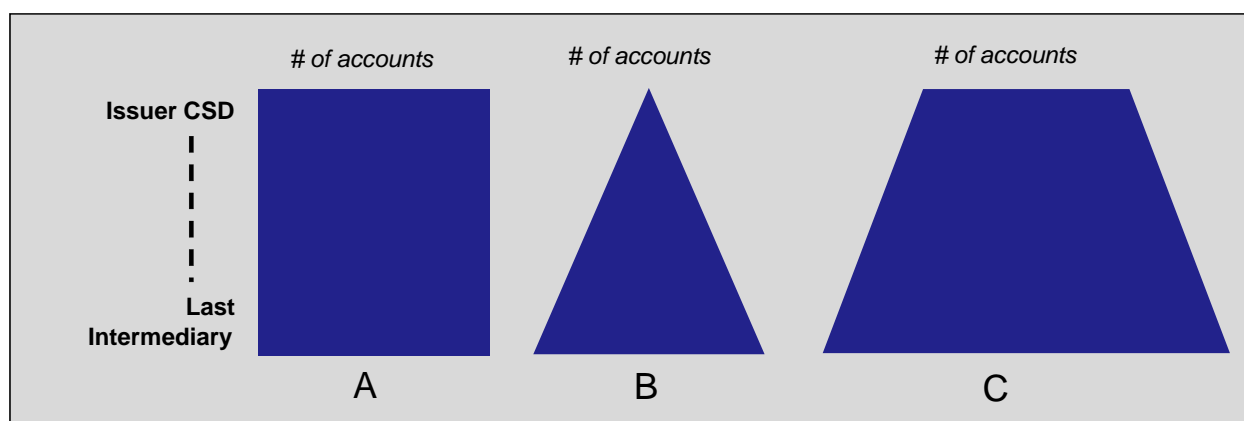
1. Law and Regulation: Requirements in law and regulation for segregation at the CSD level are based very largely on concerns for asset protection and transparency.
2. Tax processing: Segregation often takes place by end-investor, category of investor or by category of activity.
3. Requirements for shareholder identification and issuance processes: Local securities law or issuers might require to segregate accounts for shareholder identification purposes, for instance to control who is entitled to vote at a general meeting.
4. Stock Exchange Settlement and CCPs: Account segregation may be used in the context of handling stock exchange and CCP business e.g. holding dedicated Investor CSD accounts for the Stock Exchange activity per Clearing Member at the Issuer CSD
5. CSD Participant/End investor business: CSD participants might have a variety of other legal, risk and operational reasons to operate separate securities accounts for individual clients or specific categories of customers.

### 1.2.2 Impact of account segregation in a cross-CSD environment

T2S offers to CSDs the possibility to open as many securities accounts as required, allowing CSDs to flexibly segregate their account according to their particular needs or based on legal/regulatory requirements. Likewise, other participants such as custodians have also the possibility to segregate accounts for their clients.

The key factor to consider in order to gauge the impact of a given account segregation is a) the level at which account segregation is implemented and b) the impact which this segregation has on account segregation throughout the settlement chain (such as the question if the information needs to be maintained throughout the settlement chain). Depending on these criteria the account structure throughout the settlement chain (in terms of number of accounts) can take one of the following scenarios.

**Figure 2: Theoretical account segregation scenarios along the settlement chain**

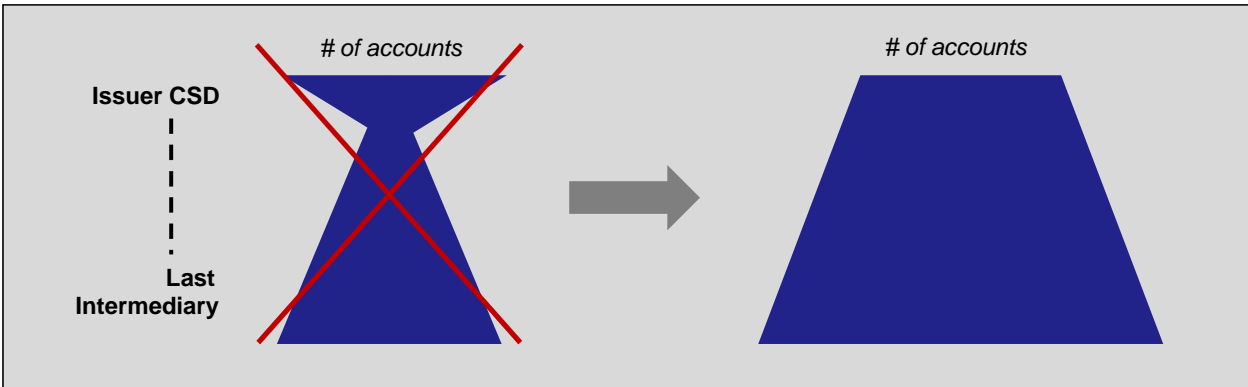


In scenario A, account segregation is propagated bottom-up through the settlement chain e.g. account segregation by end-investors.

In scenario B the segregation at the bottom is gradually aggregated such that there is little or no segregation at the top of the settlement chain.

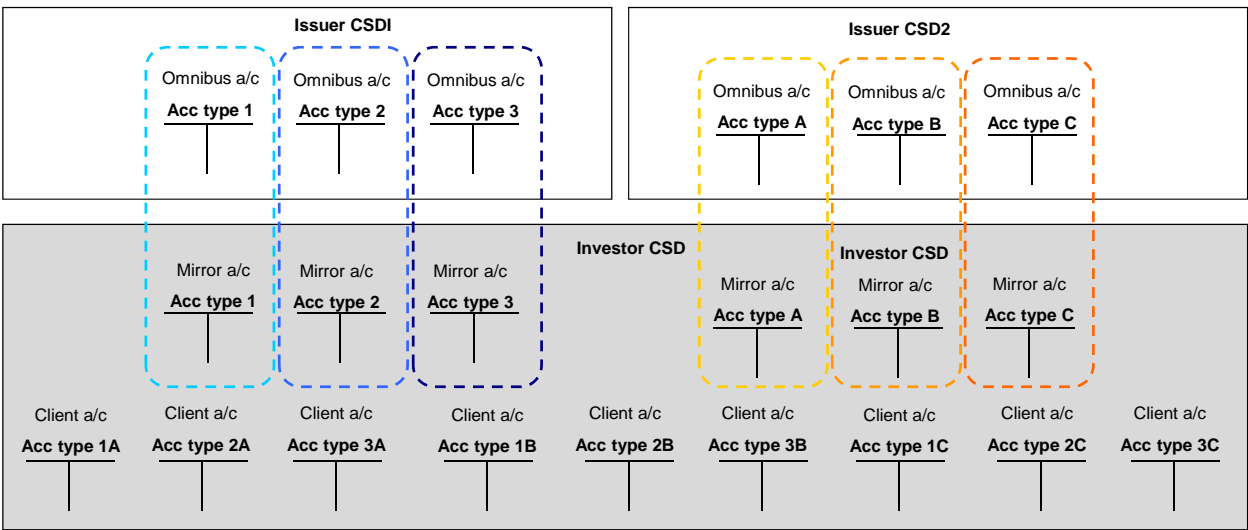
If two conflicting requirements for segregation exist at the upper and lower ends of the settlement chain, they somehow need to be reconciled in the middle. To give an example, this is the case when an additional layer of segregation, e.g. to cater for a national specificity, is introduced at the level of omnibus accounts, while at the lower levels of the chain accounts are segregated based on different criteria such as end-investor accounts or groupings of end-investor accounts. If the criteria imposed by the CSD have to be implemented at the lower levels of the chain as well, this leads to conflicts with the account structures at the lower levels of the chain, resulting in the multiplication of accounts in order to cater for the conflicting criteria (scenario C).

Figure 3: Account segregation with conflicting segregation criteria on top



As long as an investor CSD interacts with only one issuer CSD, the additional complexity into the account structure set-up relates one to one to the issuer CSD. However, in a scenario where the investor CSDs interacts with multiple issuer CSDs, any kind of mandatory account segregation imposed by the issuer CSDs adds a multiplied layer of complexity to the investor CSDs and it participants’ account structure as described in the diagram below. This leads to a multiplication of the number of accounts and results in major complexities for investor CSDs and CSD participants as well as a large numbers of accounts

Figure 4: Complexity of account structure as a result of account segregation



The TFAX recommends minimising account segregation, in particular at the higher levels of the settlement chain (e.g. issuer CSD level). Account segregation that needs to be propagated through the settlement chain should be avoided. If account segregation is required, this should be implemented at the lowest possible level of the settlement chain. However, investor and issuer CSDs should be free to offer their participants the possibility to operate segregated accounts on a voluntary basis.



### 1.3 TFAX findings and recommendations

Two methods for passing information via T2S were subject to TFAX analysis: a) Passing additional details in T2S settlement messages b) using account segregation to pass additional information through the chain.

The TFAX analysis examined the implications of CSD requiring their participants to include additional message fields in a cross-CSD context. The main drawbacks are that the fields used in the T2S settlement messages are not always available in the realignment messages and that the procedure does not work in all settlement scenarios. In addition, high complexity is created for CSDs and their participants, since the information requirements are not yet harmonised across markets. Under current conditions and T2S specifications, market participants will therefore be confronted with major difficulties in handling the various requirements, gathering the information needed and maintaining it.

**The TFAX recommends not using T2S settlement messages to pass on additional details through the settlement chain. Additional information requirements should be handled outside T2S.**

Furthermore, the TFAX analysis showed that account segregation can be a useful tool for handling a variety of business needs e.g. stock exchange settlement, issuance and individual investors' needs, but may – under current conditions – result in inefficiencies. Depending on the individual segregation criteria, a distinction between different levels of account segregation need to be made depending on the actor asking for the segregation and the impact this may have on the settlement chain.

The key finding relates to account segregation at the highest levels of the settlement chain. In a cross-CSD context, investor CSDs need to cope with the segregation requirements applicable in their issuer CSDs, leading to a multiplication of the number of accounts and resulting in major complexities for investor CSDs and CSD participants and huge numbers of accounts. If account segregation is required, this should be implemented at the lowest possible level of the settlement chain.

**The TFAX recommends minimising account segregation, in particular at the higher levels of the settlement chain (e.g. issuer CSD level). Account segregation that needs to be propagated through the settlement chain should be avoided. If account segregation is required, this should be implemented at the lowest possible level of the settlement chain. However, investor and issuer CSDs should be free to offer their participants the possibility to operate segregated accounts on a voluntary basis.**

Since, under current conditions, both methods of utilising T2S to pass information show substantial deficits, in many cases the only option is to pass information outside T2S. However, this will not facilitate the processing as long as the information requirements for various processes are not harmonised. On the contrary, there is the risk that inefficiencies are manifested and that information transmission and maintenance are decentralised further as various individual communication channels are used. Harmonisation of information requirements and the optimisation of the transmission channels would greatly simplify the information gathering and maintenance process for all participants required to transmit additional details.

## 2. Registration processing

Registered securities are linked to a register in which the names of the shareholders are recorded. Originally, the shareholder register determined the legal owner of a securities position, and the settlement of a securities transaction involved the deletion of one name in the register and the replacement by a different name. Nowadays, and with the development of CSDs, securities settlement systems and chains of intermediated securities holdings, the specific function of registration has evolved. Registration can at present be defined as the “function of keeping the central register for the issuer [of registered securities], which usually provides information on beneficial owners and/or end-investors”<sup>2</sup>. The central register can be performed by other entities that are not CSDs (i.e. register-maintaining entities), such as registrars, issuer agents, stock exchanges or the issuer itself. Most European markets have implemented registration processes and 73% of ECSDA CSDs currently offer registration services.<sup>3</sup> 66% of the CSDs operating the central register in their country ensure this function under a legal privilege.<sup>4</sup> The CSD maintenance of the central register is to be distinguished from the CSD notary function, which is the function of “maintaining the ‘central’ register for a particular issue in view of enabling the settlement of the corresponding securities.”<sup>5</sup>

The aim of this section is to define the relationship between registration and settlement and the manifestation of this relationship in related processes and market practices in the post-T2S environment. The topic of settlement finality is out of scope of this section, as it pertains to settlement in the context of T2S only and does not affect the relationship between settlement and registration.

### 2.1 About registration

#### 2.1.1 Purposes of registration

Registration serves multiple purposes, manifested in the legislation of different markets:

The provision of information on beneficial owners and/or end-investors to the issuers is the current key aim of registration. Registration provides transparency about shareholders as it allows issuers to identify beneficial owners and investors, thus enabling them to provide Investor Relation services. The registration function ensured by CSDs and/or other entities allows issuers to provide specific services to the investors and monitor ownership. In this sense, the definition of registration is very much focused on the relationship between the issuer and the investor. In markets with registration practices it is usually the issuer who decides upon the issuance of the securities whether or not the security shall require or allow registration. In many markets this choice has been legally manifested in national legislation by offering

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<sup>2</sup> Source: Public consultation on CSDs and on the harmonisation of certain aspects of securities settlement in the EU, 13 January 2011. Registration in terms of the CSD notary function is not within scope of the issue.

<sup>3</sup> ECSDA report on issuer services  
[http://www.ecb.int/paym/t2s/progress/pdf/subtrans/st\\_mtg1\\_item2\\_4\\_2.pdf?46ae0a2ab68fbc1a5e7194a777f5597c](http://www.ecb.int/paym/t2s/progress/pdf/subtrans/st_mtg1_item2_4_2.pdf?46ae0a2ab68fbc1a5e7194a777f5597c)

<sup>4</sup> ECSDA report on issuer services  
[http://www.ecb.int/paym/t2s/progress/pdf/subtrans/st\\_mtg1\\_item2\\_4\\_2.pdf?46ae0a2ab68fbc1a5e7194a777f5597c](http://www.ecb.int/paym/t2s/progress/pdf/subtrans/st_mtg1_item2_4_2.pdf?46ae0a2ab68fbc1a5e7194a777f5597c)

<sup>5</sup> Source: Public consultation on CSDs and on the harmonisation of certain aspects of securities settlement in the EU, 13 January 2011. Registration in terms of the CSD notary function is not within scope of the issue.

issuers the choice between different types of securities (or share attributes) i.e. issuers have the choice between issuing “registered securities” (requiring registration) or “bearer securities” (not requiring registration). Over time more sub-types have been established in some markets such as bearer securities that can be converted into registered securities to account for additional issuer needs.

In addition, in some markets there are securities for which registration is optional, depending on the choice of the investor. In this case of “on-demand registration”, the investor decides whether or not registration is to take place (otherwise these securities are handled as bearer securities). Consequently, the securities which need to be registered “on-demand” can only be determined transaction-by-transaction and not exclusively based on their type.

Furthermore, registration can also be a requirement defined by the issuer for attaining certain rights (e.g. voting rights, loyalty bonus) on a registered share. In many markets, the recognition of certain rights (e.g. voting rights) is also linked to the entry/update made in the register. If, in these markets, registration does not take place with settlement, there is the risk that the purchaser of a securities position is not granted the necessary rights at the point of settlement.

Finally registration can serve as a means for issuers of monitoring or even (in some markets) controlling ownership. In some markets, dedicated types of securities have been created, for which ownership needs to be granted by the issuer (“registered securities with restricted transferability”) such that shareholder groups can be excluded from obtaining ownership. This concept originates in family businesses, which aimed at controlling the transfer of securities to shareholders outside the family, but is also used in regulated industries.

### **2.1.2 Nominee and beneficial owner registration**

With respect to the level of detail required for registration, a distinction needs to be made between two concepts: registration of beneficial owners and nominee registration. The concept of registration is inherently based on beneficial owner registration, as the issuer has an interest in knowing the end-investors. However, as there are practical constraints in receiving the information on beneficial owners some markets have settled for nominee registration instead of or alongside beneficial owner registration. In cases where the information on beneficial owners is not available to the intermediaries, the intermediaries themselves (e.g. custodians) are then registered.

### **2.1.3 Relation of registration and settlement**

Settlement has the primary aim of discharging the obligations of trading parties through the transfer of funds and the associated transfer of securities in the securities accounts in the settlement system, i.e. in the post-T2S environment in T2S. Registration as an issuer service does not need to be performed by a CSD. It can be managed, as it is the case in some markets, by non-CSD entities. Whether or not registration and settlement are handled as distinct or integrated processes depends essentially on the information requirements for both processes and the ways in which this information can be retrieved and stored.

The primary reason for maintaining two separate systems is that the level of information is not the same in the two systems. This is typically the case if a registration system maintains information at the level of the end investor (or beneficial owner), while the settlement system maintains information only at the level of omnibus accounts that hold securities on behalf of multiple end investors. In this case, the register is operationally distinct from the settlement system and likewise the information management for both processes runs separately i.e. there are two databases, one holding settlement information and the other holding registration information.

This reason does not apply in markets where the register and accounts in the settlement system are maintained on the same level of information. For instance, in direct holding markets, where accounts in the CSD system are segregated down to end-investor level, the information available in the settlement system is already at the level of the one required for the register. End-investor accounts could therefore be used for the purpose of registration. The CSDs have then in principle the possibility to provide the issuer with the required information directly from the settlement system. The same applies in countries where nominee registration is accepted. In this case the participant receiving the securities, whether it is the end-investor or an intermediary, is registered using the settlement accounts (held at nominee level<sup>6</sup>). In this case there is no need to maintain a separate database for managing the registration details and settlement and registration could be completely integrated.

Consequently, it can be derived that settlement and registration are handled as separate processes, whenever the register-maintaining entity requires additional information about owners (beyond the information required for settlement) to be maintained in addition to settlement data (i.e. one with a different level of segregation/detail). This is usually the case when the level of account segregation in the settlement system does not provide sufficient details for registration.

Although registration and settlement can be distinguished conceptually, they are in fact closely related. From the point of view of an investor, a buyer – who pays for a securities purchase at point of settlement – will want to ensure that he has the ability to exercise the full rights associated with the securities position upon receiving the securities in his account, i.e. upon settlement. From the point of view of an issuer, it is important that the register does in fact reflect the outcome of the settlement process. If it does not, then the shareholder register as a tool to communicate with the end investor loses its effectiveness. As a consequence, it is crucial for the adaptation of settlement and registration processes to achieve alignment of settlement and registration data.

## **2.2 Adapting registration to T2S**

### **2.2.1 Sequencing of registration and settlement**

The need for alignment between registration and settlement needs to be reflected in the sequencing of registration and settlement in T2S. Since settlement achieves the transfer of securities in the securities

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<sup>6</sup> The terms nominee and omnibus accounts are used without reference to specific legal concepts, but rather as opposition to end-investor accounts.

accounts maintained by the CSD, the register should not be updated prior to settlement in T2S. Otherwise, there is a risk of registering securities that will never be transferred. Accordingly, the confirmation of settlement is required prior to the registration. This ensures that only securities that have settled are registered and reduces the risk of misalignment.

The sequencing by itself does not solve the need for alignment between settlement and registration data. There are still two sets of data which need to be aligned and reconciled in order to ensure consistency and avoid gaps in the registration process.

## **2.2.2 Managing complexities and risks for registration processing**

### **2.2.2.1. Passing registration information using T2S (Centralisation)**

In order to minimise the risks of misalignment between settlement and registration information, one could consider to use T2S such as a) by passing registration information fully through the T2S settlement chain to the issuer CSD (the issuer CSD might need to subsequently forward the information to the register-maintaining entity), if necessary complemented by b) account segregation.

In the scenario where T2S messages were to be used to pass registration details, the issuer CSD would act as a point of centralisation, gathering the registration details received by settlements effected in its account. As established in the section “Transmission and maintenance of information in a cross-CSD context”, passing on additional information via realignment messages has considerable drawbacks. If the issuer CSDs acting as point of centralisation requires the use of the settlement chain to pass through the necessary information, all involved Investor CSDs and intermediaries would need to adopt particular practices e.g. for filling in the T2S settlement messages or setting up T2S. This will necessitate a degree of harmonisation across markets. Based on current conditions and market requirements, the information needed for registration varies substantially between markets. Investors and investor CSDs will thus be confronted with major complexities resulting from the variety of required fields, as well as associated information gathering and maintenance processes, resulting in unmanageable complexities, particularly for CSDs and CSD participants which are active in several markets. Also confidentiality issues may arise by passing the registration details in T2S messages through the whole settlement chain, as entities will become aware of final beneficiaries even though they are not involved in the registration process. Finally, based on the design of T2S, passing additional details in T2S messages is not possible in all settlement scenarios. In a settlement scenario where a transfer of securities takes place within an Investor CSD holding a single omnibus account with the Issuer CSD, there will be no realignment messages generated, that could be used to pass information to the issuer CSD. Thus this process will always need to be complemented by another process outside T2S. In addition, there are cases where registration is required while there is no settlement in T2S due to the transfer between end-investors under the same omnibus account. This scenario would need to be catered for as well.

**Under current conditions (e.g. unharmonised information requirements and T2S specifications) the TFAX recommends not to use T2S settlement messages as a means of passing registration details.**

The second method of using T2S to pass on registration information would be to segregate accounts based on an indicator relevant for registration (e.g. whether registration of a security is required or not). This kind of segregation would need to be propagated throughout the settlement chain in order to be effective such that investor CSDs and CSD participants would need to implement the segregation as well into their account structures. As pointed out in the section “Transmission and maintenance of information in a cross-CSD context” account segregation that needs to be propagated can create huge complexities for investor CSDs and CSD participants which will have to cope with the segregation requirements of several issuer CSDs at the same time.

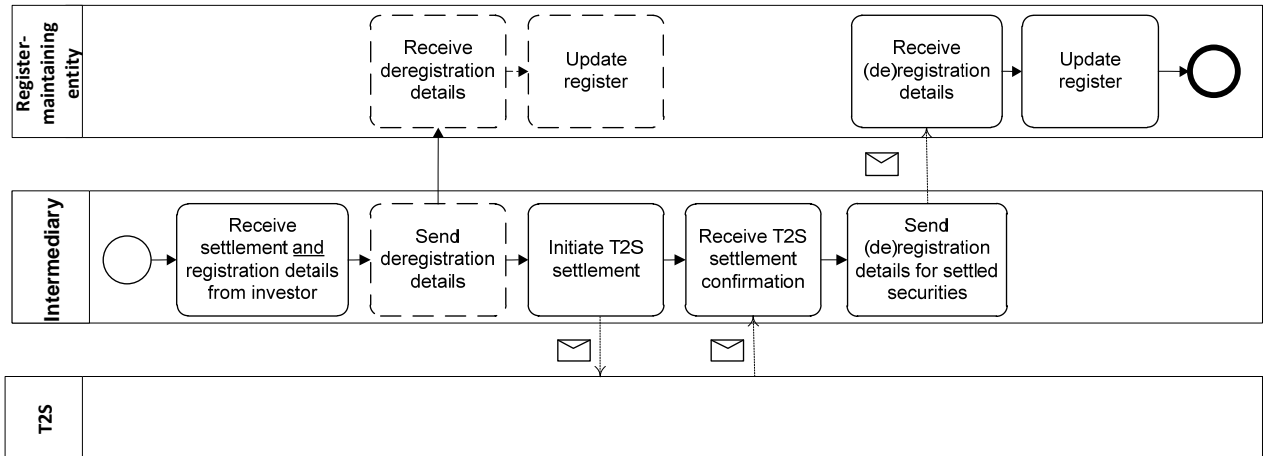
**The TFX recommends that account segregation for the purpose of registration, which needs to be propagated throughout the settlement chain, should be avoided if possible.**

2.2.2.2. Alignment between registration and settlement at the level of the intermediaries  
(Decentralisation)

Another scenario to think of would be to achieve alignment of registration and settlement at the level of the intermediaries, since they are the ones usually receiving both, registration and settlement information. In this scenario the information gathering process and responsibility would be fully decentralised and distributed over the intermediaries.

The generic process could look as follows:

**Figure 5: Generic T2S data retrieval process for registration purpose**



- 1) The intermediary receives settlement as well as registration details from its Investors (or other intermediaries in the chain).

Optional:

In some markets, it is not possible to settle registered securities directly. In these markets, the securities need to be deregistered first before settlement can take place.<sup>7</sup> This requires the

<sup>7</sup> In some markets, this concept applies to some securities only, while for others deregistration prior to settlement is not required.

intermediary to conduct an additional step<sup>8</sup> prior to instructing T2S: the intermediary needs to first send the deregistration details to the register-maintaining entity, which can subsequently update the register thereby making the securities available for settlement.

- 2) The intermediary initiates T2S settlement i.e. enriches and sends the settlement instruction to T2S.
- 3) The intermediary receives the settlement confirmation from T2S. Alternatively the intermediary can use T2S reports and queries to retrieve the settlement status from T2S e.g. at the end of day.<sup>9</sup>
- 4) After having received the settlement confirmation (or reports/queries), the intermediary can now forward the registration details or deregistration details (unless deregistration is required prior to settlement) he received in step 1) for those securities that have settled in T2S to the register-maintaining entity.

In a cross-CSD settlement scenario there might not be a direct connection from the intermediary to this institution acting as the register-maintaining entity, in this case the information needs to be passed to that entity (e.g. issuer CSD, issuer agent or issuer itself) either through the chain of investor CSDs or by involving a service provider (participant in the issuer CSD) who could be outside of the settlement chain.

In order to initiate the (de)registration process, the intermediary needs to determine for which securities (de)registration details are to be forwarded.

- 5) The register-maintaining entity receives the (de)registration details.
- 6) The register-maintaining entity updates the register.

The intermediaries take over the key role in ensuring the alignment between the settlement in T2S and the registry. In fact, the responsibility for ensuring that registration details are passed to the register-maintaining entity is distributed to all intermediaries instructing T2S (e.g. Investor CSDs or DCPs) and not centralised within one institution. The intermediaries are in charge of passing on the registration details in order to avoid misalignment between T2S and the register. In order to ensure the timely transfer of rights with settlement, the process needs to be set-up such that the update of the register can take place immediately after the settlement confirmation has been received.

While in this scenario, the complexities in T2S are minimised, there are additional complexities to be handled by the intermediaries. To give an example, intermediaries might require a separate set of accounts outside T2S to handle registration details. This will impact custodians, investor CSD and possibly the entire custody chain. While some intermediaries such as custodians might already have a

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<sup>8</sup> CSDs also have the possibility to offer Straight-Through-Processing for deregistration (only via indirect connectivity).

<sup>9</sup> E.g. reports on positions (Statement of Holdings) or on the transactions (Statement of Transactions) or using the Securities Account Position Query and Settlement Instruction Queries.

separate set of accounts for asset servicing purposes, this will not be the case for many CSDs. For Investor CSD this might thus constitute a barrier to access the issuer CSD.

With such a model, as it is generally the case when responsibility is distributed, the risk of misalignment between the settlement system and the registry is still existent, as the intermediary might miss to pass on the registration details. In addition, when the level of account segregation in the settlement system (e.g. omnibus account) does not provide sufficient details for registration (e.g. at end-investor level), this brings an additional component of complexity to be managed by the intermediaries, thus resulting in higher risks of misalignment between T2S settlement data and the registry.

## 2.3 TFAX findings and recommendations

The above analysis has shown that settlement and registration are conceptually separate processes, whenever the CSD requires additional information (about owners) beyond the information required for pure settlement. However, they are closely related and there is a need for realignment between both. On the one hand, registration should take place after final settlement in T2S. On the other hand, there should not be any event post-settlement that questions the transfer of rights.

In order to achieve the alignment between registration and settlement, two main options were analysed, a) centralisation by the use of T2S (e.g. T2S messages and/or account segregation) and b) decentralisation at the level of the intermediaries. In line with the analysis in section “Transmission and maintenance of information in a cross-CSD context”, there are significant obstacles for using T2S messages to pass registration details such as the missing harmonisation of requirements for the additional information and the fact that the process would always be complemented by an additional process outside T2S to cater for all settlement scenarios.

Similarly, the use of account segregation for registration purposes implies the implementation of segregation throughout the entire settlement chain. As highlighted in the section “Transmission and maintenance of information in a cross-CSD context”, this would impose major complexities on investor CSDs and CSD participants.

**Under current conditions (e.g. unharmonised information requirements and T2S specification) the TFAX recommends not to use T2S settlement messages as a means of passing registration details.**

**The TFAX recommends that account segregation for the purpose of registration, which needs to be propagated throughout the settlement chain, should be avoided.**

Consequently, registration details should be passed to the register-maintaining entity outside T2S for the alignment of registration and settlement to be attained at the level of the intermediaries. However, as the analysis revealed, this option also bears the drawback of adding complexities (such as new sets of accounts outside T2S) to be handled by all intermediaries involved and the risks due to the involvement of a large number of intermediaries and the spreading of those risks. For investor CSDs this might constitute a barrier to access the issuer CSD.



Under current conditions there is neither an ideal technical nor process-based solution for ensuring the alignment of registration with settlement data.

Except for those markets where settlement and registration are fully integrated, such as direct holding markets, there will always be the risk of misalignment between settlement and registration data, which could also prevent buyers from timely acquiring the rights linked to the purchase of the securities.

**The TFAX therefore invites the HSG to discuss other potential solutions of legal/regulatory nature - which go beyond the above technical or process-based approaches.**

**The TFAX has identified the following non-exhaustive potential solutions: (1) the possibility of nominee registration, (2) linking the transfer of rights to settlement such that there is no post-settlement event questioning the transfer of rights, and (3) to abandon transaction-by-transaction registration completely. All of these options would aim at further integration of registration and settlement as a means of ensuring the realignment of both processes.**

Regarding option (1) and as indicated above, in direct holding markets (except for those applying the layered model in T2S) the end-investor accounts in T2S can be used for the purpose of the registration and CSDs have the possibility to provide the issuer with the required information directly from the settlement system. Similarly in countries where nominee registration is accepted, the participant receiving the securities can be registered. Since T2S accounts are in this model segregated to the level required for registration, the complexity of handling different levels of segregation is no longer existent. This facilitates the alignment between settlement and registration data and minimises reconciliation efforts.

Consequently, it could be considered to apply this model to all markets in order to link settlement to the transfer of rights and reduce the risk of misalignment between the register and T2S. The key prerequisite is a uniform level of information i.e. level of account structures for registration and settlement such that the level of registration is equal to the level of settlement. Those markets where the account structure for settlement is more aggregated than that required for registration (e.g. end-investor registration) would need to align the level of detail required for both by putting in place a regulatory framework that allows for nominee registration. It should be noted that in this case, nominee registration should be accepted for both, domestic and cross-CSD settlement, in line with the aim of establishing a single European market.

Accepting nominee registration and thus a different level of registration data has certain impacts that need to be considered. Changing the registration system to nominee registration, which mostly requires a change in legislation<sup>10</sup>, would lead to a more generic level of detail in the register overall. This level of detail might not be sufficient in all cases to provide for full transparency over investors. Markets who decide to accept nominee registration will therefore need to implement additional processes in order to identify the end-investors and provide issuers with investor details.

By implementing such a model, an integrated process for registration and settlement is achieved.

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<sup>10</sup> In many markets the legislation of registration is closely linked to transfer of ownership concepts.

However, such a model might imply that market participants will not have the possibility anymore to choose between nominee and final beneficiary registration for the same ISIN, which should be avoided. Nominee registration should not be restricted to investor CSDs; it can also be used by any other intermediary who is acting as nominee (level playing field).

Regarding option (2) and whether or not the transfer of rights is linked to registration, settlement or both depends on the national legislative frameworks and markets practices. In order to ensure that there will be no event post-T2S that questions the transfer of rights; it could be considered to apply a consistent practice such that the transfer of rights is no longer exclusively linked to registration, but instead to the time of settlement. This will ensure that at the point of settlement the buyer has certainty on the acquisition of all rights associated with the securities. Registration will still be required to keep an overview of the end-investors. Depending on the time gap between settlement and registration, there will also be the need to set-up an additional process based on T2S settlement data to determine the holders of securities at the point of time when rights are to be exercised (e.g. on the date of a general meeting). In this model registration and settlement are handled as two distinct processes.

However, this approach – by itself – does not reduce the complexities associated with the accurate update of the register and would need to be complemented by sound intermediary processes or a framework based on nominee registration.

Another, similar option (3) to consider is to conduct registration not on a transaction-by-transaction basis but only when required in order to determine the holders of securities. In this case, registration could be completely decoupled from settlement while it is still ensured that buyers have certainty on their rights when they become relevant. For this purpose the information channels for custody processing can be used.

### **3. Tax processing**

In some markets, taxes are levied on a transaction-by-transaction basis and closely linked to settlement, such as transaction taxes, stamp duty tax and pro-rata temporis withholding tax. The section focuses on the information requirements and information flows related to tax processing which are required by an agent whatever this agent might be (CSD / intermediary / other) for further processing. The tax processing in itself, e.g. how the calculation and collection is conducted by the agent, is not covered in this section.

*The section's scope does neither include tax on stock processing, nor tax collection on dividends, nor individuals' tax declarations. It also does not cover the fiscal harmonisation work of the Commission on removing the Giovannini barriers 11 (on withholding tax procedures) and 12 (on transaction tax procedures).<sup>11</sup>*

#### **3.1 About tax processing**

##### **3.1.1 Responsibility for tax processing**

The party responsible for the tax processing differs across European markets. For some markets it can be the Issuer CSD that directly debits withholding tax from the participant's cash account, as it is the case in NBB SSS<sup>12</sup>. In some other cases, the Investor CSD or the CSD participant that has a withholding status is responsible to interact with the local tax authorities, e.g. in Italy. Finally, the end-investor himself can be responsible for its tax payment via the regular tax declarations. All in all, the European market is fragmented with regards to the party (individual or legal entity) that has to perform the tax processing.

##### **3.1.2 Process flow and information requirements**

Similar to the differences in actors involved, the taxation process itself differs between the various markets. However, in all cases information needs to be passed in a way or another to the tax processing actor. This could be information regarding the "tax status" of a transaction or the "tax status" or "tax id" of the end investor.

The information to be passed on from Investors to the tax processing agent can vary depending on the market rules and processes currently in place. A tax identification number, country of residence, address are typical types of information that can be required by the tax processing agent for the tax processing activities (Settlement instruction tax related fields are described in the Annex, including the availability of the fields in T2S customised messages).

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<sup>11</sup> See 2<sup>nd</sup> T2S Progress Report on Harmonisation, sections 4.3.1 and 4.3.2 [publication date to be added]

<sup>12</sup> National Bank of Belgium Securities Settlement System

## 3.2 Implementing tax processing with T2S

To cover the different tax requirements there are two mechanisms that can be considered in the T2S context. The first mechanism relies on passing additional information during the settlement process via the settlement instruction messages sent to CSDs/T2S on a per transaction basis. The second mechanism relies on segregation of the accounts in T2S based on the tax status. The following sections will detail these two mechanisms and the benefits and limitations for each.

### 3.2.1 Passing tax related information in T2S settlement messages

In some markets there is the requirement to pass tax related information from investors to the tax processing agent, e.g. to identify the tax status of a given transaction for a given CSD participant and whether it requires tax processing or not. It could therefore be considered to pass the relevant details in T2S messages, e.g. an indicator identifying if the instruction requires tax processing or not. As stated earlier, the party requiring the information for the tax processing might be any actor in the settlement chain from the end-investor to the issuer CSD. Therefore, the information required has to be transferred throughout the settlement chain in T2S from the layer at which it is available (e.g. end-investor) to the layer at which it is needed for transmitting the information to the tax processing agent (e.g. the issuer CSD or another investor CSD in the settlement chain).

Passing information via the settlement chain could be done by extracting the required information from the original business instructions and transferring it via the realignment instructions triggered in the case of cross-CSD settlement (however, this functionality is currently not available in T2S<sup>13</sup>).

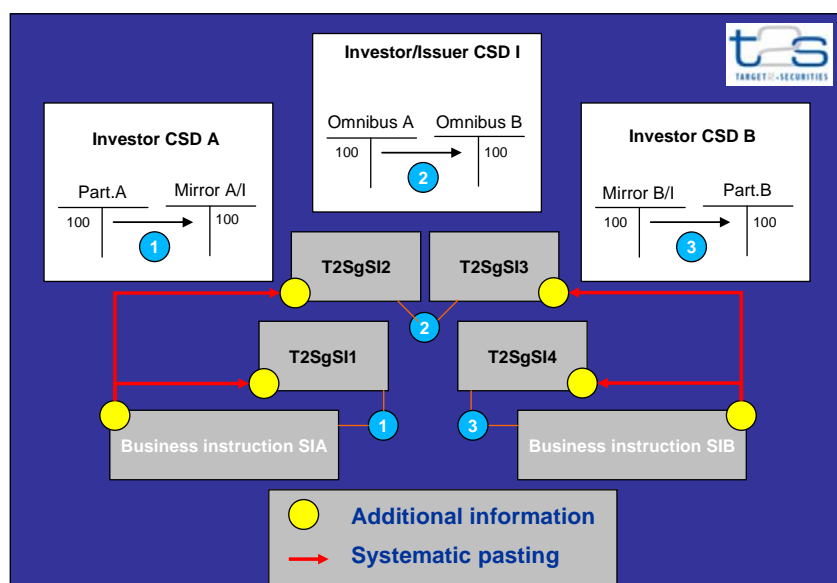
For instance, hereunder in the figure 1 where two DCPs in two investor CSDs A and B instruct T2S for settlement and provide transaction tax related information, T2S would copy the tax related information into the realignments instructions generated by T2S. Upon matching of settlement instructions in a cross-CSD scenario, T2S identifies the realignment chain based on the static data maintained by the CSDs. In the scenario hereunder, T2S will generate four realignment instructions:

- two realignment instructions impacting the mirror accounts at the investor CSDs level, (T2SgSI1 and T2SgSI4)
- two realignment instructions impacting the omnibus accounts of the Investor CSDs at the Issuer CSD (T2SgSI2 and T2SgSI3).

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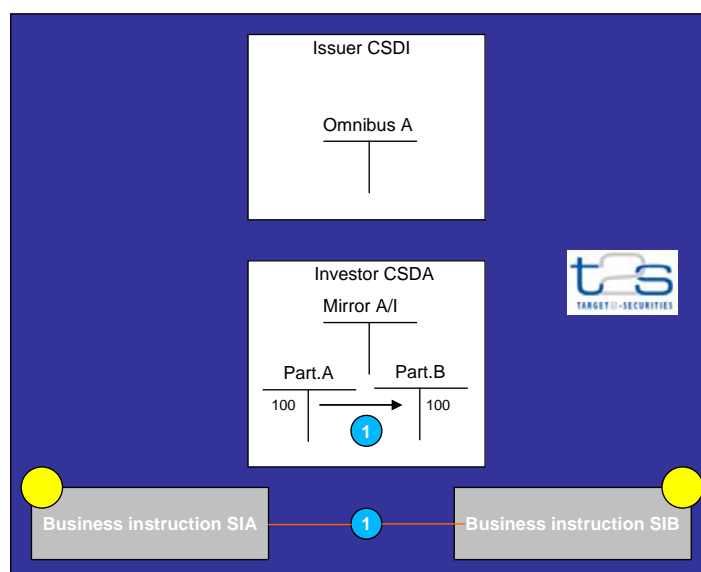
<sup>13</sup> The current realignment message does not include the field(s)/block(s) that could be required for the information passing. For their usage into T2S, the ISO messages have been customised, e.g. unnecessary fields were removed to facilitate the message specifications and reduce the need for validation by the T2S application. Also from a functional perspective the mechanism required to copy the tax related information into realignment instructions is currently not foreseen in T2S.

**Figure 1: Copy of tax related information into realignment instructions**



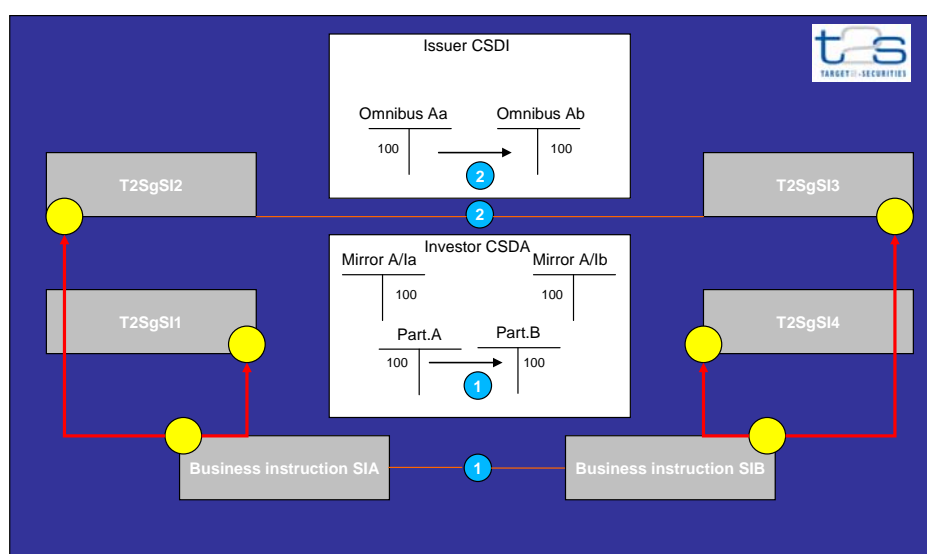
As established in the section “Transmission and maintenance of information in a cross-CSD context”, the main limitation of using T2S messages as a means of passing on tax related information is that it is not applicable in all settlement scenarios. In the scenario depicted below, where the Issuer CSD needs the tax related information but the two participants are in the same Investor CSD, which is using a single omnibus account at the issuer CSD, the settlement takes place solely within the Investor CSD (i.e. it is in fact an Intra-CSD settlement). As a result, no realignment is triggered by T2S and the Issuer CSD does not receive the required information. Thus, when using T2S messages to pass details to the tax agent (e.g. issuer CSD), the process would always need to be complemented by another process outside T2S and would never by itself be sufficient.

**Figure 2: Intra-CSD settlement for foreign ISIN (e.g. issued by other T2S CSD)**



An exception applies in the particular case where the investor CSD segregates its omnibus account in the issuer CSD. In this case, T2S will trigger realignments since the CSD participants' positions are held in two different omnibus accounts at Issuer CSD level. For instance hereunder in Figure 3, the Part. A securities account is linked to Mirror A/Ia and Omnibus Aa while Part. B securities account is linked to Mirror A/Ib and omnibus Ab. Without omnibus account segregation, passing tax related information into T2S settlement instructions would not work in all settlement scenarios and would always need to be complemented by another process outside T2S. With omnibus account segregation, however, the number of accounts to be managed rises substantially, thus increasing complexities and associated risks of managing these complex account structures.

**Figure 3: Intra-CSD settlement with account segregation**



As identified in the section “Transmission and maintenance of information in a cross-CSD context”, there is another drawback of using T2S messages to pass information. If each CSD requires different sets of tax related information in the settlement instructions and possibly sets up its own specific restriction in T2S,

it means that un-harmonised practices using T2S messages are implemented and maintained in T2S. As a result, investors will need to provide different sets of tax related information depending on the CSD requiring it in order to complete settlement. For instance settling a security issued in a given market could require the Investors to provide a Tax identification number into its settlement instruction, while for settling a security issued in another market the investor could have to specify another type of information (end-investor name and address for instance). This would be a barrier for Investors to settle in certain markets. This complexity can be removed only if the same information requirements and rules are implemented across CSDs and for both domestic and cross-CSD settlement.

Furthermore, copying tax related information within the realignment across the different layers of the settlement chain will result in making potentially confidential information available to all actors in this chain, including those who are not involved in the tax processing.

In addition, implementing tax information in T2S messages does not cover the related validations. If a CSD requires checking that a given tax related detail is provided in the settlement instructions and/or realignments, it will have to implement a specific restriction in T2S in order to “Hold” the instructions and then validate in its systems if the tax information is available. Based on the result, the CSD can release or cancel the on “hold” instructions in T2S. This procedure will increase the need for interaction between T2S and the CSD system, thus resulting in a delay of settlement and higher communication costs.

**Based on current conditions, the TFAX recommends that tax related information for domestic and cross-CSD transactions is not passed via T2S settlement messages for both domestic and cross-CSD settlement.**

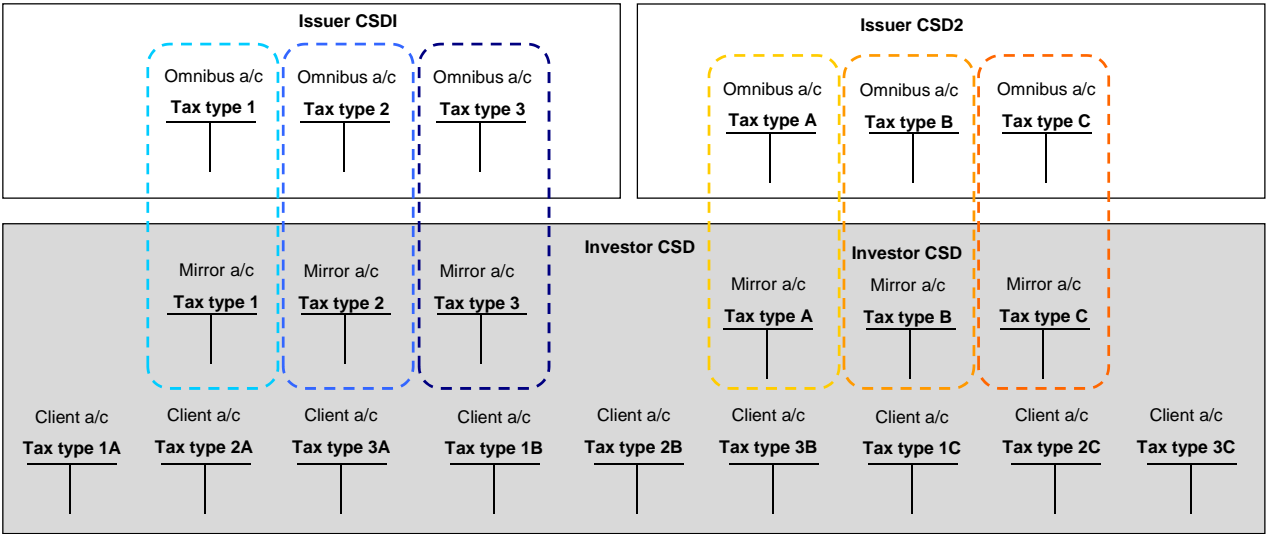
### **3.2.2 Account segregation in T2S**

In some markets there are tax regulatory requirements for the Issuer CSD to segregate accounts based on certain tax criteria, e.g. type of Investor, resident, non-resident, exempt or non-exempt account etc. The Investor CSD will have to open multiple omnibus accounts at the Issuer CSD, depending on the tax status of its own clients and maintain in the investor CSD books the same number of mirror accounts.

T2S offers the possibility for CSDs to open as many securities accounts, as required and to maintain additional attributes for these accounts, the Market Specific Attributes (MSA). For instance, a CSD where tax account segregation is required can maintain in T2S an additional attribute that will serve the purpose of flagging the securities account with the appropriate “Tax Type”. The CSD will be able to define in T2S static data what the possible values for this attribute are. The MSA can be used in order to define restriction rules, see the annex for more information.

Each CSD is responsible for maintaining its reference data for securities accounts including the MSA. Therefore there might be a situation in T2S where each CSD determines its own set of values in order to support the account segregation using the MSA. Such a situation could lead to the following account structure in T2S:

Figure 4: Non-harmonised account structure flagging



It has to be noted that the complexity of the account structure in itself will increase in the case where the Investor CSD interacts with multiple Issuer CSDs which define their own tax account segregation requirements. One factor is the number of mirror and omnibus accounts that will need to be maintained by the Investor CSD. It is dependent on the number of tax status types that each Issuer CSD require e.g. if an Issuer CSD requires three different types of accounts, the Investor CSD will maintain three mirror accounts in its books and open three omnibus accounts in the books of the Issuer CSD. At the level of client accounts the number of accounts to be handled is likely to be even higher than that of each individual investor CSD, since in many cases the different requirements of the investor CSDs for segregation need to be combined.

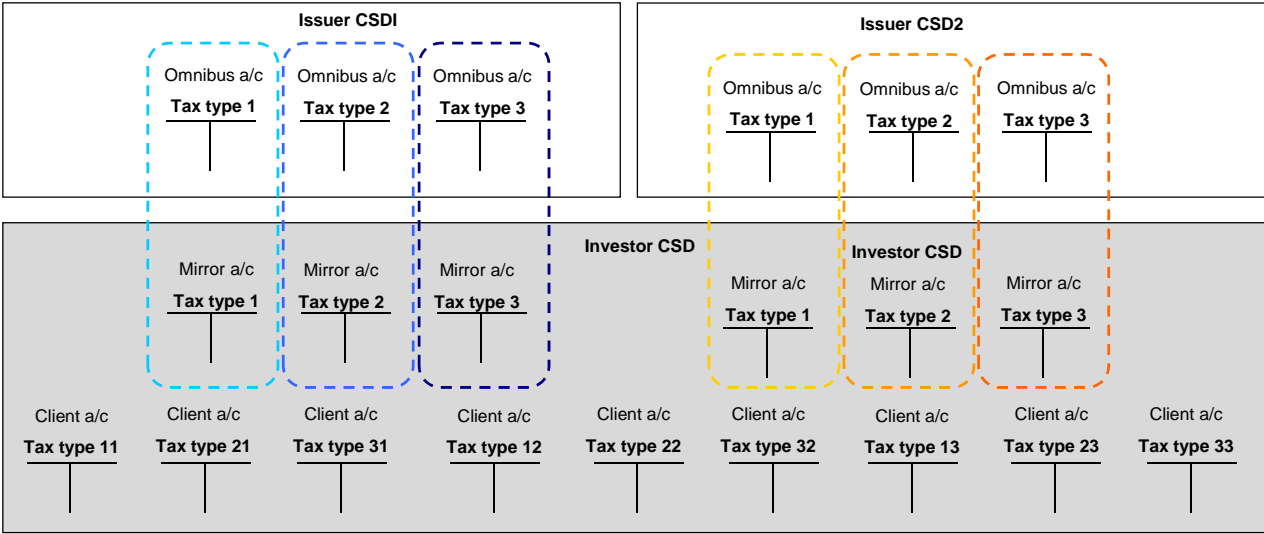
In addition, the Issuer and Investor CSDs tax account segregation has an impact on the CSD participant account structure and reconciliation, e.g. intermediaries will also have to segregate their securities accounts depending on the different tax types required by the markets in which they settle securities. This implies an additional effort to reconcile positions at the level of the CSD participant since its clients might hold positions reflected in different securities accounts in T2S.

**The TFA recommends avoiding account segregation as a mechanism to support tax processing.**

The T2S community could support a harmonisation for the values of the MSA, e.g. all markets agree to use a list of common list of values (in our example 1,2,3 are the possible values for the Tax Type into the different markets). However, even if the values of the MSA (i.e. the Tax Type values defined in static data via the MSA) are the same across markets (e.g. 1,2,3) this does not simplify the account structure. The CSD participants in particular have to handle multiple securities accounts per market/Issuer CSD.

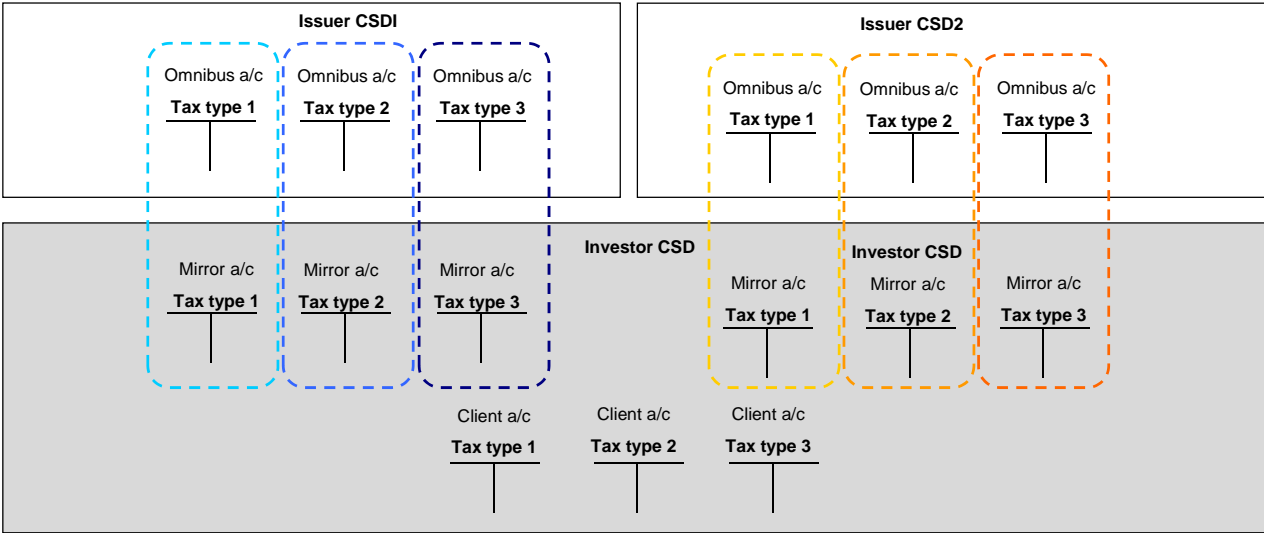


Figure 5: Harmonised values for Market Specific Attributes across markets



The only possible solution to reduce the complexity of account segregation is to harmonise the business logic of the MSA values across the markets such that the same meaning is attributed to the harmonised values by all markets (for instance, this does not apply if the distinction is made based on “resident “and “non-resident” status, since the status of the same participant will differ across markets). This condition would be met only if a pan-European harmonised set of criteria defines the tax status of a securities account. In the figure below, it is apparent that the harmonisation at the level of the business logic, i.e. the classification of Tax Type across markets and the harmonisation at a technical level, simplifies the account structure at the level of the CSD participants.

Figure 6: Harmonised values for Market Specific Attributes and harmonised business logic



Since as of today the business logic is not harmonised across markets due to different tax regulations, there is currently no technical and process-based solution to achieve efficient tax processing in the post-T2S environment. Tax processing related to settlement that needs to be conducted on a transaction-by-transaction basis, is already associated with high complexity. This complexity will not be reduced as a

result of T2S, on the contrary, it will remain or even be amplified as cross-border business increases unless further harmonisation is pursued.

**The TFAX invites the HSG to monitor the harmonisation of European tax regulations related to settlement.**

### **3.3 TFAX findings and recommendations**

Based on the above analysis, the provision of tax related information via the T2S settlement chain bears considerable disadvantages, based on the current conditions such as unharmonised tax rules and regulations, different information requirements as well as current T2S specification. As long as the harmonisation on tax information to be provided has not taken place, passing additional tax details in T2S messages would create major complexities on the investor and investor CSD's side. In addition, the solution would lead to impacts in terms of confidentiality.

**Based on current conditions, the TFAX recommends that the tax related information for domestic and cross-CSD transactions is not passed via T2S settlement messages for both domestic and cross-CSD settlement.**

Regarding the option of mandatory account segregation for the purpose of tax processing, the complexities in terms of account structure for investor CSDs and CSD participants constitute a barrier for efficient cross-CSD settlement. Implementing account segregation for tax purposes on a mandatory basis will lead to a multiplication in the number of participant accounts, complex reconciliation etc. and impact investor CSDs and CSD participants considerably. For more details on the detrimental impact of mandatory account segregation in a cross-CSD context, refer to section "Transmission and maintenance of information in a cross-CSD context".

**The TFAX recommends avoiding account segregation as a mechanism to support tax processing.**

Account segregation can only be considered as an efficient solution for the handling of tax processing if all markets reach a common tax related categorisation for securities accounts segregation. However, a harmonised framework for tax-related account segregation cannot be achieved without putting in place a sound harmonised framework for tax processing across Europe.

As a result, there is no technical and process-based solution to achieve efficient tax processing in the post-T2S environment. Tax processing related to settlement that needs to be conducted on a transaction-by-transaction basis, is already associated with high complexity. This complexity will not be reduced as a result of T2S, but will remain or even be amplified as cross-border business increases.

**The TFAX invites the HSG to monitor the harmonisation of European tax regulations related to settlement.**

In this context, the TFAX would like to point to the new trade-related taxes (e.g. Financial Transaction Tax (FTT) and similar projects) currently being introduced or considered in some European markets. These new requirements are likely to be the source of new complexities and obstacles to cross-CSD

settlement if they are to be collected at settlement level. Only by disconnecting tax processing from settlement and/or harmonising tax frameworks the complexity can be reduced in the long-run.

**The TFAX recommends that trade-related taxes should not be collected at settlement level. If this cannot be avoided, then this should be done in a harmonised manner across markets in order to prevent detrimental impact on cross-CSD settlement.**

## 4. Portfolio transfers

Portfolio transfers (or book transfers) occur when a client changes of custodian or bank. Depending on the market and on the type of client requesting the transfer the procedure can be significantly different.

If currently the cross-border settlement of portfolio transfers is considered rare or even not existent, it should be considered that, as a result of the implementation of T2S, cross-border portfolio transfers might occur more frequently as a result of increased competition in the market.

This section aims at identifying the barriers to cross-CSD settlement of portfolio transfers and at recommending solutions.

### 4.1 Implementing portfolio transfers with T2S

#### 4.1.1 Types of book transfers and identification via transaction codes

The SMPG<sup>14</sup> has set out market practices for the usage of ISO15022 messages in the case of portfolio transfers. Different types of transfers have been identified so far:

- Internal transfers (within the same Custodian)
- External transfers (between different Custodians)

For each of these, the SMPG recommends the usage of defined Transaction Type codes, see [Annex](#) for information. The SMPG also recommends the usage of the beneficial ownership change flag, this field is available in the settlement instruction message of T2S should it be needed by the instructing party. See Annex for information. Even though the standards were created with respect to ISO 15022, the transaction codes recommended by the SMPG can be used in the ISO 20022 messages to distinguish the settlement instructions related to a given type of book transfer. Likewise, the beneficial ownership flag can be used.

#### 4.1.2 Matching

It is recommended by the SMPG to match settlement instructions for the portfolio transfers, however, currently not all the settlement instructions related to portfolio transfers are subject to matching. In some markets matching is currently based on the type of Investor transferring the assets (Individual, Institutional), and sometimes not required at all. This “Dump” practice leads to higher risks for investors and intermediaries alike.

For more details on the current practices in Europe, please see the Annex.

T2S does not support the dumping as such, e.g. it will not settle single-legged instructions without requiring matching. In the context of T2S, matching can be achieved in two ways:

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<sup>14</sup> SMPG: Securities Market Practice Group

1. Instructions are sent separately (Delivery and Receipt legs) and matched by the system based on a common harmonised list of matching fields
2. An appropriate set of already matched Delivery and Receipt instructions is sent by the CSD (or any authorised Actor). This is only possible for the intra-CSD scenario.

**Since matching is mandatory for T2S settlement, the TFAX recommends that settlement instructions related to portfolio transfers should be sent to T2S as “to be matched” instructions or “already matched” instructions.**

#### **4.1.3 Passing additional information**

As of today, each market has its own requirements in terms of information to be provided from the delivering custodian to the receiving custodian. For more information regarding the type of data required in different markets, please refer to the [Annex](#). In the T2S context, this would lead to the manifestation of additional complexities in terms of information gathering and maintenance for the involved actors.

The SMPG practice for book transfers does not list out the potential additional information that is required for other processes than the settlement ones.

**The TFAX recommends that the information required by the receiving custodians should be harmonised to the extent possible to ensure smooth cross-CSD settlement.**

**The TFAX invites the HSG to follow up on the harmonisation of information requirements and related message fields for portfolio transfers.**

As stated earlier, matching of instructions is required either in or outside T2S before being sent as already matched instructions to T2S (only possible for Intra-CSD scenario). Therefore the current process, where no matching takes place cannot continue, and there has to be either an already matched instruction, or two separate instructions to be matched in T2S, to settle the portfolio transfer.

Additional information is required for the handling of the receipt of the portfolio transfer by the receiving custodian. This passing on of information can occur in two ways:

1. In T2S using the settlement messages
2. Outside T2S via the CSDs or directly between the custodians involved in the portfolio transfer

##### **4.1.3.1. Scenario 1 – Use of T2S settlement messages**

It could be considered to pass on additional information related to portfolio transfers via T2S messages. Technically speaking, this scenario would make use of the copy functionality that is available for the CSDs and their participants. The delivering custodian would include the additional information required into the settlement instruction, so that the CSD can retrieve it and transmit the information to the receiving custodian. In the intra-CSD scenario, it would be technically possible that the delivering

custodian inputs the additional information<sup>15</sup> into its settlement instruction and that the receiving custodian subscribes to a copy of the settlement instruction.

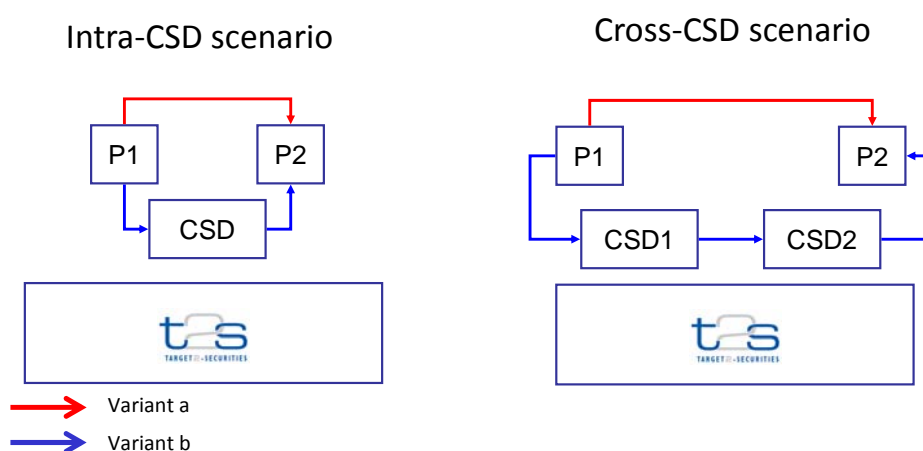
However, in a cross-CSD context, the receiving custodian cannot receive the copy of the delivery instruction, unless it is a participant in the delivering custodian's CSD. In order to receive the messages, the custodian would thus need to become a participant in the other custodian's CSD. The configuration for receiving the portfolio transfer messages would require additional indicators to be used in the messages in order to identify the portfolio transfer instructions. In addition, there might be confidentiality issues, as the details put into the settlement instruction will not only be visible to the other custodian receiving the copy, but also to all other recipients of the respective message copies. Under current conditions, there remain considerable obstacles to realising this scenario in a cross-CSD context.

#### 4.1.3.2. Scenario 2 – Additional information passed outside T2S

When additional information is passed outside T2S, two variants can be considered:

- a) either the exchange of additional information is performed between the custodians directly in an agreed format,
- b) the information is passed through the CSD(s)

**Figure 6: Scenario 2 for intra- and cross-CSD settlement**



This scenario shows no apparent drawbacks. Regarding the variants proposed, it depends on the CSDs choice to implement a service to support the portfolio transfers and information passing outside T2S or to leave portfolio transfers up to the custodian and their bi-/multilateral arrangements. When compared to scenario 1, scenario 2 (both variants) has the advantage to allow for both, intra-CSD and cross-CSD scenarios.

Based on the analysis above, scenario 2 (passing information on portfolio transfers outside T2S) is the only scenario suitable for both, intra-CSD and cross-CSD scenarios, whereas scenario 1 comes with considerable obstacles in a cross-CSD context.

<sup>15</sup> Provided that all necessary fields are available in the T2S customised schemas, which is currently not the case.

**The TFAX recommends that information on portfolio transfers should be passed outside T2S (scenario 2). Whether scenario 2 is implemented as variant a) information is exchanged between the custodians directly or b) information is passed through the CSD(s), depends on the CSDs and their choice whether or not to offer the particular service**

## **4.2 TFAX findings and recommendations**

The TFAX analysis revealed that currently not all portfolio transfer instructions are subject to matching.

**Since matching is mandatory for T2S settlement, the TFAX recommends that settlement instructions related to portfolio transfers should be sent to T2S as “to be matched” instructions or “already matched” instructions.**

The TFAX analysed two different scenarios for handling portfolio transfers in a T2S context: 1) the use of T2S messages to pass additional details 2) passing all details outside T2S. The use of T2S messages shows a major drawback in a cross-CSD context: the custodian wanting to receive the details of the portfolio transfer would need to become a participant in the other custodian’s CSD. Under current conditions, there remain considerable obstacles to realising this scenario in a cross-CSD context.

**The TFAX recommends that information on portfolio transfers should be passed outside T2S (scenario 2). Whether scenario 2 is implemented as variant a) information is exchanged between the custodians directly or b) information is passed through the CSD(s), e.g. by means of a tax application provided by the CSD, depends on the CSDs and their choice whether or not to offer the particular service.**

The TFAX analysis has revealed another obstacle in the context of portfolio transfers requiring further harmonisation efforts. Markets currently require different sets of fields in order to instruct portfolio transfers. In view of increasing cross-border business and cross-border portfolio transfers, this is likely to lead to high complexity in information gathering and maintenance for CSDs and CSD participants involved in portfolio transfers.

**The TFAX recommends that the information required by the receiving custodians should be harmonised to the extent possible to ensure smooth cross-CSD settlement.**

**The TFAX invites the HSG to follow up on the harmonisation of information requirements and related message fields for portfolio transfers.**

## 5. Bond stripping and reconstitution

Different practices exist for stripping/reconstitution of bonds in the European markets. In some markets, bond stripping and reconstitutions are handled using Corporate Actions messages, in others they are handled using securities settlement messages. Bond stripping and reconstitutions handled via Corporate Actions messages are out of scope of this section, the focus is on handling bond stripping and reconstitution using settlement messages (for CSDs offering this service to their participants). Furthermore, some markets have limitations with respect to the parties allowed to instruct the stripping or reconstitution of bonds. For instance, in Belgium and France only the participants identified as primary dealers (PD) or recognised dealers (RD) are allowed to send bond stripping instructions to the CSD. As a result, CSDs in some markets perform additional validations on the bond stripping instructions (as compared to the settlement instructions) from their participants. The focus of this section will be placed on the possibilities for handling the required validations in T2S, so as to facilitate the cross-CSD processing of such instructions.

### 5.1 Implementing bond stripping and reconstitutions with T2S

Bond stripping can be instructed using indirect and direct connectivity with different implications for the handling of primary dealer or recognised dealer restrictions (or similar ones referring to the instructing party).

#### 5.1.1 Option 1: Restricting bond stripping and reconstitution to indirect connectivity

For this option, CSDs would require CSD participants to send all bond stripping instructions to the issuer CSD and not directly to T2S. This allows the issuer CSD to perform additional validations on the bond stripping instructions and instructing parties in order to subsequently instruct T2S for settlement.

In case of a cross-CSD bond stripping instruction, the participant may have to instruct an investor CSD. There will always be the need for the investor CSD to maintain external connectivity to the technical issuer CSD or issuer CSD, in order to instruct the bond stripping all the way up to the issuer CSD.

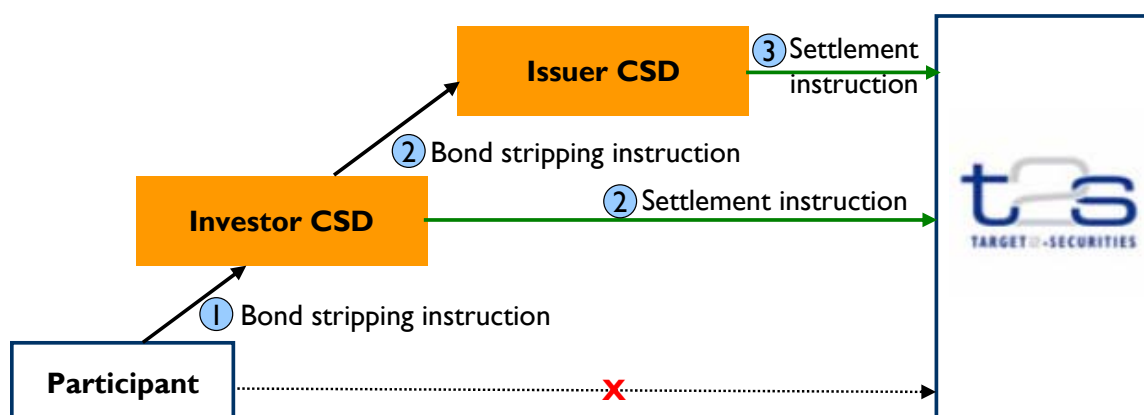
The diagram below (Figure 1) depicts the message flow for bond stripping instructions:

- 1) The participant instructs the investor CSD outside T2S for bond stripping.
- 2) The investor CSD validates the instruction and instructs T2S for moving the bonds, stripped bond and coupons between omnibus account of participant and mirror account (reflecting investor CSDs omnibus account at issuer CSD). In parallel the investor CSD instructs the issuer CSD outside T2S for bond stripping.
- 3) The issuer CSD validates the instruction from the investor CSD and instructs T2S for moving the bonds, stripped bond and coupons between omnibus account of investor CSD and the issuer's securities account. The instructions of the investor CSD and issuer CSD need to match in T2S. This process is similar to the existing ones where the bond stripping transactions are always within a single CSD, but



with settlement inside T2S. This model is applicable for both intra-CSD and cross-CSD bond stripping transactions.

**Figure 7: Indirect connectivity to T2S**



### 5.1.2 Option 2: Implementing restriction rules in T2S

The investor CSD and the issuer CSD can configure restriction rules in T2S reflecting the validations they intend to perform on the bond stripping instructions from their participants (e.g. to allow instructions only from a PD or RD). This applies to direct as well as indirect connectivity.

First, the CSD must be able to identify the bond stripping instructions originating from the participants. The ‘securities transaction type code’ value ‘CONV’ can be used by CSD participants to identify the bond stripping instructions.

In addition, the issuer CSD needs to define restriction rules in T2S according to the individual market’s requirements regarding e.g. primary and recognised dealers. For instance, the issuer CSD needs to identify its participants who are acting as PD or RD. For this purpose the issuer CSD defines a MSA (Market Specific Attribute) for the party (e.g. Party-Dealer-Type, with values Y/N, where Y indicates the party is a PD or RD) in T2S. Using this MSA, issuer CSD sets-up a negative rejection restriction rule (Rule 1) to ensure that stripping instructions from PD or RD only are accepted in T2S. With rule 1, instructions with transaction code ‘CONV’ (bond stripping instructions) are allowed only from the instructing party who is a PD or RD (i.e. Party-dealer-type as ‘Y’).

**Table 5-1: Rule 1**

Rule Parameter	Value
Party-Dealer-Type	Y
Securities transaction type	CONV (to identify the bond stripping instruction)

The issuer CSD also requires to set-up an additional rule to reject all other instructions with the securities transaction type CONV (i.e. where party-dealer-type is not ‘Y’). T2S will apply these rules on the instructions received from the participants and will accept bond stripping instructions only from PD or RD.

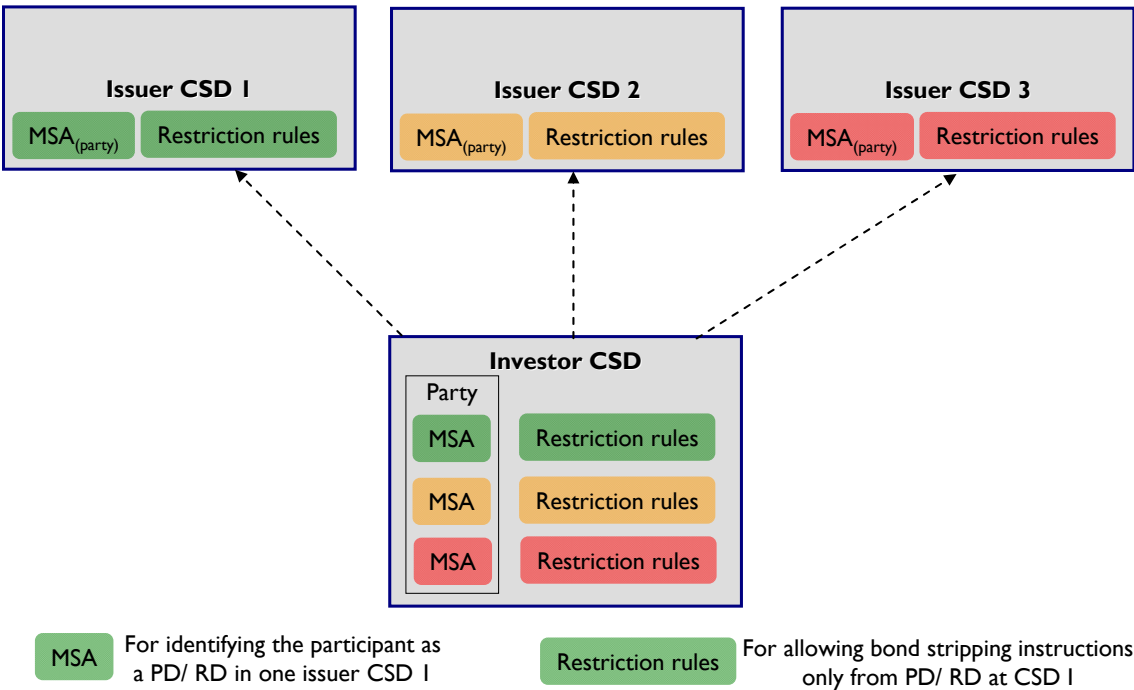
An alternative solution is to implement settlement restrictions on the securities accounts used by the respective primary or recognised dealers. The rules need to be set up such that CONV messages are only accepted on these accounts. However, this only works if privileges on the securities accounts are set up so that only the primary or recognised dealers can instruct on the account (and no other CSD participants).

For cross-CSD bond stripping instructions and provided that the investor CSD allows DCPs (directly connected parties) to instruct T2S directly, the investor CSD as well needs to perform the same validations as performed by the issuer CSD. For this purpose the investor CSD needs to define additional MSAs and restrictions (similar to the ones defined by issuer CSD) in T2S. The participants of the investor CSDs will be able to instruct T2S for bond stripping of ISINs that are issued by other CSDs as well, but will have to follow the rules created by each issuer CSD.

However, in case the participants of the investor CSD are PDs or RDs in one or more issuer CSDs, the configuration of the MSAs and restriction rules at the investor CSD becomes complex. The investor CSD need to replicate the MSA and restriction rules (for the purpose of validating the bond stripping instructions) as configured in each issuer CSD.

For instance, in the below diagram, the investor CSD is linked to three issuer CSDs. The investor CSD need to defined three MSAs for the party in order to identify if the party is a PD/RD in each of the issuer CSDs. Similarly, investor CSD should set up three sets of restriction rules, each for validations required by one issuer CSD.

**Figure 8: Definition of MSAs and restriction rules at the investor CSD in a cross-CSD scenario**



In case the investor CSD (depicted in the above diagram), is an issuer CSD itself for a certain set of ISINs, it needs to validate the bond stripping instructions from the participants on those ISINs as well. For this purpose it needs to maintain one more set of restriction rules in T2S.

### **5.1.3 Option 3: Using T2S allegation messages to trigger the validation**

Bond stripping and reconstitutions are mostly instructed against the issuance account or a quasi-issuance account. Therefore the primary or recognised dealer will in most cases not be able to send already matched instructions, but settlement of the bond stripping or reconstitution will require a counterparty instruction. This fact can be used to derive another option for handling bond stripping and reconstitution in T2S.

When the bond stripping or reconstitution is instructed, it is possible for the CSD to use the incoming allegation message in order to identify the instruction as bond stripping or reconstitution. As a prerequisite, the 'securities transaction type code' should have the value 'CONV' in the bond stripping instruction in order to allow for the identification.

The CSD can then conduct its validations. When the results of the checks are positive (e.g. when the instructing party is indeed a primary or recognised dealer) the CSD can send the matching instruction. Otherwise, it would need to send a cancellation instruction.

This option has the advantage that it creates less complexity within the settlement chain. In addition, this option allows for more flexibility than option 2 since additional validation can be carried out any time by the CSD receiving the allegation.

Based on the above, option 2 and 3 both enable the CSD to conduct the required checks and validations on the instructing party, while allowing for direct connectivity.

### **5.1.4 Option 4: Configuring Privileges on Issuance Accounts**

First, the CSDs can specify the issuance accounts related to an ISIN when configuring the securities CSD link. This set-up ensures that issuance/amortizing of an ISIN can only be done from the identified issuance account.

Second, the privileges need to be set-up. The issuance accounts in T2S can only be held in the name of the CSD. However, the CSD has the possibility to grant access to the issuance account to CSD participants. In T2S this can be achieved by implementing privileges on the issuance account. Object privileges can be used to grant access on the issuance accounts to specific user groups only such as primary or recognised dealers. The CSD must authorize the respective parties to use the issuance accounts. In this case the privileges check "Send New Settlement Instruction on a Securities Account" shall be used. For details refer to UDFS Chapter 1.3.2.

However, this option bears the disadvantage that the issuer gives up control on the issuance account to the primary or recognised dealers by granting the privileges. In addition, this option is only possible for primary and recognised dealers having their accounts with the issuer CSD.

Based on the above analysis, all options presented achieve the objective of enabling the necessary validations of primary or recognised dealers for bond stripping and reconstitution. However, option 3 is most efficient in terms of processing, as it avoids the manifestation of additional complexities (i.e. restrictions) and allows for direct connectivity.

**When the bond stripping process is handled by the CSD via standard settlement messages, the TFAX recommends that T2S allegation messages should be used to trigger the validations required for bond stripping and reconstitution (option 3).**

## **5.2 Restrictions on the choice of the CSD**

In some markets, primary dealers are required to have accounts in the issuer CSD. This creates an obstacle to cross-CSD settlement, as it limits the primary dealers in the choice of the CSD for conducting bond stripping or reconstitutions.

**The TFAX recommends removing restrictions on the location of primary and recognised dealers' securities accounts i.e. primary dealers should be free to choose the CSD of their preference.**

## **5.3 TFAX findings and recommendations**

The TFAX analyses showed that there are several options for handling bond stripping and reconstitutions in T2S using settlement messages. While all options achieve the objective of enabling the necessary validations of primary or recognised dealers for bond stripping and reconstitution, the use of T2S allegation messages appears to be the simplest option, as it avoids the manifestation of additional complexities (i.e. restrictions) and allows for direct connectivity.

**When the bond stripping process is handled by the CSD via standard settlement messages, the TFAX recommends that T2S allegation messages should be used to trigger the validations required for bond stripping and reconstitution (option 3).**

In the course of the analysis, the TFAX discovered restrictions on the primary dealer's location of securities account such that primary dealers are required to have accounts in the issuer CSD.

**The TFAX recommends removing restrictions on the location of primary and recognised dealers' securities accounts i.e. primary dealers should be free to choose the CSD of their preference.**

## 6. Non-standardised securities

Non-standardised securities in the context of this section can be defined as securities that are compliant with the first three T2S eligibility criteria (i.e. ISIN, held by CSD, book-entry form), but are non-fungible from a settlement perspective. According to the URD these securities “may still be entered in and processed by T2S under specific conditions.”<sup>16</sup>

“Fungible” from a settlement perspective means that amounts/fractions of a certain security issue (designated by a specific ISIN) are interchangeable during the settlement process and that no additional security identifier relating to a specific balance or part of a balance is required to complete valid settlement.

One example of securities that are non-fungible, but comply with all other eligibility criteria are certain bonds in Austria and Hungary, which are identified not only by an ISIN but also by a sequence and serial number. As a result it is necessary that the investor transmits additional information to the issuer CSD before settlement can take place.

**The TFX recommends that non-standardised securities (as defined for this document), should be eliminated over time in order to avoid the implementation of additional complexities in the settlement chain, preferably before T2S Go-Live.**

However, for the existing cases of non-fungible securities which are to be processed in T2S the following generic options are available. It should be noted that all options will be accompanied by the drawback of processing inefficiencies.

### 6.1 Handling non-standardised securities in T2S

In T2S there are two basic options for handling non-fungible securities requiring additional information to be passed: 1) direct instruction but with additional information passed outside T2S using CSD Validation Hold, and 2) indirect instruction via the CSD only.

For both options, a distinction needs to be made between intra-CSD settlement occurring within the Issuer CSD (i.e. intra-Issuer CSD settlement), intra-CSD settlement occurring within an Investor CSD (i.e. intra-Investor CSD settlement), and cross-CSD settlement.

#### 6.1.1 Option 1: Use of CSD Validation Hold

The process flow for using CSD Validation Hold is outlined in the BPD:

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<sup>16</sup> URD v5.01, p.43.

#### **6.1.1.1. Part 1: Set-up and trigger of CSD Validation Hold.**

##### **Intra-Issuer CSD Settlement:**

As a precondition, the issuer CSD must set-up the processing restrictions for CSD Validation Hold functionality in T2S reference data. In this particular case, CSD Validation Hold will be triggered based on the ISIN pertaining to the particular security.

Since the CSD Validation Hold rules apply to instructions from CSD participants as well, the CSD Validation Hold functionality is also applicable for direct connectivity.

If T2S successfully validates a settlement instruction and identifies that a CSD Validation Hold rule is applicable on the settlement instruction, the issuer CSD receives a settlement instruction status advice. If the CSD Participant has instructed directly, it will also receive the status advice.

##### **Intra-Investor CSD Settlement:**

When settlement occurs within an Investor CSD, no realignment messages are created. Consequently, the restrictions implemented by the issuer CSD do not apply (as they would need to be applied on the realignment messages). As a result, it is required that the Investor CSDs replicate the restrictions for these non-fungible securities in order to cater for this settlement scenario.

##### **Cross-CSD Settlement:**

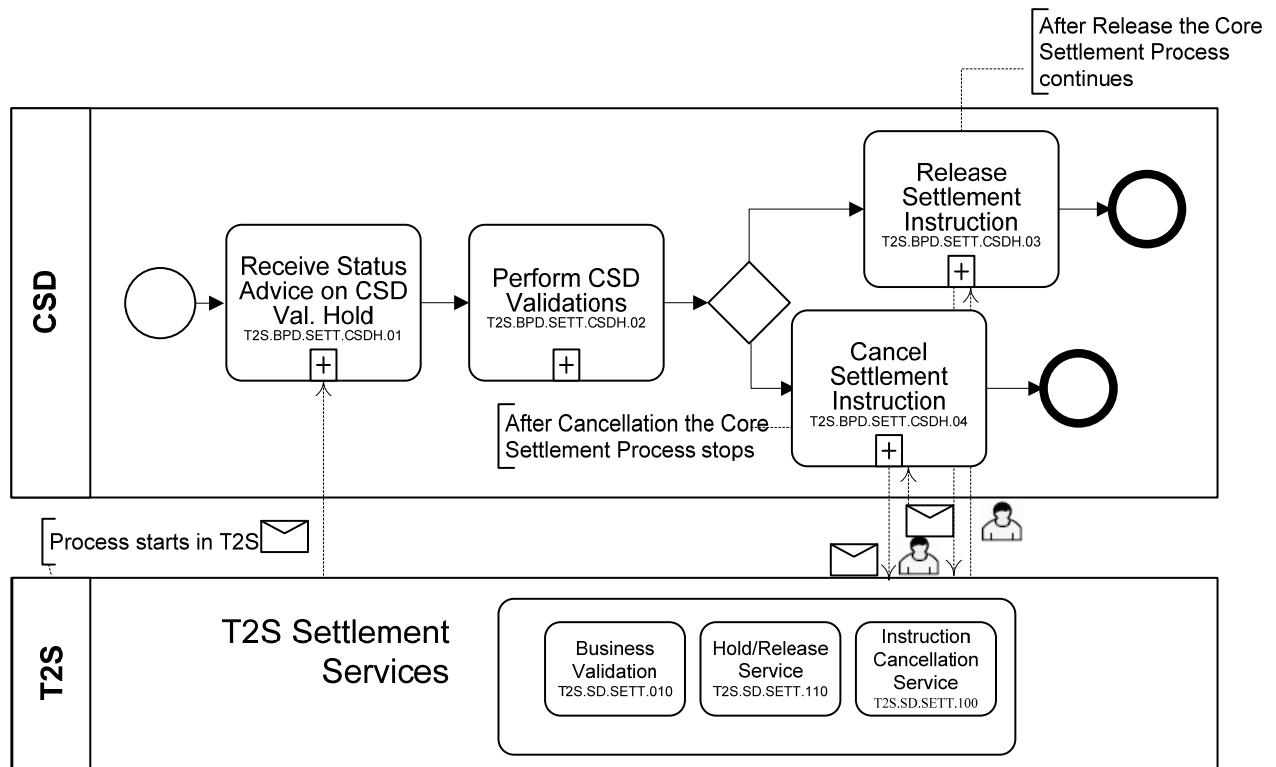
In the case of cross-CSD settlement it is the issuer CSD that needs to define the CSD Validation Hold rules. Since these rules apply to the realignment instructions, there is from a technical perspective no need for the Investor CSDs to set-up equivalent rules. If T2S detects that the rules apply on the realignment instruction, the Issuer CSD will be notified by a settlement instruction status advice. However, for operational efficiency reasons Investor CSDs might decide to implement the same restrictions as the Issuer CSD (see below section 2.1.2)

#### **6.1.1.2. Part 2: Management of CSD Validation Hold.**

##### **Intra-Issuer CSD Settlement:**

The Issuer CSD will be notified of the CSD Validation Hold by means of a settlement instruction status advice. Following the reception of the status advice, the issuer CSD can then – in a process outside T2S - request the additional information from the CSD participant. The CSD participant will then need to provide the additional information outside T2S (requiring a direct or indirect (via another CSD or intermediary) connectivity to the Issuer CSD. If the information is successfully retrieved, then the issuer CSD can release the settlement instruction. In this case the settlement process will continue as usual. If the information that is required for settlement cannot be retrieved, the issuer CSD will cancel the settlement instruction.

**Figure 1: Management of CSD Validation Hold (source: BPD v1.0)**



#### Intra-Investor CSD Settlement:

In this case, the Investor CSD carries out the management of CSD Validation Hold as detailed for the intra-Issuer settlement scenario. Provided that the CSD Validation Hold restrictions have been set-up by Investor CSDs correctly, no other specificities apply.

#### Cross-CSD Settlement:

Usually in a cross-CSD scenario, the Issuer CSD will set-up the rules for CSD Validation Hold, which will apply on the realignment instructions. Upon being notified of the CSD Validation Hold the Issuer CSD can release the realignment instructions. However, it is not possible for the Issuer CSD to cancel the original settlement instructions coming from the Investor CSD, nor the realignment instructions generated by T2S. What is more, the realignment instructions do not carry underlying instruction references; therefore the Issuer CSD cannot specify the underlying instruction when notifying the Investor CSDs.

In order to circumvent these complexities the Investor CSDs can implement the same restrictions as the Issuer CSD and put the underlying settlement instructions on hold directly. This also bears the advantage that CSD Validation Hold is applied before matching in T2S and that the investor CSD receives direct feedback and has the possibility to quickly interact with investors.

Taking everything into the account, the implementing CSD Validation Hold for processing of non-fungible securities in T2S leads to inefficiencies in terms of processing as well as implementation efforts for not only Issuer CSDs, but also for Investor CSDs.

### **6.1.2 Option 2: Indirect settlement instruction via the CSD**

#### Intra-Issuer CSD Settlement:

Alternatively, the CSD issuing such non-fungible securities could require participants to instruct T2S indirectly for these securities. In this case the CSD participants are obliged to send instructions for these particular instruments to the CSD. In addition, they have to specify the additional information either in the settlement instruction sent to the CSD or in a separate instruction (as part of asset servicing). The CSD then instructs T2S for settlement.

#### Intra-Investor CSD Settlement:

In case of an intra-Investor CSD instruction, the participant will need to instruct its Investor CSD. The Investor CSD needs to set-up checks and validations in its CSD system in line with those of the Issuer CSD in order to detect the incoming instructions pertaining to these specific non-fungible securities and process them accordingly.

#### Cross-CSD Settlement:

In case of a cross-CSD instruction, the participant has to instruct its Investor CSD. There will always be the need for the Investor CSD to maintain external connectivity to the technical Issuer CSD or Issuer CSD, in order to instruct settlement all the way up to the Issuer CSD.

In addition, this approach bears the same disadvantages as option 1. The Investor CSDs will have to propagate the rules and validations of the Issuer CSD in order to allow for efficient processing. Otherwise the Investor CSD will receive feedback from the Issuer CSD only after the realignment instructions are created.

Taking everything into account, option 2 bears operational advantages only in the case of intra-Issuer CSD settlement. In all other settlement scenarios, this option leads to processing inefficiencies and implementation efforts similar to those of option 1.

## **6.2 TFAX findings and recommendation**

The TFAX analysis explained two different options for handling non-standardised securities in T2S: 1) Use of CSD Validation Hold, and 2) Indirect settlement instruction via the CSD.

In the cross-CSD context the use of CSD Validation hold bears the disadvantage that other Investor CSDs are required to implement the same restrictions in order to allow for efficient processing. This leads to a multiplication of restrictions in the Investor CSD and thus the implementation of the specificity in a cross-CSD context.

The indirect instruction via the CSD will require Investor CSDs to maintain external connectivity to the technical Issuer CSD in order to instruct settlement all the way up to T2S. As a result, both options have considerable disadvantages and lead to the propagation of specificities through the settlement chain.



**The TFAX recommends that non-standardised securities (as defined for this document), should be eliminated over time in order to avoid the implementation of additional complexities in the settlement chain, preferably before T2S Go-Live.**

**For those non-standardised securities that need to be handled in T2S, either CSD Validation Hold (option 1) is to be applied, or instruction needs to take place indirectly via the CSD (option 2).**

**The TFAX invites the HSG to follow up on this matter.**

## **Part 2: Other issues related to adaptation to cross-CSD settlement**

### **7. CSD Ancillary Services**

Today, CSDs offer a variety of services in addition to the core service of settlement. Since T2S will entail changes in the existing CSD systems, the set up and offering of these ancillary services might change as a result. This section focuses on the services related to Repo, Triparty Repo, Securities lending and borrowing and discusses the possible implementation with T2S. The discussion is relevant for parties having their securities accounts and settlement of related transactions in T2S.

#### **7.1 Classic Repo**

Repurchase Agreement (Repo) is a securities sale and repurchase transaction. Under a "classic" Repo, the owner of securities (the seller) will sell the securities (typically bonds or shares) to its counterpart (the buyer) for a price and agree to buy back equivalent securities at a specified future date for the repurchase price. These are the two “legs” of the Repo transaction.

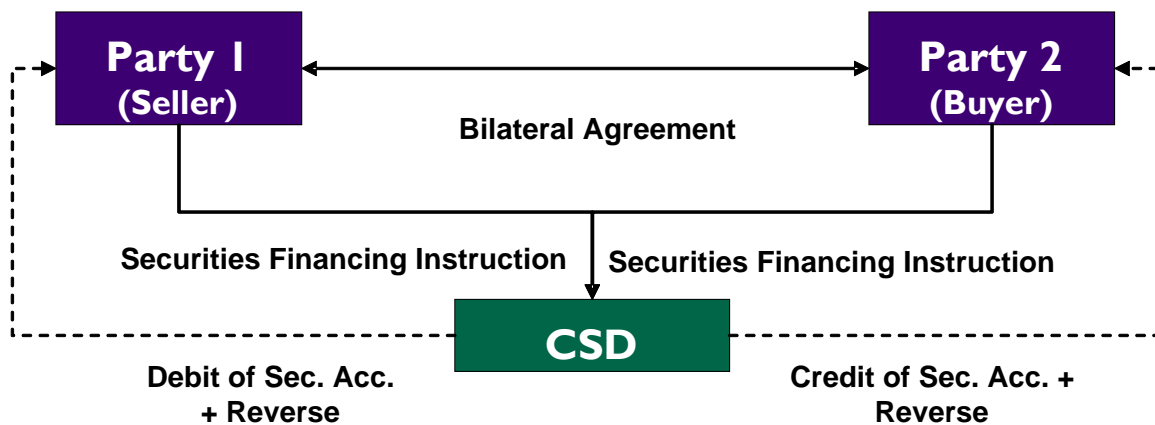
Seen from the side of the seller a Repo transaction is a tool to borrow funds from or lend securities to the buyer. From the side of the buyer, a Repo transaction is a tool to lend funds to or borrow securities from the seller.

When the Repo trade is considered as a liquidity provision transaction, the securities kept by the financial provider (the buyer) are referred to as collateral. The collateral is re-valued (marked to market) by the finance provider during the duration of the Repo trade. If the value of the collateral falls under the value of the cash lent plus an agreed haircut, the finance provider requests more collateral from the Repo seller, or vice versa in case the value of collateral increases. This process is referred to as margin maintenance and is part of the Repo master agreement underpinning the Repo trade.

##### **7.1.1 CSD Repo services**

CSDs in some markets offer Repo services to their participants. In such markets, upon concluding the Repo agreement, the CSD participants communicate the Repo details (e.g. Repo rate, Repo closure date) along with the collateral movement instructions to the CSD (Figure 2-1).

**Figure 2: CSD Classic Repo Model**



The CSD matches and processes the collateral movement instruction (first leg of the Repo trade) and automatically creates the forward transaction (second leg of the Repo trade).

The CSD typically would:

- create Repo closure transactions, with collateral and cash moving in reverse direction between the Repo seller and Repo buyer (as compared to the Repo initiation)
- calculate the interest stemming from the Repo agreement
- and create the forward transactions to move the interest from the Repo seller to the Repo buyer.

In order to be able to create the Repo closure and interest movement instructions the CSD assumes values for certain parameters that are mandatory (e.g. EONIA rate for floating rate Repos). In cases where the participants want to use an interest rate different to the one used by the CSD, there is the need for manual corrections to be done by the CSD participants.

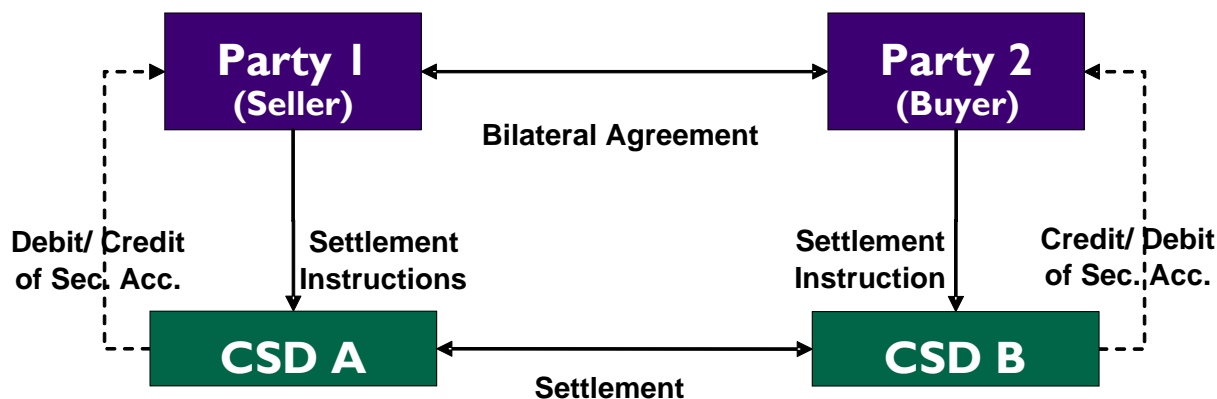
The timing for creation of Repo closure and interest transactions differ based on the type of Repo. In case of fixed rate Repos, the CSD can create the opening and closing legs at the same time. In case of floating rate Repos, the CSD can create the closing legs only after the relevant rate (e.g. EONIA rate) is known.

After the Repo transactions are initiated, the CSD participants are responsible for managing the collateral valuation throughout the Repo life cycle i.e. the seller agrees with the buyer to provide more or take back the excess collateral, depending on the valuation prices of the securities.

### Cross-CSD Repo

In theory it is possible that a Repo could be agreed between participants of two different CSDs. In this case each participant would instruct its CSD for settlement purpose. The CSD provides only settlement related services, but no specific services related to Repo. The model is as shown below.

Figure 3: Cross-CSD Classic Repo Model



#### 7.1.2 CSD Repo processing in T2S

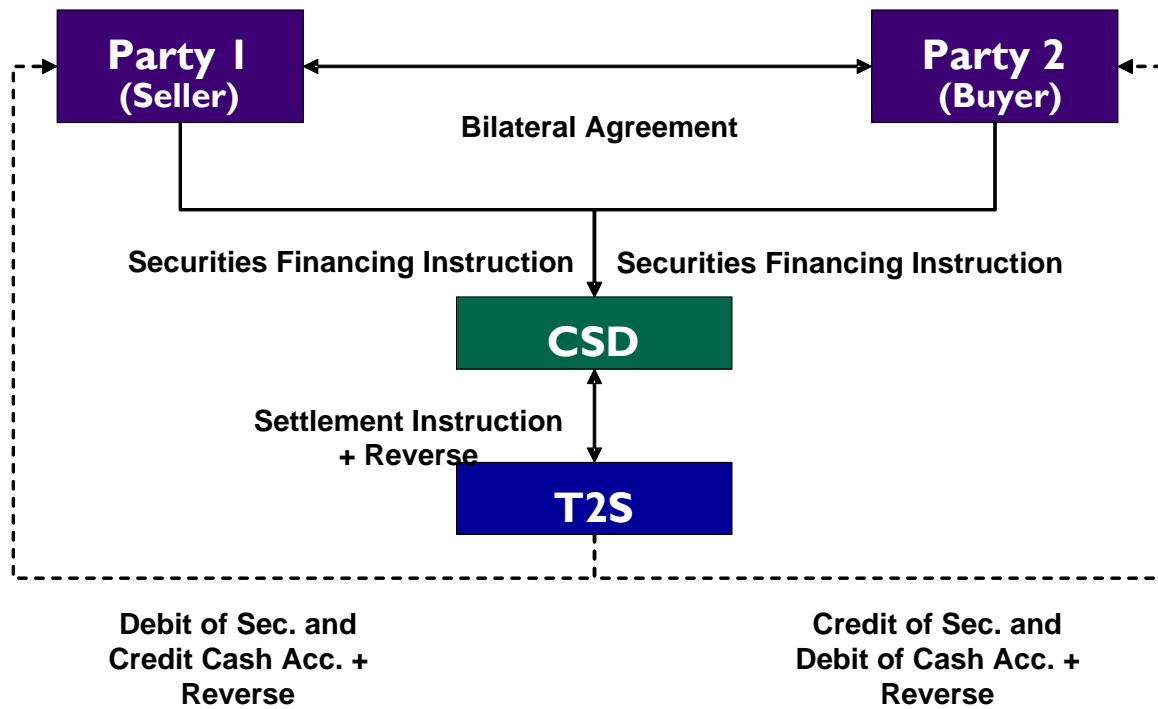
From a settlement in T2S perspective, the Repo instructions are treated the same as any other trade related instruction. Based on a decision by the T2S Advisory Group (AG), T2S does not provide any Repo-specific functionality<sup>17</sup> or processing, in line with the “lean T2S” concept.

With T2S there would be in theory two possible scenarios for the CSD participants to manage Repos: The participants communicate with their CSD for the Repo processing (indirect connectivity, Figure 2-3), and the CSD communicates with T2S for settlement of Repos. In this scenario, there is no impact to the CSD participants. As long as the CSD participant uses indirect connectivity, the CSD can continue its Repo services as today.<sup>18</sup>

<sup>17</sup> However, the linkage functionality in T2S could be used in certain cases (fixed rate repos) in order to ensure proper sequencing of the settlement.

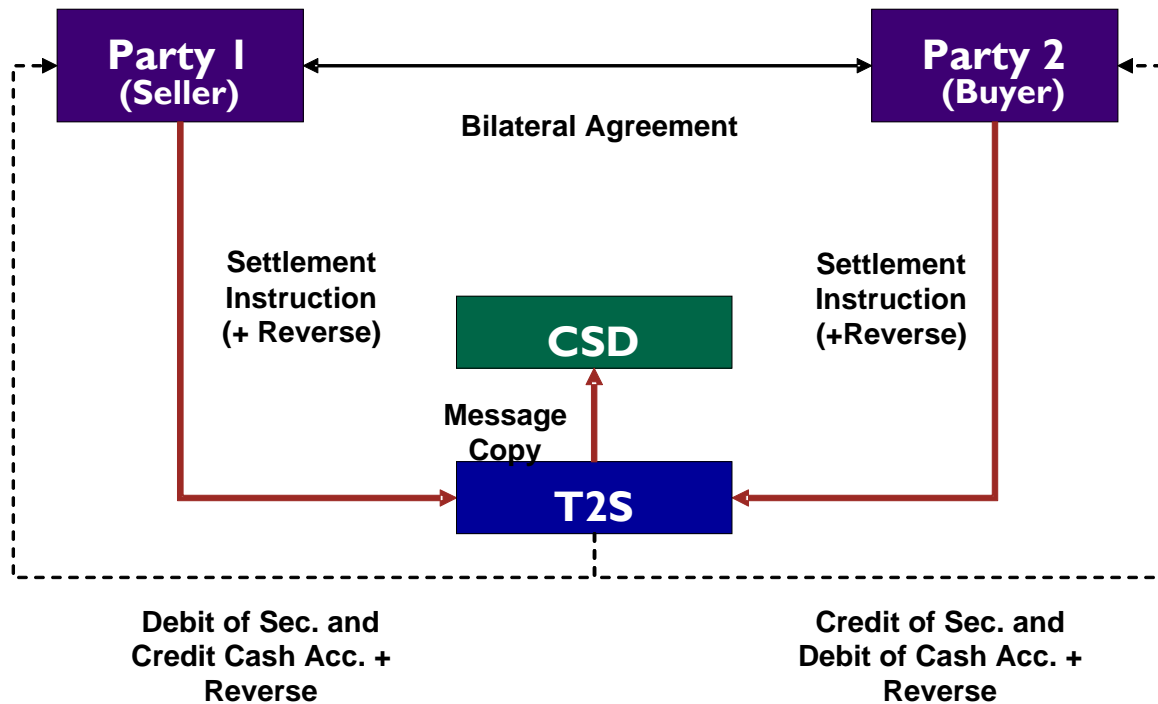
<sup>18</sup> The CSD participant can in any case instruct T2S (directly or indirectly) for both, the opening and return leg, without using the CSD Repo service.

**Figure 4: Processing of Repo with indirect connectivity to T2S**



When direct connectivity is used, (Figure 2-4), the CSD participant sends the settlement instructions directly to T2S (as a Directly Connected Participant - DCP) for movement of collateral and cash.

**Figure 5: Processing of Repo with direct connectivity to T2S**



However the settlement instructions (ISO20022 message, sese.023) do not have a provision to indicate the Repo details such as the rate or the Repo closure date<sup>19</sup>. Consequently, the instruction copy which the CSD can choose to receive would not contain these details either. This (i.e. SI not accommodating Repo details) has two implications:

- First, as there is no provision in the inbound message to provide the Repo details, it means that the CSD cannot get the information required from the copy, to provide its Repo services from T2S.
- Second, the matching of the Repo instructions in T2S will occur based on T2S matching fields and not based on the Repo details as it is done today by the CSD. The Repo participants need therefore to ensure that the instructions they send to T2S properly reflect their Repo agreement.

This limitation implies two variants for direct connectivity:

- Variant (a) The Repo participants handle the sending of the opening legs of the Repo ensuring that the instructions will match in T2S. In parallel, the Repo participants will have to send the Repo details to the CSD via a separate channel so that the CSD is able to generate the return legs and interest movement instructions in due time. Matching would take place in T2S, thus reducing the CSD service to the generation of return legs and interest movements only.
- Variant (b) The CSD decommissions the Repo service completely and it is the responsibility of the Repo participants to manage the opening and closure of the Repo.

Since today the CSDs' standard Repo parameters for matching are not always in line with the agreement between the Repo participants and therefore creates risks for the CSDs (see section 2), the second variant bears the advantage that the discrepancies would no longer exist.

Alternatively, CSDs require their participants to instruct Repos always via the CSD. In this case, matching based on Repo details could take place based on the Repo details within the CSD just like today. However, CSDs would have to maintain their matching engine solely for the purpose of offering Repo services. In essence, it depends on the CSDs' service model whether or not to offer such a service and the participants' decision to use it.

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<sup>19</sup> Repo details are only available in the ISO20022 message 'Securities Financing instructions (sese.033)' and are not in the message 'settlement instruction (sese.023)'. T2S does not plan to use the sese.033.

### ***Cross-CSD Repo***

In a cross-CSD Repo, participants administer the Repo. The CSDs do not provide any Repo services. In the context of T2S, participants send settlement instructions reflecting the Repo transaction to T2S directly, or via the CSDs. There are no cross-CSD issues foreseen in this model.

#### **7.1.3 Details of Repo instructions to T2S**

Even though the T2S settlement instruction does not include a provision for Repo details such as the rate and closure date, there is the possibility to indicate the type of transaction in the settlement instruction. ISO has defined specific transaction type codes for usage in Repo transactions. CSD Participants have the possibility to instruct T2S for Repos using these standard Repo codes in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023), as in the below table.

**Table 2: ISO Codes for Repo transactions in T2S settlement instruction<sup>20</sup>**

	Movement Type	SecuritiesTransactionType	Common Trade reference <sup>21</sup>	Repo Reference
Repo opening leg of Seller	DELI	REPU (Repo)	ABC	123
Repo opening leg of Buyer	RECE	RVPO (Reverse Repo)	ABC	123
Repo closing leg of Seller	RECE	REPU (Repo)	DEF	123
Repo closing leg of Buyer	DELI	RVPO (Reverse Repo)	DEF	123

These transaction types can be used by the participants in the settlement instructions to identify Repo transactions (in sese.023) in the T2S system. In addition, participants can specify a ‘Common Repo Reference’ in the settlement instruction (sese.023) to T2S, in order to allow them to identify instructions related to a specific Repo trade. The Common Repo reference is as per SMPG standards a unique reference for the whole Repo, e.g. the 4 instructions shall contain the same reference. It is to be noted that the transaction types and common repo reference are not used for matching purposes in T2S.

**The TFAX recommends that participants should use ‘Common Trade Reference’ in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023) in order to avoid the risk of matching a Repo transaction with other types of transactions (e.g. a trade related transaction).**

<sup>20</sup> Sese.023

<sup>21</sup> Potentially, the reference used as Common Trade Reference (optional matching field) could be the same for opening and closing legs. In this case, the common repo reference could be used for that purpose.

This field is an optional matching field i.e. when both parties specify this field in the settlement instruction, it becomes a matching criterion. If only one party specifies it, it matches against blank.

#### **7.1.4 TFAX findings and recommendation**

From the settlement in T2S perspective, the Repo instructions are treated the same as any other trade related instruction. The TFAX analysis revealed that as long as a CSD participant uses indirect connectivity, the CSD can continue its Repo services as today. For direct connectivity, there are two variants possible for repo processing: (a) The Repo participants handle the sending of the opening legs of the Repo ensuring that the instructions will match in T2S. In parallel, the Repo participants will have to send the Repo details to the CSD via a separate channel so that the CSD is able to generate the return legs and interest movement instructions in due time. (b) The CSD decommissions the Repo service completely and it is the responsibility of the Repo participants to manage the opening and closure of the Repo. It depends on the CSDs' service model to offer such a repo service for direct connected parties or not.

In addition, the TFAX would like to highlight the possibility to use the ISO transaction types and common repo reference when instructing T2S.

**The TFAX recommends that participants should use 'Common Trade Reference' in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023) in order to avoid the risk of matching a Repo transaction with other types of transactions (e.g. a trade related transaction).**

## **7.2 Triparty Repo**

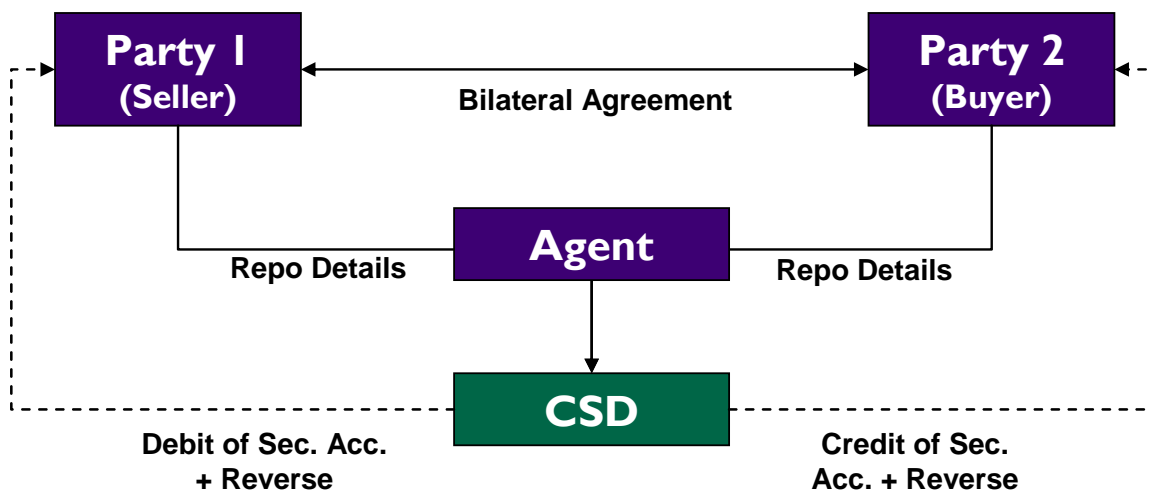
Triparty Repo is a repurchase transaction between the Seller (Cash taker) and Buyer (Cash Provider), where the Repo is administered by a third party called the Repo agent. This section focuses on tri-party repo transactions between parties having securities accounts in T2S.

### **7.2.1 Repo Agent's Activities**

In triparty Repo, the Repo participants (Seller, Buyer) conclude a Repo trade, and transmit the Repo details to the agent. Agent would typically perform several activities including, initiate transfer of cash and collateral between seller and buyer, manage the Repo during its open period and initiate the Repo closure. The below diagram depicts the Repo between participants belonging to the same CSD.



**Figure 6: Triparty Repo Model**



**Initiating transfer of cash and collateral:**

The Repo participants could already agree bilaterally on a basket of securities that are allowed to be used as collateral. From the Repo details provided by the Repo participants, the agent identifies the required collateral positions in the securities accounts of the seller. Agent initiates movement of collateral securities from seller to buyer and cash from buyer to seller.

In order to access the services of the Repo agent, the Repo seller has to ensure that the collateral securities positions are available to the Repo agent. Usually participants provide access on all of its securities accounts to the agent, so that the agent can identify the collateral for the Repo transaction, from available positions in any of the accounts. The participant could also provide a restrictive access to its securities positions by creating securities accounts only for the use of the agent, and moving the required securities into this account.

In some Repo contracts, the collateral positions provided by the seller should not be re-used by the Repo buyer for other settlement purposes. These positions could only be used for settling the closure of the Repo.

**Managing the Repo:**

During the Repo period, the agent re-valuates collateral positions according to the market price and initiates collateral movements between the seller and the buyer.

In some markets the Repo seller is entitled to the benefits on the collateral positions. In such cases, the agent is also responsible to manage the claims due to corporate actions. The agent also manages the effect of reorganisation of the collateral securities positions.

Some Repo contracts may also have a provision allowing the seller to replace the existing collateral securities positions with other securities positions. In case the seller needs the existing collateral positions for other settlement purposes, the agent facilitates the replacement of existing collateral.

### Repo closure:

The agent keeps track of the Repo closure period, and on the closure date initiates transactions to move collateral positions to the Repo seller, and cash to the Repo buyer. In addition the agent also calculates the interest on the Repo as per the rate bilaterally agreed between the participants and initiates movement of interest to the buyer (or to the seller in case of a special Repo).

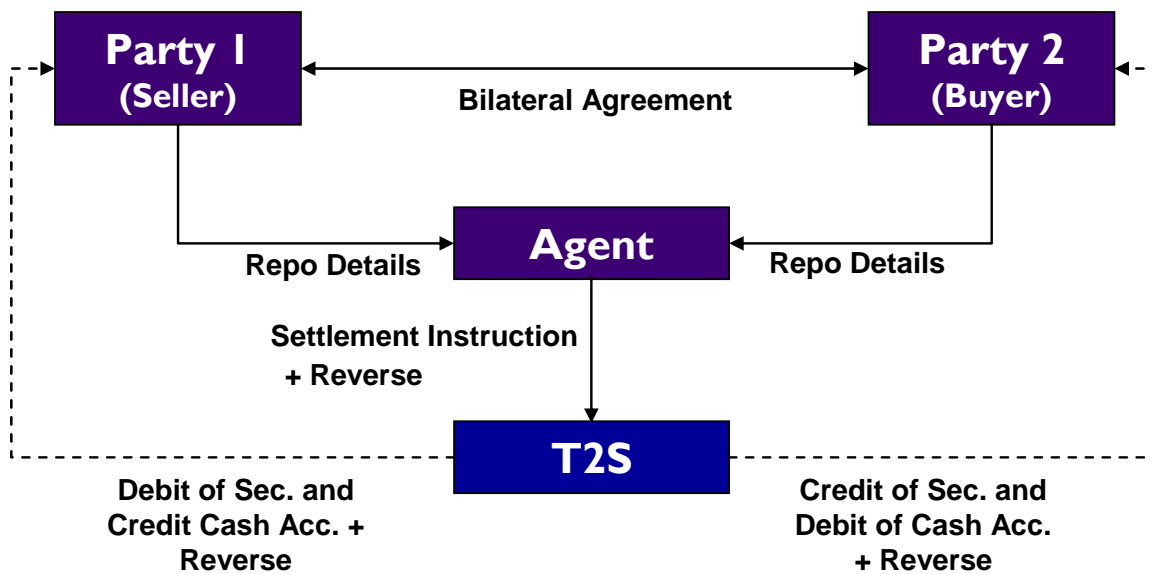
For all the Repo related activities, the agent is also responsible for reporting to the participants.

## **7.2.2 Triparty Repo processing with T2S<sup>22</sup>**

### **7.2.2.1. Repo within a CSD (e.g. Intra-CSD settlement)**

Today the Repo agent sends settlement instructions to the CSD in order to manage Repos. With T2S, this interaction may change, and the agent could send settlement instructions directly to T2S (as a Directly Connected Participant - DCP). Agent and participants (as DCPs) will receive communication from T2S about the status of the settlement instructions upon message subscription.

**Figure 7: Intra-CSD Repo Model**

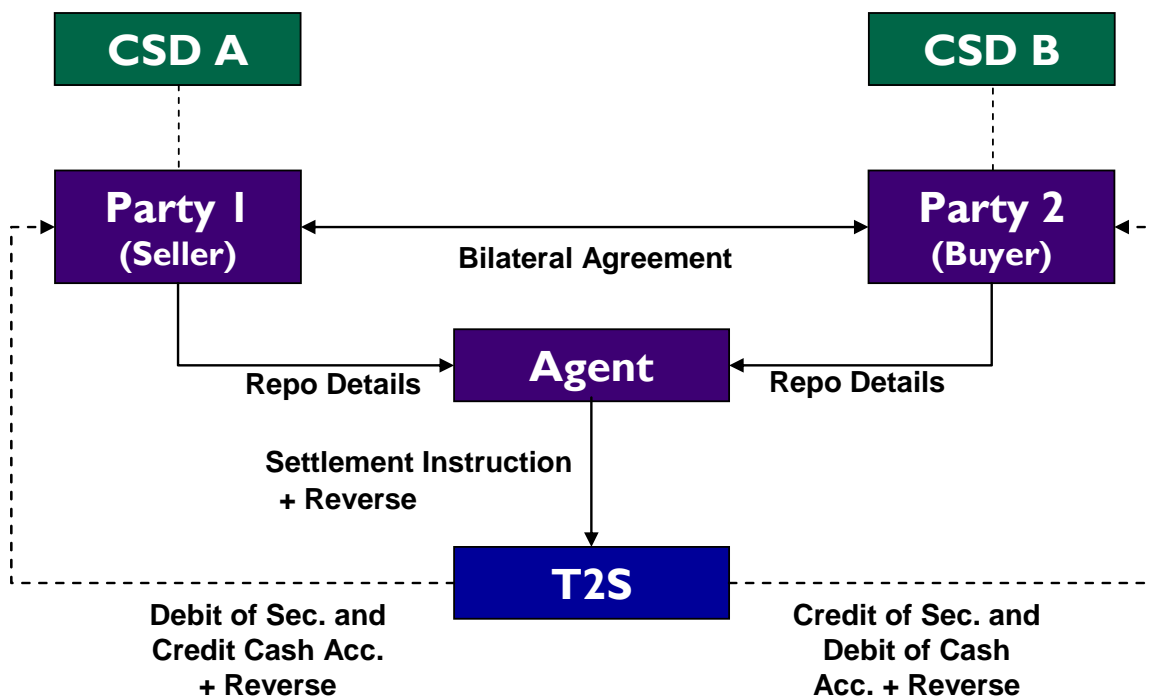


### **7.2.2.2. Repo in a cross-CSD environment**

Repo transaction could take place between participants of two different CSDs participating in T2S. The model is as depicted below.

<sup>22</sup> This section uses Repo as an example for illustration, but is applicable to collateral services in general.

**Figure 8: Cross-CSD Repo**



In this case the agent must have authorisation to use the securities account and dedicated cash account of Repo participants that belong to different CSDs<sup>23</sup> (i.e. CSD A, CSD B). In addition, the Repo seller should make the collateral securities positions available to the agent.

In a cross-CSD environment different CSD participants could end up using different agents, thereby having multiple agents accessing the CSD accounts. In addition, a CSD participant could use services of more than one agent e.g. to administer Repo with participants in different markets. In order to manage the access to CSD accounts, participants may choose not to provide access on all securities positions to the agent, but may opt for restricting the agent's access to only a set of securities positions to be used as collateral. To achieve this, participants can create one securities account for each agent. Alternatively, participants could segregate the securities positions into a position within the existing securities account, and allow agents to use only that position (see section 3.2.3.1 for set-up in T2S).

Similarly, in Repo contracts where the collateral positions provided by the seller should not be re-used by the Repo buyer for other settlement purposes, buyer may separate the collateral positions received from other securities used for settlement purpose. To achieve this buyer can create one account for each agent and book the collateral received into that account. Alternatively, buyer could block the received collateral positions within the existing securities account using a dedicated position (see section 3.2.3.2 for set-up in T2S).

<sup>23</sup> The agent needs to enter into an agreement with the two CSDs.

### **7.2.2.3. Segregation of accounts and position in T2S**

In T2S, segregation can take place at two different levels: either at the level of securities accounts or at the level of securities positions within one securities account.

Segregation at the level of level of securities accounts is what many CSDs and CSD participants are most familiar with. In the cross-CSD context an addition aspect might need to be considered: If the account segregation takes place at the level of omnibus/mirror accounts it has to be propagated through the settlement chain to all investor CSDs.

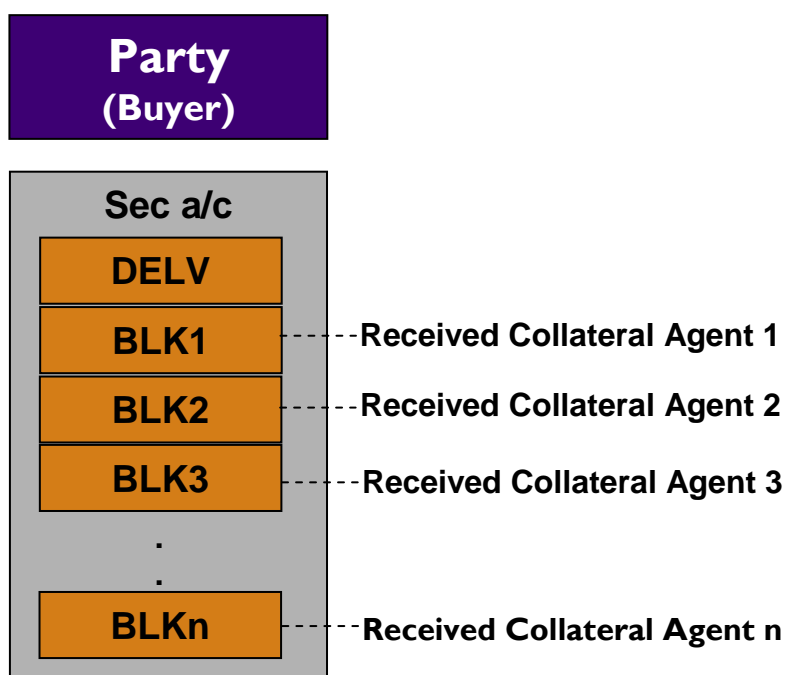
Segregation at the level of securities positions allows CSDs and CSD participants to make securities available for a specific purpose. Besides securities positions which are deliverable and thus available for settlement, there are other types: blocked, reserved, and earmarked. Any settlement in T2S always leads to a movement of securities from one securities position to another. In the context of tri-party repo processing the use of blocked and earmarked positions is to be considered.

Blocking: Blocking of a securities position is used to prevent a securities position from settlement. For instance, a repo buyer could block the collateral positions received in order to prevent its settlement for the duration of the repos. When the participants blocks a securities positions T2S provides a blocking reference. When participants want to use these blocked positions, they must specify the blocking reference in the settlement transactions to indicate to T2S that these blocked positions should be used for settling this transaction.

In case of Repo contract where buyer cannot use the collateral, the received collateral positions could be segregated in the Repo buyer's securities account using the blocking in T2S. Unless additional restrictions are implemented the CSD participants can use the collateral in a blocked position. In order to prevent CSD participants from using the collateral in the blocked position, additional settlement restriction rules must be implemented, specifying that the position can only be debited by a certain party (e.g. the agent).

The CSD could create several blocked positions in the securities accounts of the participants, e.g. BLK1, BLK2, BLK3, etc, so that the collateral received due to a Repo involving a certain agent is posted into the respective position.

**Figure 9: Blocking in the participant's securities accounts**



Blocking types may have different notations in various CSDs, making it difficult for the agent to manage the received collateral in the buyer's account.

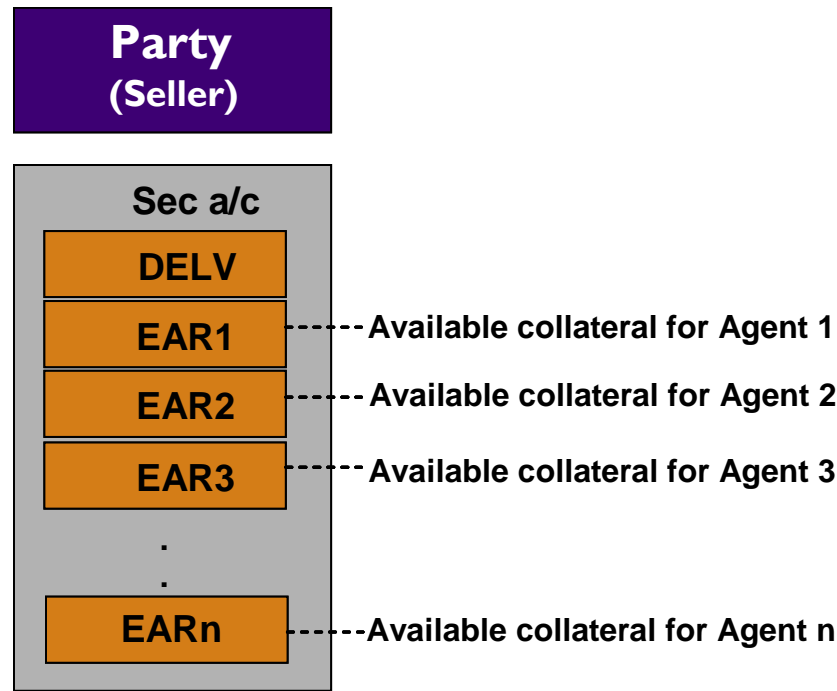
Earmarking: Earmarking creates pools of securities which are to be used for a specific purpose, while they remain available for settlement. For example, a participant can earmark a securities position in a securities account for use as eligible collateral and for use by a specific agent. For earmarking no additional restriction references are created (as opposed to blocking).

The CSD can also set-up additional settlement restriction<sup>24</sup> rules, for instance to ensure that only a specific agent can access a specific earmarked position. The below diagram shows, the possibility of the CSD creating several earmarking positions, EAR1, EAR2, EAR3 etc, where each one is identified for collateral usage by a specific agent only.

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<sup>24</sup> Settlement restrictions are rules that can be set-up by CSDs in T2S. T2S checks these during the validation of settlement instructions. CSDs could setup restrictions to indicate to T2S for checking a combination of attributes and to reject instructions that match the rule.

**Figure 10: Earmarking in the participant’s securities accounts**



When segregation is achieved using securities positions, each CSD could potentially use a different notation to identify the earmarked positions in their participant’s accounts e.g. CSD A identifying the collateral available for an agent’s usage as ‘XXX1’ and CSD B identifying the collateral available for the same agent’s usage as ‘YYY1’.

**The TFAX recommends that it should be up to the agent and its client to determine the need for segregation and the appropriate segregation method (i.e. the use of accounts or position segregation such as earmarking and blocking in T2S).**

**7.2.2.4. Complexity of Repo processing in a cross-CSD context**

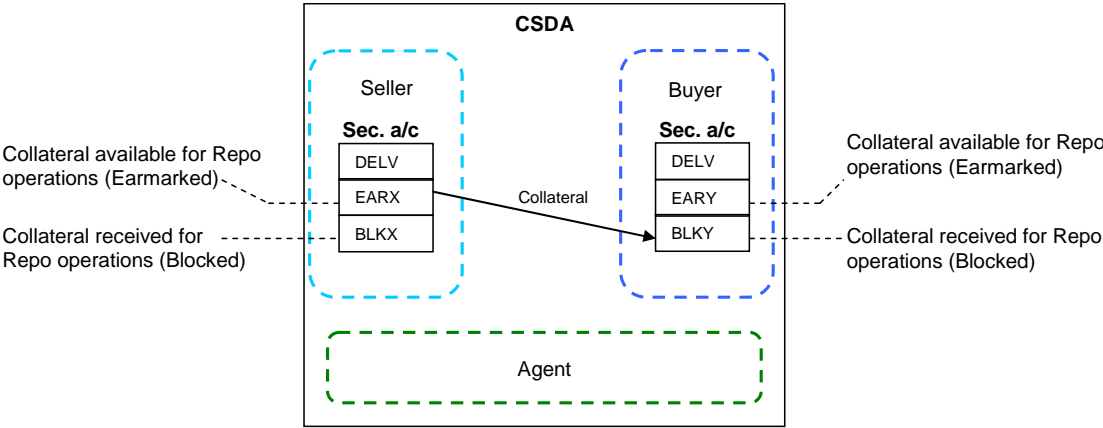
In a market the CSD would usually offer only one option to the participants for separating the securities positions based on the purpose for which they should be used e.g. collateral eligible positions of the seller or collateral received by the buyer. The options could be to use separate accounts for each purpose, or to use segregated positions within an existing account.

In an intra-CSD Repo transaction, in case the market has a practice of position segregation, the CSD could offer the participants to have two position types in relation to repo i.e. one earmarking position for making the eligible collateral available to the agent and one blocking position for storing the collateral until it is returned to the seller.

In this case the agent could easily know the notation for identifying the earmarking and blocking. The movement<sup>25</sup> of collateral is as depicted below.

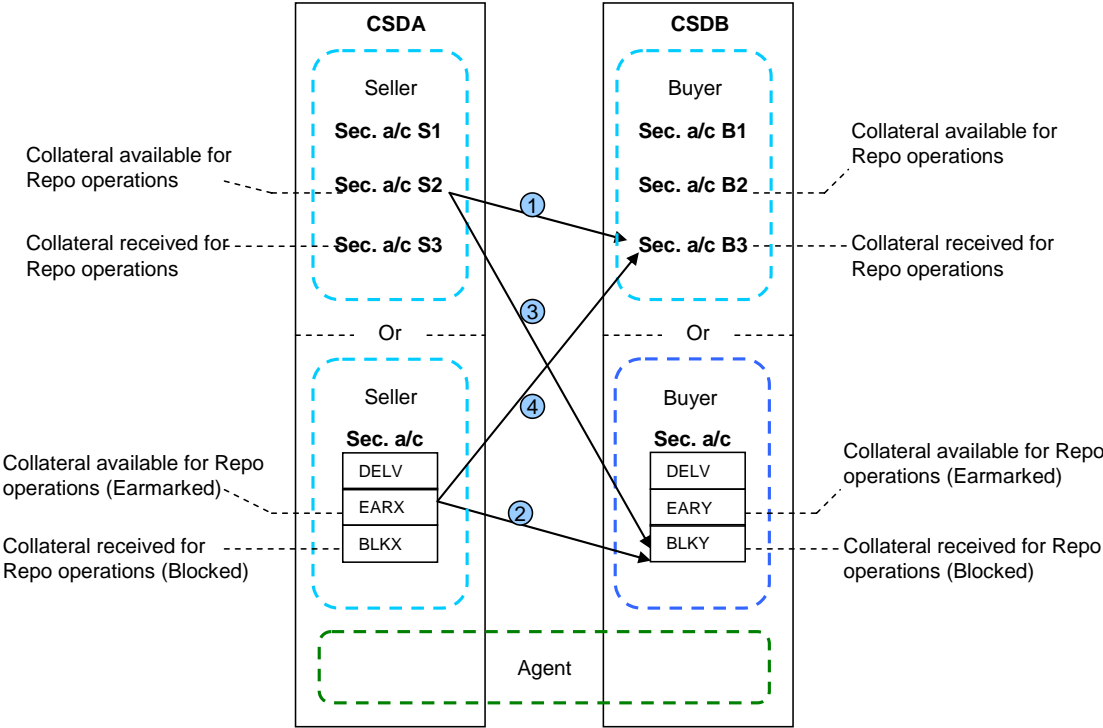
<sup>25</sup> Only one of the positions i.e. receivable positions or deliverable positions can be specified in already matched instructions. Also positions can not be received into blocked/reserved positions (this requires an additional intra-position movement).

Figure 11: Account structure for Intra-CSD Repo using positions



In a cross-CSD environment, each CSD may be using a different option to separate the positions based on the purpose e.g. CSDA could use separate accounts for each purpose, and CSDB could use position segregation for each purpose. Below diagram represents the possible combination of securities account set-up (for facilitating the position separation) in each CSD and the collateral movement.

Figure 12: Account structure for cross-CSD Repo using both positions and account segregation



In this case the agent must identify whether the collateral positions are available in a separate account or in an earmarked position. In case it is earmarked, the agent must identify the specific earmarking. This makes the agent's Repo processing complex. For instance, for the movement 1 above, the agent would only need to generate settlement instructions to transfer the collateral from the Seller to the Buyer's securities account. For the movement 3, the process will be different as the agent will have to first send the relevant instructions to transfer the collateral from Seller to Buyer's securities account, and in a

second step block the collateral using an intra-position movement instruction. Similarly the return legs of these two Repo operations (e.g. 1 and 3) will have a different process as the agent will have to specify in the return leg of the movement 2 the restriction reference assigned when the collateral was blocked in the first leg of Repo. For movement 2, the earmarked securities can be transferred directly to the securities account of the buyer, and in a second step the collateral will be blocked on the buyer's securities account through an intra-position movement instruction.

For cross-CSD Repo services, it is possible that participants in a CSD use services of more than one Repo agent. To facilitate separation of collateral for each agent, the CSD may offer several Earmarking, Blocking types as shown in section 3.3.1, 3.3.2. As the notations to identify the segregated position could vary in each CSD, it becomes difficult for the agent to identify the earmarked position where the collateral is available and to identify the blocked position where the received collateral should be posted.

For instance the table hereunder show that the agent 1 will have to use three different codes to identify the collateral to be taken from the sellers in 3 different markets.

**Table 3: Different code values per CSD for earmarked positions**

	<b>CSD 1</b>	<b>CSD 2</b>	<b>CSD 3</b>
<b>Agent 1</b>	EAR1	XXX1	YYY1
<b>Agent 2</b>	EAR2	XXX2	YYY2
<b>Agent 3</b>	EAR3	XXX3	YYY3

To resolve this issue, all CSDs in T2S could create the earmarking of collateral available for an agent using the same code. Similarly all CSDs in T2S could create the blocking position for the collateral received via an agent using the same code. This would significantly reduce the complexity on the agent's side for instructing the opening and closing legs in a cross CSD context.

**When segregation is used, the TFAX recommends that earmarked and blocked positions should be named in a uniform way across markets, so that the agents can process collateral in a seamless way in cross-CSD repo transactions.**

#### **7.2.2.5. Repo related Processing in T2S**

##### ***Initiating transfer of cash and collateral***

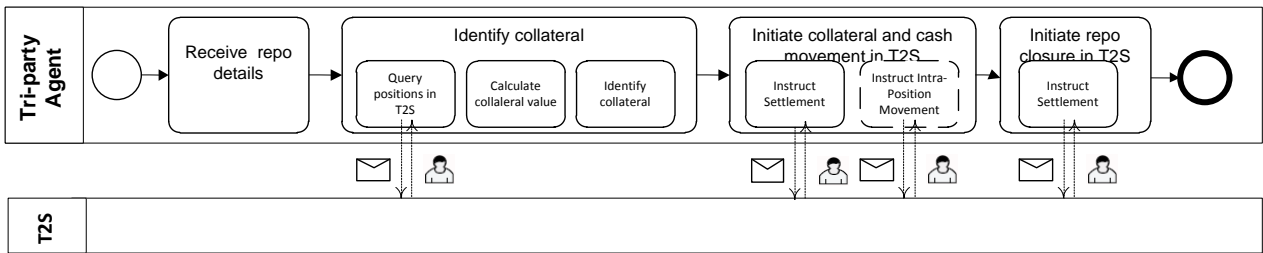
The agent needs to have authorisation (from the CSD participants) to act on the securities accounts and cash accounts of the participants (buyer and seller) for processing Repos. The agent initiates the Repo process after receiving the Repo details from both Seller and buyer. In the first step, the agent queries T2S (using ISO20022 messages or the T2S GUI) for the available securities positions in the accounts of the Repo buyer, and receives the securities positions details. The agent uses the mark-to-market information to calculate the value of available securities and identifies the collateral required. The agent initiates instructions to T2S to move collateral from the Seller to the Buyer and to move cash from buyer to the seller. In case the collateral received by the buyer should be booked into the blocked position, the agent also creates an intra-position movement instruction, to move the collateral from deliverable position to



blocked position. As part of this the agent will receive the status advices from T2S for the settlement instructions and settlement restrictions upon message subscription. In case the CSD participants and the CSD are directly connected to T2S, they would also receive status advices from T2S provided they subscribed to those messages.

In addition the agent is also responsible for initiating the transactions for the Repo closure in T2S, i.e. to move the collateral from the Repo buyer to the Repo seller and to move cash from Repo buyer to the Repo seller. These transactions should have a settlement date equal to the Repo closure date. Cash in a repo transaction can be moved using a DvP transaction in T2S or outside T2S (in this case. the securities transfer in T2S takes place as FoP transaction).

**Figure 13: Activities in Initiation of Repo**



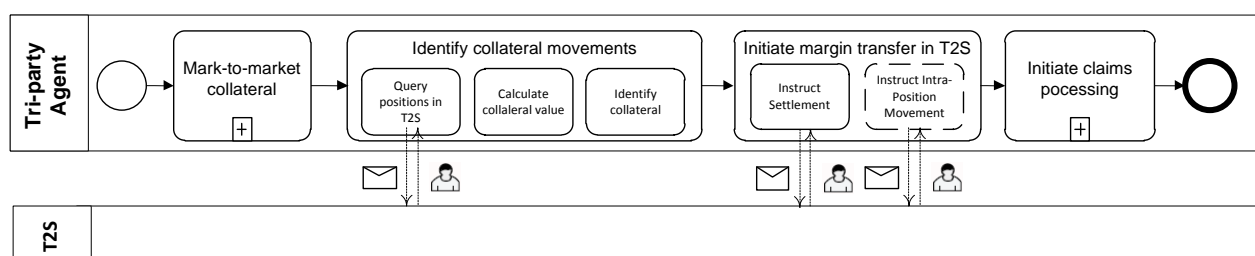
### Managing the Repo

In the agent’s system, the agent could already have the details of the collateral provided to the Repo buyer for a specific Repo. The agent revalues the collateral (i.e. mark-to-market) and identifies the need for additional collateral to be provided to the Repo buyer or need for returning some collateral to the Repo seller. In case of need for additional collateral, the agent queries T2S for the available securities positions in the accounts of the Repo seller. Based on the available positions, the agent identifies the collateral positions required, and initiates instructions to T2S to move collateral from the Seller to the Buyer. In case the buyer segregates the collateral received into the blocked position, the agent additionally creates an intra-position movement instruction, to move the collateral from deliverable position to blocked position, where more collateral is required by buyer, or vice-versa.

In the markets where Repo seller is considered as the beneficial owner of the collateral securities positions, the agent is responsible for making sure the benefits on the collateral securities reach the Repo seller. For this the agent initiates transactions (claims) to move the benefits (cash and/or securities) from the Repo buyer to the to the Repo seller.

In cases where the collateral securities are planned to undergo a reorganisation, the agent is responsible to replace such securities with other securities as collateral. The agent queries T2S for all pending collateral instructions that are on the ISIN undergoing reorganisation, and initiates their cancellation. In addition the agent also initiates the instructions to T2S for the Repo closure on newly identified collateral ISINs.

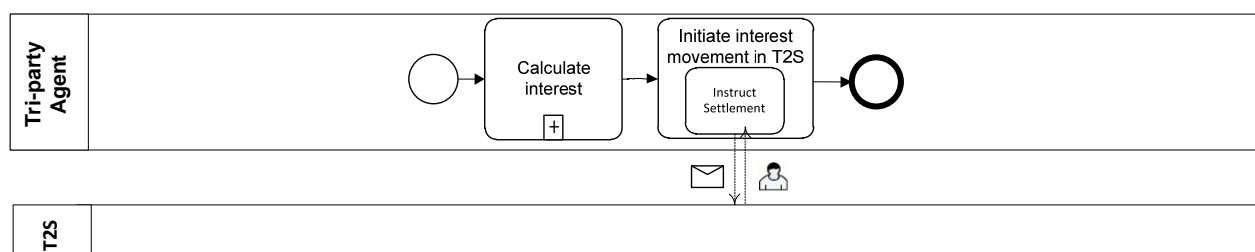
**Figure 14: Activities in management of Repo**



### **Repo closure**

During the closure of Repo, the agent is responsible for calculating the interest on the Repo amount and initiating transactions to move the interest from the Repo seller to the buyer. The agent could initiate PFOD (payment free of delivery) transactions for this purpose.

**Figure 15: Activities in Interest calculation**



### **7.2.3 Details of Repo instructions to T2S**

ISO has defined specific transaction types for usage in the Repo transactions. Agents can instruct T2S for Repos using these standard Repo codes in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023).

**Figure 16: ISO Codes for Repo transactions**

	Movement Type	SecuritiesTransactionType	Common Trade Reference <sup>26</sup>	Common Repo reference
Repo opening leg of Seller	DELI	TRPO (Triparty Repo)	ABC	123
Repo opening leg of Buyer	RECE	TRVO (Triparty Reverse Repo)	ABC	123
Repo closing leg of Seller	RECE	TRPO (Triparty Repo)	DEF	123
Repo closing leg of Buyer	DELI	TRVO (Triparty Reverse Repo)	DEF	123

These transaction types can be used by the participants to identify Repo transactions in T2S system. This will allow CSDs and participants to query specifically on these types of settlement instructions.

<sup>26</sup> Potentially, the reference used as Common Trade Reference (optional matching field) could be the same for opening and closing legs. In this case, the common repo reference could be used for that purpose.

In addition agents can specify the 'Common Repo Reference' in the settlement instruction to T2S, in order to allow them/participants to identify instructions belonging to a specific Repo transaction. The Common Repo reference shall be unique across the whole Repo process.

It is to be noted that the transaction types and common repo reference are not used for matching purposes in T2S. In order to avoid the risk of matching a Repo transaction with other types of transactions (e.g. a trade related transaction), agents can use the 'Common Trade Reference' in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023). This field is an optional matching field i.e. when at both parties specifies this field in the settlement instruction, it becomes a matching criterion. If only one party specifies the field, it matches to blank.

#### **7.2.4 TFAX findings and recommendations**

The TFAX analysis has shown that there are multiple tools available in T2S, which can facilitate the processing of tri-party repos such as account segregation and position segregation my means of earmarking or blocking.

**The TFAX recommends that it should be up to the agent and its client to determine the need for segregation and the appropriate segregation method (i.e. the use of accounts or position segregation such as earmarking and blocking in T2S).**

In a cross-CSD context, it is possible that participants in a CSD use services of more than one Repo agent. If the naming of blocked and earmarked positions is done in an unharmonised manner, this can render the processing highly complex for agents.

**When segregation is used, the TFAX recommends that earmarked and blocked positions should be named in a uniform way across markets, so that the agents can process the collateral in a seamless way in a cross-CSD repo transaction.**

In addition, the TFAX would like to highlight the possibility to use the ISO transaction types and common repo reference when instructing T2S.

### **7.3 Securities Lending and Borrowing**

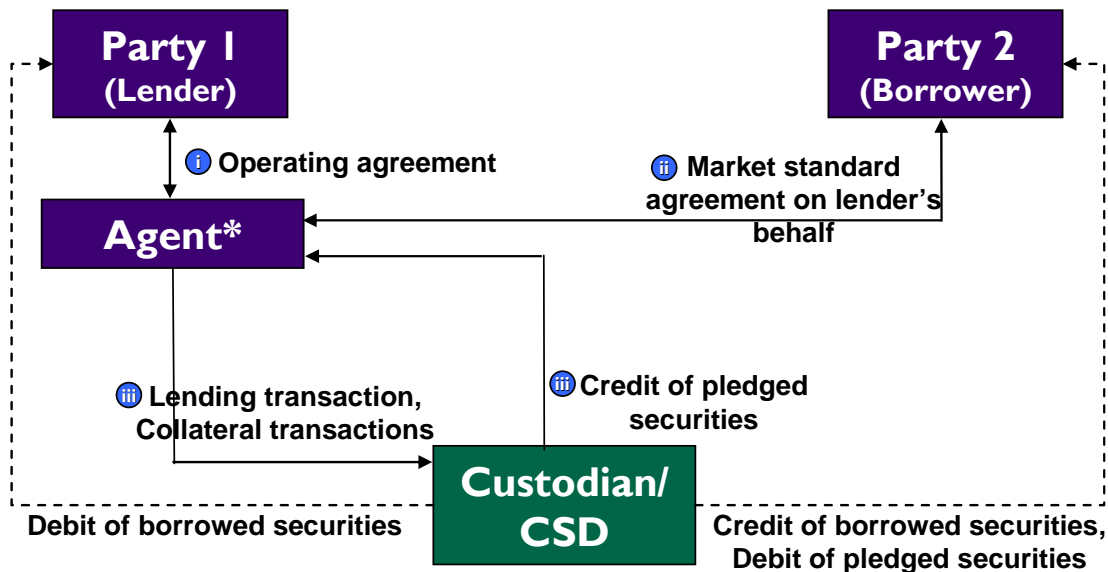
Securities lending is a transfer of securities linked to the subsequent transfer of equivalent securities by means of an agreement. Such transactions are collateralised and the 'rental fee' charged, along with all other aspects of the transaction, are dealt with under the terms agreed between the parties. The borrower will also pass over to the lender any dividends/interest payments and corporate actions that may arise on the borrowed securities.

#### **7.3.1 Securities Lending and Borrowing in CSDs**

The investors lend the securities usually through their custodian or other agents (e.g. CSD). It is also possible that investors use a third party agent who arranges the loans and instruct the custodian about the securities delivery/receipt and collateral movements. Very few entities like large investment funds

conduct their own lending and borrowing. Below is a model of the securities lending and borrowing (SLB) via an agent.

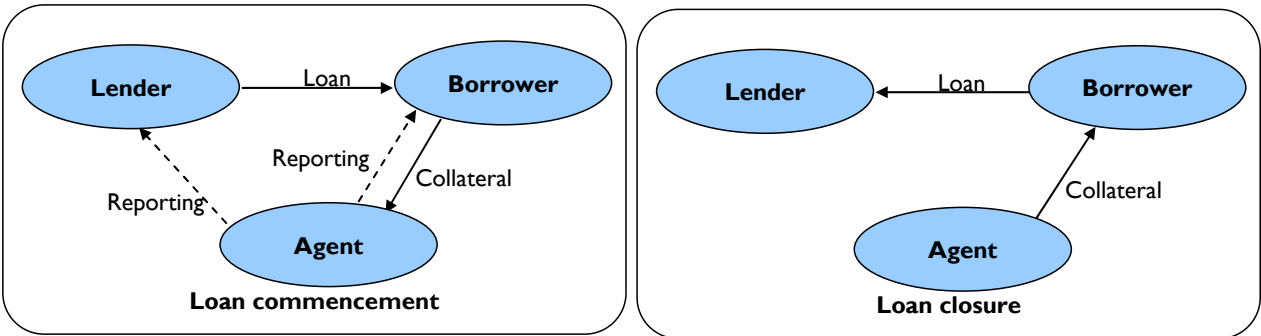
Figure 17: Securities Lending Model



\* Lender and Borrower have operating agreement with the Agent for Lending/ borrowing

- (i) The lender enters into an operating agreement with the agent.
- (ii) When a borrowing request is received from the borrower, the agent identifies the availability of securities for lending and will enter into a market standard agreement with the borrower on the lender's behalf.
- (iii) The agent will initiate the movement of securities from lender to borrower and the movement of collateral from borrower to itself (agent) in the accounts maintained at the custodian/CSD. In this transaction the absolute title over the lent securities is passed to the borrower and the collateral securities is passed to the agent on behalf of the lender. The legal title of the collateral securities remains with the borrower during the time of the lending agreement. The collateral can also be cash.

Figure 18: Transactions during Securities Lending



The agent is also responsible for revaluating the collateral from time to time and initiating adjustment of the collateral. i.e. to request more collateral from borrower in case the value of existing collateral reduces or to return collateral to borrower in case the value of existing collateral increases.

The lender could use services of only one agent for managing its lending. In this case the lender could place all the collateral available in a set of securities accounts and provide access rights on these securities accounts to the agent. However it is possible that a lender uses more than one agent to manage its Lending. For example, lending in certain securities could be facilitated by a specific agent only. In this case if the lender has only one securities account having lendable securities positions, the agents would have an issue in identifying the lendable positions. The lender is responsible for making sure that only relevant lendable positions are available to each of the agents for managing the lending. This could be done by having separate securities accounts catering to each agent. Another way is to have positions in the securities accounts, and providing access to the positions to the agents.

### 7.3.2 Securities lending process with T2S

From a settlement in T2S perspective, the securities lending instructions are treated the same as other trade related instruction, and no special processing is envisaged. One possible change is in terms of the connectivity of the agents to T2S. Without T2S the agents send settlement instructions to the custodian/CSD in order to process the securities lending. With T2S there would be two possible scenarios for the agent and participant (borrower) to manage lending and borrowing.

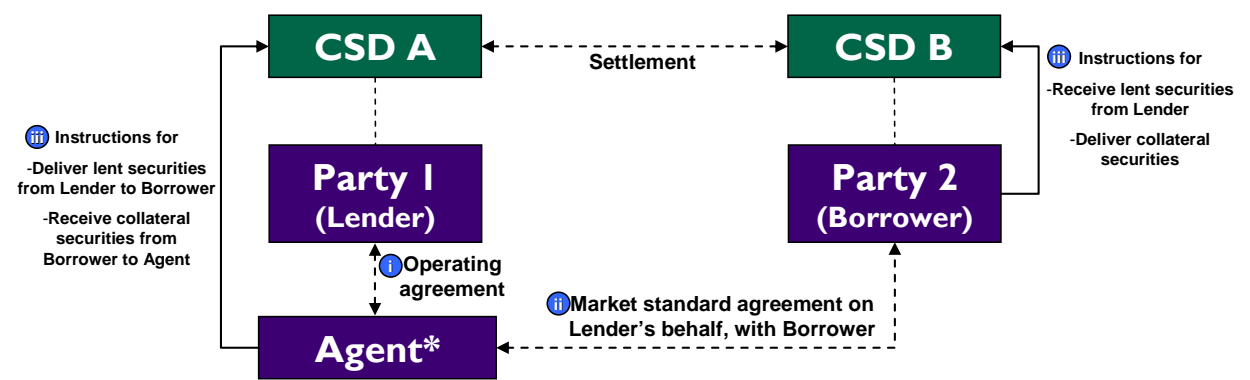
In the first scenario the agent and participants (borrower) communicate with the CSD for the securities lending processing, and the CSD communicates with T2S for settlement of borrowed/collateralised securities. In this case, there is no impact to the agent or participants.

In the second scenario, the agent and/or participants (borrower) communicates the settlement instructions directly to T2S for movement of lent securities and collateral/cash (as a Directly Connected Participant - DCP).

### 7.3.3 Cross-CSD securities lending process

Securities lending could take place between participants in two different CSDs. The model is as depicted below. In this case, the agent (on behalf of the lender) and Borrower instruct their corresponding CSDs for movement of lent securities and collateral securities.

Figure 19: Securities Lending Model in cross-CSD environment

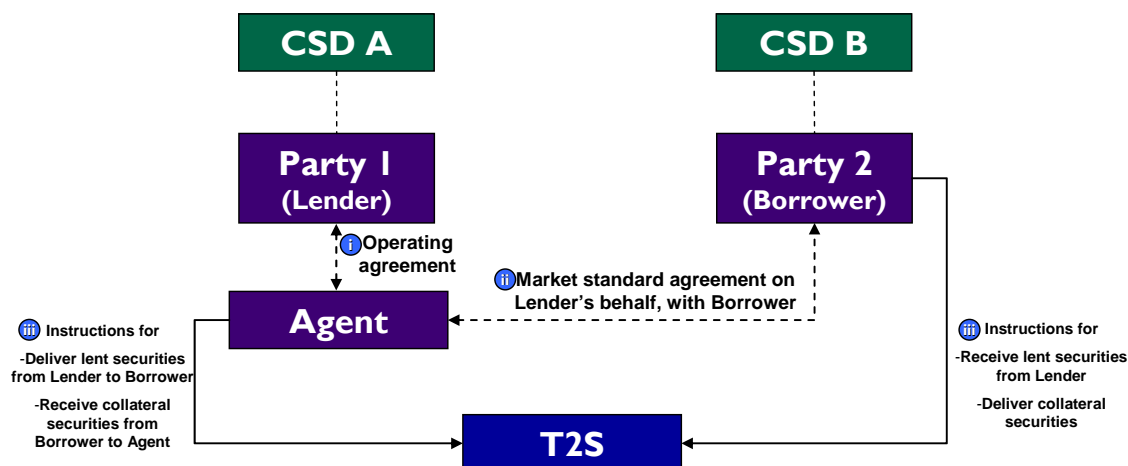


\* In case there are intermediaries between the Agent and the CSD, Agent instructs its intermediary.

### 7.3.4 Cross-CSD securities lending process in T2S

From the settlement in T2S perspective, the securities lending instructions in a cross-CSD environment as well are treated similar to other trade related instructions. However agents, participants could make use of the position segregation features of T2S.

**Figure 20: Securities Lending Model in cross-CSD environment**



Under the assumption that some lenders use services from multiple agents, we can foresee two solutions for managing the lendable positions in securities accounts in T2S; either the lender opens as many accounts as the number of agents, or it can segregate its positions using the earmarking in T2S. The earmarking processing type of the restriction model is particularly adapted to this as it will allow delivering/receiving securities into defined sub-positions using settlement instructions and intra-position movements. Earmarking in T2S is detailed in the section 3.2.3.1. Participants should request their CSD to create required earmarking positions.

In addition to creating the earmarking positions, the CSD is also responsible to set-up settlement restriction rules, to ensure that only a specific agent can access a specific earmarked position for lending.

As the positions are specific to each CSDs domain, it is possible that each CSD has defined the earmarked or blocked positions using a different notation. E.g. CSD A identifying the lendable positions available for agent's usage as 'XXX1' and CSD B identifying the lendable positions available for the same agent's usage as 'YYY1'. In this case the agent would require to process different kinds of earmarked positions for instructing the movement of lent positions belonging to different participants, making it a difficult task.

**When segregation is used, the TFAX recommends that this should be done in a uniform way across markets, so that the agents could process the securities lending in a seamless way in cross-CSD transactions.**

Also agents provide lending services for multiple participants. When agents receive collateral from borrowers, they hold it in segregated accounts (in the order of each participant). Alternatively agents could have several blocked positions in their account, each blocking type reflecting collateral received for

a lender. Blocking in T2S is detailed in the section 3.2.3.2. Agents should request their CSD to create required blocking positions.

### 7.3.5 Details of SLB instructions to T2S

ISO has defined specific transaction types for usage in the SLB transactions. Agents can instruct T2S using these standard codes in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023).

**Table 4: ISO Codes for SLB transactions**

	Movement Type	SecuritiesTransactionType	Common Trade reference <sup>27</sup>
Opening leg of borrower	RECE	SECB (Securities borrowing)	ABC
Closing leg of borrower	DELI	SECB (Securities borrowing closing)	DEF
Opening leg of lender	DELI	SECL (Securities lending opening)	ABC
Closing leg of lender	RECE	SECL (Securities lending closing)	DEF

However these codes are not used for matching purposes in T2S. In order to avoid the risk of matching an SLB transaction with other types of transactions (e.g. a trade related transaction), the agents can use the 'Common Trade Reference' in the ISO20022 message SecuritiesSettlementTransactionInstruction (sese.023).

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<sup>27</sup> Potentially, the reference used as Common Trade Reference (optional matching field) could be the same for opening and closing legs.

### 7.3.6 TFAX findings and recommendation

The TFAX analysis has shown that there are multiple tools available in T2S, which can facilitate the processing of securities lending and borrowing, in particular the use of position segregation.

In a cross-CSD context, it is possible that participants in a CSD use services of more than one lending and borrowing agent. If the naming of blocked and earmarked positions is done in an unharmonised manner, this can render the processing highly complex for agents.

**When segregation is used, the TFAX recommends that this should be done in a uniform way across markets, so that the agents could process the securities lending in a seamless way in cross-CSD transactions.**

In addition, the TFAX would like to highlight the possibility to use the ISO transaction types and common trade reference when instructing T2S.



## 8. CCP instructions

This section analyses the current complexities and limitations in terms of Central Counterparty (CCP)<sup>28</sup> settlement and location of securities accounts and points to the possibilities that T2S offers to support the business model of CCPs and their specific needs e.g. with respect to CCP's Power of attorney (PoA), options for matching, instruction of T2S for cross-CSD settlement and alignment with the schedule of a settlement day in T2S. In this respect, the scope of the section is confined to the interaction between the CCPs and CSDs, i.e. it does not cover the relationship that the CCPs might have outside T2S such as with ICSDs.

The aim of the CCPs is to give protection to both sides of a trade, providing to each party that the trade will settle at the agreed price even in the event one party defaults on its obligations. The CCP interposes itself as counterparty to both parties involved in a trade i.e. a seller to every buyer, and buyer to every seller.

In most jurisdictions, the legal concept that enables a CCP to become the counterparty is either 'novation' or 'open offer'. Through novation, the original contract between the buyer (i.e. buying trading firm which could be a clearing member or a non-clearing member) and seller (i.e. selling trading firm which could be a clearing member or a non-clearing member) is extinguished and replaced by two new contracts, one between the CCP and the buyer (i.e. CM1) and the other between the CCP and the seller (i.e. CM2)<sup>29</sup>. In an open offer system, a CCP is automatically and immediately interposed in a transaction at the moment the buyer and seller agree on the terms. If all pre-agreed conditions are met, there is never a contractual relationship between the buyer and seller in an open offer system. In both concepts the CCP is responsible to effect settlement i.e. whether open offer or novation concept is applied has no impact on the settlement.

In general CCPs offer netting of trades (such as CNS<sup>30</sup> or TDN) to their clearing members<sup>31</sup> (CM). In this case CCP will send netted instructions to CSD, before the CSD's scheduled settlement cut-off. Some CCPs allow clearing members to choose whether to settle on a gross or net basis. In such a case, if clearing member chooses settlement on gross basis, CCP will send settlement instructions to CSD on gross basis.

### 8.1 Current limitations for settlement of CCP transactions

Currently, the CSD market is very fragmented and cross-border transactions are limited. Different types of message formats and un-harmonised CSD settlement schedules are some of many examples pointing to

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<sup>28</sup> Clearing refers to the management (risk management, transaction monitoring, and netting) of a transaction after the matching of a buy and sale trade and prior to the legal fulfilment of the respective obligation. In CCP clearing, CCP becomes the counterparty of the original buyer and seller.

<sup>29</sup> Reference: Recommendations for Central Counterparties – Consultative report, BIS march 2004

<sup>30</sup> CNS - Continuous Net Settlement; TDN – Trade Date Netting

<sup>31</sup> Clearing members are member firms of a clearing house.

the operational differences in the various markets. For CCPs, as for other market participants, this creates a barrier for cross-border transactions and setting up cross-border CCP business always requires specific and complex arrangements between CCPs and CSDs.

In addition, some stock exchanges require their participants to hold securities accounts (or have access to a securities account, via a custodian) in certain CSDs that they recognise, sometimes offering the choice between a few CSDs. CCPs operating in such markets are required to hold their securities accounts in those CSDs only. Subsequently, the CCP will demand its CMs to hold securities accounts only in those CSDs as required by the stock exchange, in order to receive its clearing services. Likewise, there might be similar restrictions imposed by national regulators.

As a result, and additionally in the absence of efficient DvP links (pre-T2S), it is difficult or impossible to implement CCP services, where the CM has securities accounts in one CSD and the CCP has accounts in a different CSD. Similarly, if the CM wants to use services of a particular CCP, the CM is required to open securities account in the CSD where that CCP maintains securities accounts. For the most part, CMs and CCPs are not able to maintain all their securities accounts in only one CSD; instead they are forced to maintain securities accounts in different CSDs.

Due to the difficulties in establishing cross-border CCP business there are only a limited number of CCP-CSD settlement models existing today. The table below provides an overview of the generic settlement models that could theoretically exist as a result of different CSD-CCP-CM combinations. As of today, only a limited number of settlement models for CCP transaction are currently used (models 1-4). In fact, since all cross-CSD models require particular arrangements, these models are implemented in a highly static way between a limited number of CSDs, while the Intra-CSD model 1 remains the predominant model.

**Table 5: Sample models for CCP transactions**

<b>Model</b>	<b>Name</b>	<b>Description</b>	<b>Current use</b>
<b>1</b>	Intra-CSD w/ one CCP	CMs, CCP hold securities accounts in a single CSD. Settlement of CCP transactions is intra-CSD	Largely used  E.g. EUREX Clearing AG
<b>2</b>	Intra-CSD w/ two or more CCPs (interoperability arrangements)	Two or more CCPs are involved; CMs and CCP hold securities accounts in a single CSD. Settlement of CCP transactions as well as inter-CCPs transactions is intra-CSD	Offered by some trading venues and some CCPs  E.g. SIX-x-clear, LCH Clearnet Ltd in Swiss market.
<b>3</b>	Cross-CSD w/ one CCP, CM in one CSD (one CM in a different CSD)	CMs have securities accounts in different CSDs. CCP has securities account in CSD, same as that of one CM	Offered by some trading venues and ICSDs  e.g. bridge between EB and CBL
<b>4</b>	Cross-CSD, w/ one CCP in both CSDs	CMs have securities accounts in different CSDs. CCP has securities accounts in both CSDs where CMs are members	Limited offer  e.g. ESES and Euroclear Bank
<b>5</b>	Cross-CSD w/ two CCPs	Two CCPs are involved; CMs have securities accounts in different CSDs. Each CCP has a securities account in one CSD only.	Currently not offered
<b>6</b>	Cross-CSD w/ three CSDs	CMs, CCP each have accounts in different CSDs	Currently not offered

## 8.2 CCPs in the post-T2S environment

In T2S CCPs are not identified specifically, but are treated as ordinary CSD participants. However, it is understood that CCPs have special processing needs in providing clearing services. A number of configurations can be done in T2S for the CCPs' requirements and related specificities in terms of processing such as prioritisation of CCP instructions, partial settlement, Power of Attorney (PoA), connectivity, and matching. In addition, details on T2S instruction and processing are given.

## **8.2.1 Set-up of T2S static data**

### **8.2.1.1. Set-up of priorities**

Currently some CCPs require that their netted settlement instructions are taken up for settlement first by the CSD before settling the instructions from other participants in the SOD (start of day). T2S offers the possibility to assign priorities to instructions from CCPs. The CSD will be able to configure static data in T2S, to automatically assign a specific priority to instructions meeting a certain criteria. The parameters of the criteria are Instruction type, Instructing party type, Instructing party BIC, market type. The CSD can configure the static data specifying that all instructions received from CCP's BIC are automatically assigned 'top' priority in T2S.

### **8.2.1.2. Set-up of partial settlement**

As of today, many CCPs use partial settlement on their instructions. T2S allows configuring partial settlement thresholds (as quantity and as amount), below which partial settlement is not allowed. Settlement thresholds in amount are configured per currency by T2S operator. Settlement thresholds in quantity are configured per ISIN by the respective Securities Maintaining Entities (SME). The SME of an ISIN is responsible to maintain the ISIN static data in T2S. Often the issuer CSD acts as the SME of ISINs.

Settlement instructions in T2S are eligible for partial settlement. However in case the instructing parties do not want their instructions to settle partially, they can indicate it in the settlement instruction by specifying the 'partial settlement indicator' as 'No'. In case of CCP instructions, CCPs and CMs can decide whether to choose the partial settlement of instructions. T2S attempts partial settlement of the eligible unsettled instructions only in particular windows identified for partial settlement. In case partial settlement can be applied, participants can specify the type of threshold that need to be applied when settling the settlement instructions partially. However, for FOP instructions only the quantity threshold is applied. For more details, refer to UDFS 1.2, section '1.6.1.9.3 Partial Settlement'. Cross-CSD settlement instructions and their linked T2S generated realignment instruction can be settled partially, if indicated by the CCP. Instructions linked by the instructing parties are not eligible for partial settlement.

### **8.2.1.3. Set-up of securities accounts and privileges**

Currently, the Power of Attorney (PoA)<sup>32</sup> concept is the prevalent means of granting authorisation to the CCP, in order for the CCP to be able to act on behalf of CMs or on behalf of the Settlement Agents appointed by the CM. In T2S, the PoA concept is "translated" by the privileges that are granted on the CMs' securities accounts<sup>33</sup>. In the context of CCPs instructions, the CCPs will usually be granted PoA by CMs to instruct on their (CMs') accounts. However, only when the T2S privileges are set-up correctly the

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<sup>32</sup> The Power of Attorney is a formal, written authority granted by one person, the Donor, to another, the Attorney, enabling the Attorney to act on the Donor's behalf and manage their financial interests.

<sup>33</sup> CCPs' and CMs' securities accounts in T2S will be treated as any other securities accounts.

CCPs will be able to send settlement instructions to T2S on behalf of their CMs. Otherwise the CMs need to instruct the CCP settlement instructions to T2S.

In the T2S privilege model, only the CSD is allowed to provide authorisation on securities accounts of its participants to a participant (e.g. CCP) in another CSD. In the context of CCPs, if the clearing member and the CCP are participants in two different CSDs, the clearing member has to approach its CSD for providing authorisation on its securities accounts to the CCP (who is a participant of another CSD). If a clearing member uses services of several CCPs, it can provide PoA to all CCPs for instructing on the same securities account. When the CCP sends settlement instructions to T2S on behalf of its CM, T2S sends the status advices on the settlement instructions to the CM, to the CSD of the CM and also to the CCP (as it is the business sender). In the absence of PoA and privileges granted to the CCP, the CMs would be required to instruct CCP instructions on their securities accounts themselves.

**The TFX recommends that all markets should recognise the PoAs granted by CMs to their CCPs. In order to allow for the PoA concept to be effective, CSDs should set up privileges on T2S securities accounts based on the request of their participants (the CCPs' CMs).**

In this context, CMs should also have the possibility to put instructions made on their behalf on hold in order to effectively manage the PoA. CCPs' adaptation to T2S should cater for this possibility.

Some CSDs require two different sets of accounts for settlement depending on whether the trade is concluded on a stock exchange or OTC. Whether or not accounts are segregated should be left at the discretion of the CM.

**The TFX recommends that segregation of account based on OTC and on-exchange trades should not be required on a mandatory basis**

### 8.2.2 Direct vs. indirect connectivity

As of today, when a CCP maintains and operates itself several accounts<sup>34</sup> in several CSDs, the CCP need to maintain technical connectivity with each of the CSDs. T2S offers a feature of direct connectivity where the participants (e.g. CCP) are allowed to have a direct technical connectivity with T2S. For using the direct connectivity, participants (e.g. CCP) require authorisation from their CSD. Upon authorisation by the CSDs, the CCP will be able to use a single technical connectivity to communicate with T2S for all its activities related to several CSDs. With direct connectivity to T2S, CCPs will also be able to query T2S for their securities accounts, instructions data etc. If there is no direct connectivity, the CCP will need to instruct each of its CSDs, which will then instruct settlement in T2S. The scenarios detailed in sections 3.4 and 5 are independent of CCPs/CMs direct or indirect connectivity to T2S.

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<sup>34</sup> It can occur that a CCP opens an account in several CSDs but outsources to a third party (settlement agent) the maintenance of the account and technical links with the CSD.

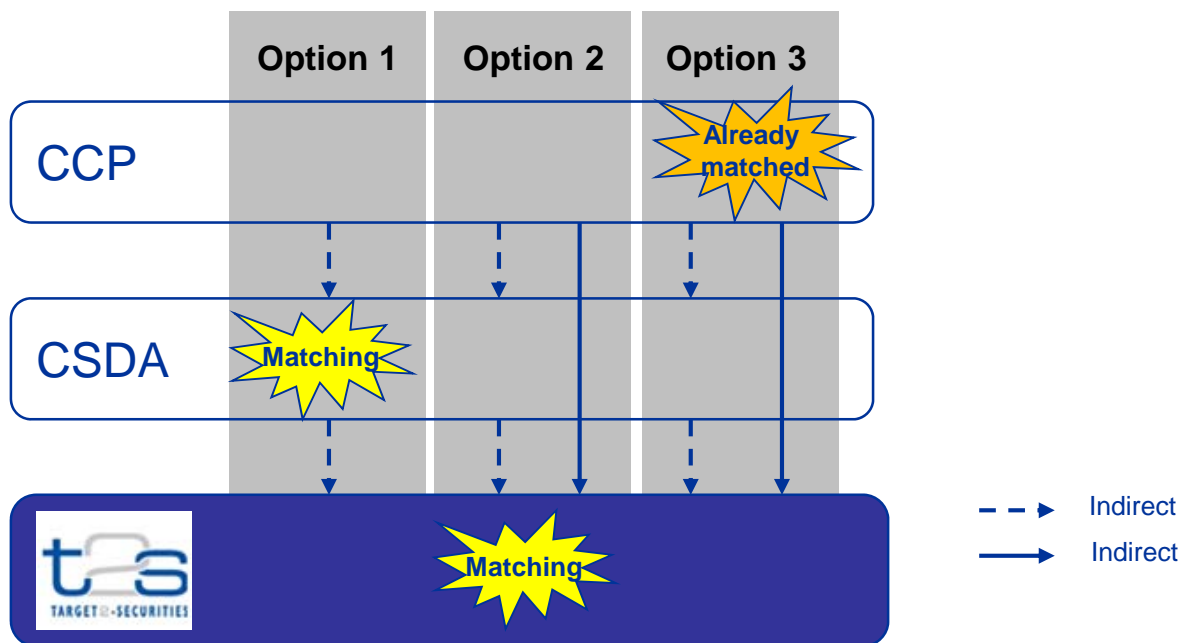
### 8.2.3 Matching in T2S

Currently CCPs offer models where the matching takes place at the CCP or at the CSD. In T2S, CCPs can also make a number of choices related to matching. Depending on the scenario (e.g. Intra-CSD or Cross-CSD and Direct or Indirect connectivity) there are different possibilities for the location of matching which will impact the exact processing flow of settlement instructions to T2S. This includes matching in T2S as an option.

#### 8.2.3.1. Intra-CSD settlement matching

In an intra-CSD settlement scenario for CCP cleared transactions, there are three main options for the matching of settlement instructions. In the option 1, the matching occurs at CSD level, it means that the CCP cannot instruct T2S directly. In the option 2, matching is performed by T2S; this allows the CCP to choose between Direct and Indirect connectivity. In the option 3, the CCP prepares the settlement instructions after netting (matching of individual trades has taken place on the exchange/trading venue) and sends only the resultant settlement instructions for settlement in T2S, e.g. “already matched settlement instructions”. This last option allows the CCP to choose between direct and indirect connectivity.

**Figure 21: Options for matching of Intra-CSD CCP transactions**



#### 8.2.3.2. Cross-CSD settlement matching

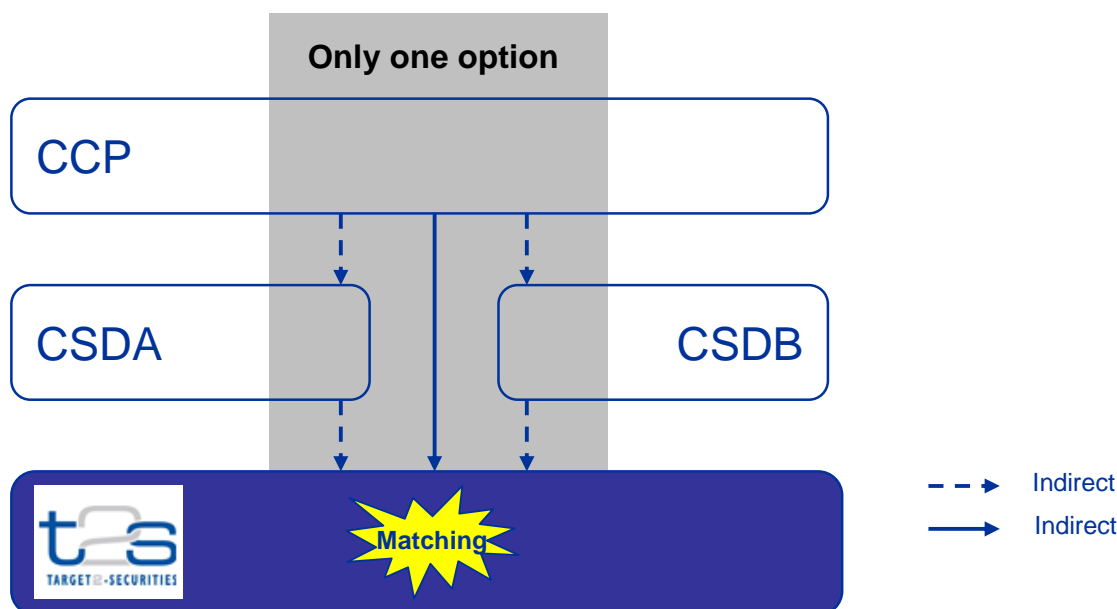
In a cross-CSD scenario, matching has to occur always in T2S since it is not possible to send a single instruction referring to two securities accounts belonging to different CSDs. This is due to the data segregation and the fact that each message needs to be stored under a certain system entity (e.g. CSD in this case).

The CCP always needs to send both legs of the settlement as separate instructions to T2S, either via the CSD in case it is indirectly connected, or directly to T2S in case it is directly connected. In both cases the matching of settlement instructions will be performed in T2S.

In case a CCP wants to have a single way to send settlement instructions (both intra-CSD and cross-CSD settlements) to T2S and match at a single location, it should opt for matching always in T2S (option 2, matching for intra-CSD transactions). This is due to the reason that options 1 and 3 (matching at the CSD and matching at the CCP) are not applicable in a cross-CSD settlement, based on current T2S specification.

Alternatively CCPs can distinguish between intra-CSD and cross-CSD settlement and instruct T2S accordingly (i.e. already matched instructions for intra-CSD settlement).

**Figure 22: Options for matching of Cross-CSD CCP transactions**



## 8.2.4 T2S instruction and processing

### 8.2.4.1. T2S instruction for CCP transactions

In order to effect settlement, the CMs and/or CCPs need to instruct T2S. The basic set of instructions to T2S is the same across all settlement scenarios; only for CCP interoperability an additional set of instructions is needed. In general the CCP has a PoA on the securities accounts of the CM, and instructs settlement on behalf of the CM as well. For detailing the instructions for CCP transactions, it is assumed that the CCP has a PoA on the CM's securities accounts.

*Please note that it is possible that settlement agents can hold securities accounts for CMs and CCPs.*

**Instruction 1:** The CCP of the seller instructs a delivery instruction on behalf of seller (CM1) against itself.

**Instruction 2:** The CCP of the seller instructs a receipt instruction against the seller (CM1).

Instructions 1 and 2 match in T2S and are attempted for settlement. It is possible that CM1 and CCP are participants in two different CSDs, resulting in a cross-CSD transaction.

Instruction 3: The CCP of the buyer instructs a receipt instruction on behalf of the buyer (CM2) against itself.

Instruction 4: The CCP of the buyer instructs a delivery instruction against the buyer (CM2).

Instructions 3 and 4 match in T2S and are attempted for settlement. It is possible that CM2 and CCP are participants in two different CSDs.

In case the CCP transactions involve two or more CCPs that interoperate, CCPs need to instruct settlement using an additional set of instructions.

Instruction 5: The CCP linked to the seller instructs a delivery instruction against the other CCP

Instruction 6: The CCP linked to the buyer instructs a receipt instruction against the other CCP. These two instructions match in T2S and are attempted for settlement.

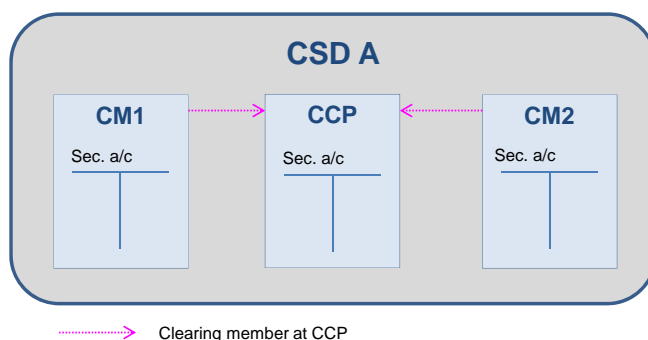
#### 8.2.4.2. Processing of CCP instructions in T2S

This section details the processing of the settlement instructions as listed in the previous section.

##### 8.2.4.2.1. Example 1: Intra-CSD CCP transactions

In this example, both CMs and the CCP hold securities accounts in a single CSD. Securities are sold by CM1 and bought by CM2. This example details how the above instructions 1-4 result in securities positions movement in T2S.

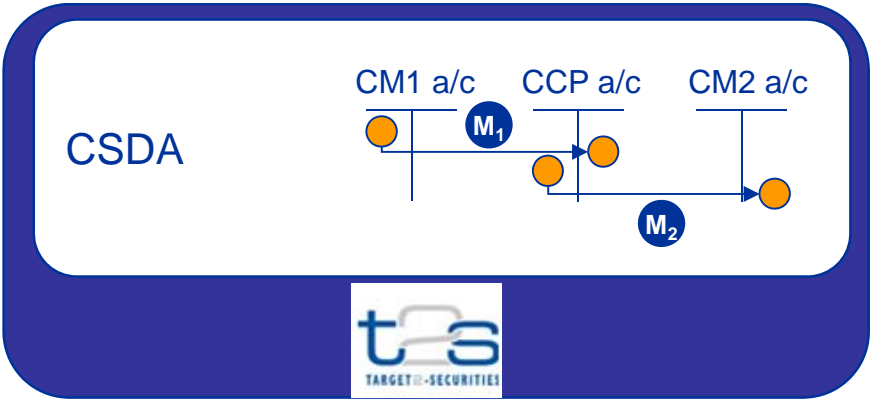
**Figure 23: Intra-CSD CCP transaction**



Settlement of instructions in 1 and 2 results in movement of securities from CM1 a/c to CCP a/c (shown as  $M_1$  below). Similarly settlement of instructions 3 and 4 results in movement of securities from CCP a/c to CM2 a/c (shown as  $M_2$  below).



Figure 24: Intra-CSD CCP transaction (movements)

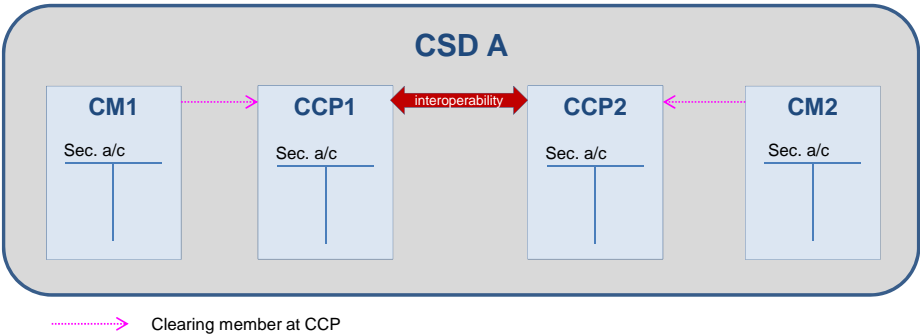


8.2.4.2.2. Example 2: CCP interoperability

When CCPs interoperate, they need to move positions between their accounts, in order to settle CCP transactions with their CMs. This example details instructions that need to be instructed by interoperating CCPs.

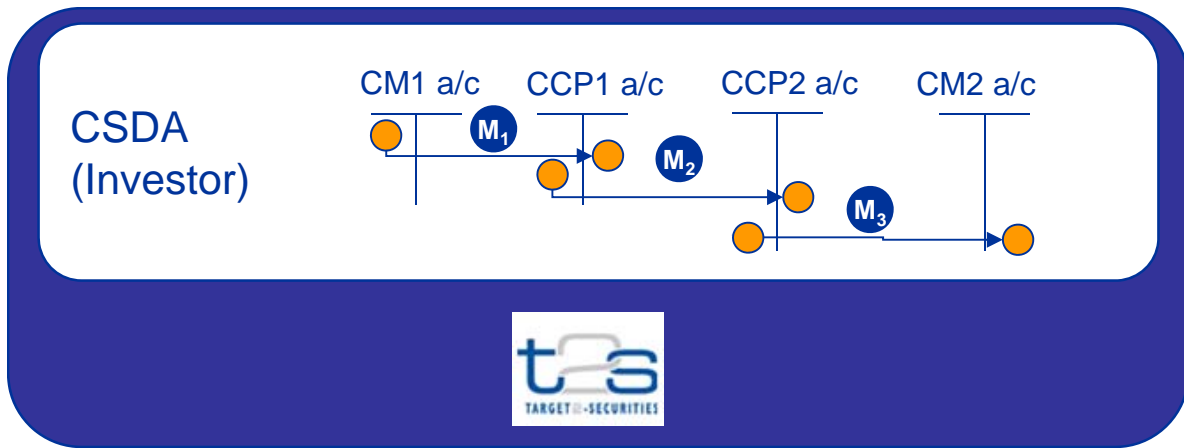
In this example, two CCPs (CCP1, CCP2) interoperate and have securities accounts in CSD A. CM1 is a clearing member at CCP1, CM2 is a clearing member at CCP2.

Figure 25: CCP interoperability



In this example scenario, instructions 1-4 are similar to the Example 1. In addition, the CCPs need to send instructions 5 and 6, in order to move positions from CCP1 a/c to CCP2 a/c.

**Figure 26: CCP interoperability (movements)**



#### 8.2.4.2.3. Example 3: CCP transactions resulting in realignments

Depending on the configuration of the trade and the location of securities accounts, T2S will need to realign positions in the technical issuer CSDs of the investor CSDs.

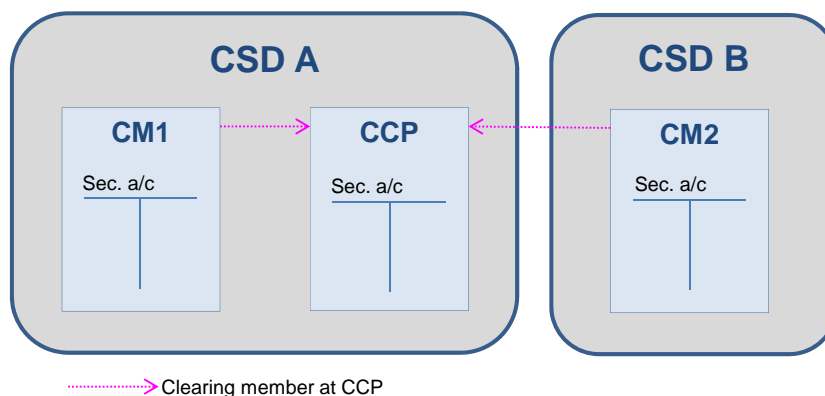
T2S automatically generates the realignment instructions, and no additional processing steps are required. Realignment messages will automatically be created for

- i) All cross-CSD transactions;
- ii) Intra-CSD transactions where the securities accounts of buyer CM and seller CM are linked to different omnibus accounts in technical issuer CSD.

This example details how the realignment instructions are generated by T2S.

In this example, CM1 and the CCP hold securities account in CSD A, and CM2 holds securities account in CSD B. CSD A is considered as issuer CSD for simplifying the example.

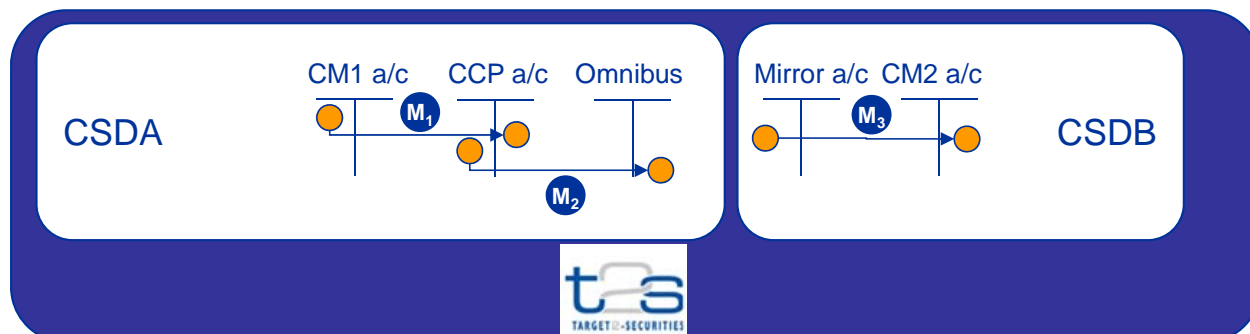
**Figure 27: Realignments in CCP transactions**



In this example scenario, instructions 1-4 are similar to the Example 1. Matching of instructions 3 and 4 will result in creation of two realignment instructions by T2S. One realignment instruction (R1) is for receiving securities into omnibus account in CSD A, with counterparty as CCP. The 2<sup>nd</sup> realignment instruction (R2) is for delivering securities from mirror account in CSDB, with counterparty as CM2. The realignment instruction R1 matches with instruction 4. Similarly the realignment instruction R2<sub>i</sub> matches

with settlement instruction 3. The settlement of these instructions will result in movement of securities from CCP a/c top omnibus account of CSD B (shown as M<sub>2</sub> below) and movement of securities from mirror a/c to CM2 a/c (shown as M<sub>3</sub> below).

**Figure 28: Realignments in CCP transactions (movements)**



#### 8.2.4.3. Reduced complexities in the post-T2S environment

Taking everything into account, market participants do not need to distinguish between the “scenario” they are in for the instruction of T2S e.g. location of securities accounts, intra-CSD or cross-CSD. While the settlement scenario is determined by the location of accounts and specific configuration of the trade, the settlement processing is adapted by T2S automatically through the generation on realignment messages. Consequently there is no longer the need to restrict the locations of securities accounts as the complexities in terms of cross-CSD settlement are minimised with T2S. If CCPs and CMs are free to choose the location of their securities accounts, competition between CSDs will be focused on the services they provide and the current silo structures can disappear, thus enabling effective cross-border CCP business.

**The TFAX recommends that trading venues, CCPs, CSDs and regulators should not impose any dependency between the locations of securities account of CMs, CCPs (or settlement agents). The CMs, CCPs (or settlement agents) should be allowed to open securities accounts in the CSD of their choice in order to be able to receive/offer CCP services.**

#### 8.2.5 Alignment of settlement schedules

T2S follows a single harmonised schedule of a settlement day. The schedule applies to all parties in T2S including the CCPs.

##### 8.2.5.1. Partial settlement windows in T2S

As a result of the netting mechanism, the quantity of securities in one DVP transaction between a CM seller and its CCP does not imply the existence of an equivalent DVP transaction between a CM buyer and its CCP for the same quantity of securities. For instance, we can have the following situation for a given ISIN where 3 transactions from CM1, CM2, CM3 sellers against the CCP (with respectively 50, 30 and 20 securities to deliver) and 2 transactions with CM4 and CM5 buyers against the CCP (for respectively 15 and 85 securities to receive). If only 2 transactions from CM1 and CM2 with 50 and 30

settle, the CCP can only redeliver 80 securities allowing for instance the CM4 buyer of 15 securities to be settled and the CM5 buyer of 85 can settle partially (65 on 85). This scenario is achievable with the usage of partial settlement.

In fact, partial settlement can increase the whole settlement efficiency of a given market.

For instance, all CCPs should adhere to the T2S partial settlement windows (In sequence X of last cycle in NTS, between 2:00-2:15 pm in RTS, between 3:45-4:00 pm in RTS). All the instructions that are pending for settlement and are marked for partial settlement by the CCP will be tried for partial settlement in these specific windows by default. It is not possible to opt for partial settlement in certain windows only, and in case this is required by CCPs this would require a manual operational effort from CCP (e.g. if the CCP does not want to use a certain partial settlement window, it has to cancel its settlement instructions that were earlier marked for partial settlement, and should reinstruct them without partial settlement eligibility).

In addition, when CCPs interoperate, the use of partial settlement (as additional matching criteria) needs to be applied on a consistent way. In case one CCP choses a partial settlement of its instructions, whereas the other CCP do not, the matching of instructions cannot take place. This will result in degradation of settlement efficiency and service of both CCPs. It is expected that CCPs will make use of all three partial settlement windows in order to avoid settlement inefficiencies for CCP transactions.

#### **8.2.5.2. Settlement cut-offs**

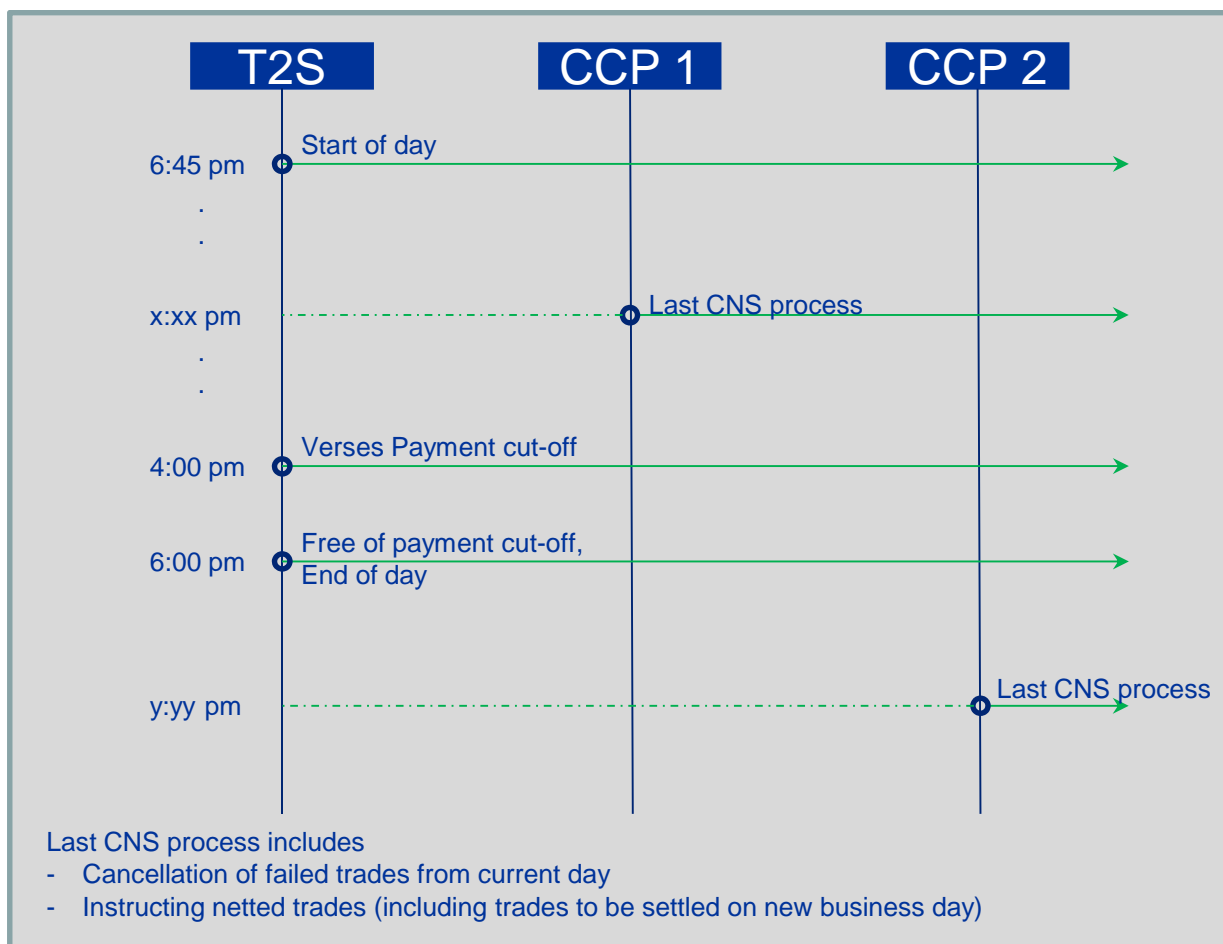
In addition, CCPs will need to adhere to the settlement cut-offs in T2S e.g. DvP cut-off at 4:00 pm, FOP cut-off at 6:00 pm. i.e. CCPs need to complete their order processing and netting (such as CNS or TDN) for the current day before the cut-offs in T2S. This is required as the CCPs interoperate with other CCPs, and they need to complete settling settlement instructions for the current day, thus making the balances in the CCP's securities account zero at the end of the day.

CCPs that net the trades using CNS cancel the pending settlement instructions at the end-of the settlement day, i.e. after 4:00 pm. A CCP using CNS nets the failed settlement instructions together with the trades due for settlement on the consecutive day and re-instructs with the newly netted quantity before the start of NTS, i.e. 7:30 pm. Below is an illustration of CCPs that have different end of day netting windows, when they interoperate. CCP1 cancels its pending instructions at x:xx pm (before 4:00 pm). However as the CCP2 initiates cancellation of its instructions at a later point in time y:yy pm (after 6:00 pm), CCP1's cancellations will not be completed, and settlement instructions will be kept pending in T2S, until matching cancellation is received from CCP2 or the instructions may settle as well.

Similarly, when CCP1 instructs next day's newly netted settlement instructions, they will also be pending for the matched instructions from CCP2, who will instruct at a later point in time. As the large majority of CCPs apply the netting of the trades, the net instructions may result in various kinds of instructions: DVP/ RVP/ DWP/ Free of payment/ Payment free of delivery. To reduce the time an instruction is unmatched and not taken for processing, it is recommended that CCPs harmonise the netting schedules. Also CCPs

need to consider different cut-offs in T2S while harmonising the CCPs' schedules and preparing for interoperability, in order to make greater use of the settlement window. Without harmonisation, there could be potentially different settlement cut-offs in different CCPs. In this case the CCPs will be limited by other interoperating CCPs' settlement windows for settling their net rebalancing instructions.

**Figure 29: Example of CCPs with different CNS windows**



It is to be noted that settlement in T2S (both real-time and night-time batch) considers both exchange trades as well as OTC trades. In fact T2S does not differentiate the exchange trades and OTC trades for the purpose of settlement.

**It is expected that, in entering into interoperability, CCPs will jointly adapt to the T2S cut-offs.**

### 8.3 Trading platforms' interaction with T2S

Trading platforms may also directly interact with T2S for sending the trade details feed to T2S, in agreement with the CSD. This scenario is relevant when there is no CCP involved in the clearing and settlement process. In order to communicate trade details related to a CSD to T2S, the trading platform should be defined as a participant of that CSD in T2S. The CSD should allow the trading platform to be a directly connected participant. Moreover, the trading platform should have power of attorney (PoA) on all the participants' securities accounts in order to send the settlement instructions on those accounts. Trading platforms can send both legs of the trade as 'already matched' to T2S in case of intra-CSD transactions.

T2S communicates the acceptance/ rejection of the trade feed after validating it. Further status changes to the settlement instructions (e.g. matched, settled etc.) will be communicated by T2S to the CSD participants owning the securities accounts, to the respective CSDs and also to the trading platform (as it is the sender of the instructions). With appropriate privileges from the CSD, the trading platform can query the status of the settlement instructions in T2S.

## 8.4 TFAX findings and recommendations

The above analysis has illustrated the main aspect of CCPs' and CMs' adaptation to T2S.

The design of T2S offers many functionalities such as prioritisation and partial settlement that allow for efficient processing of CCP transactions. One aspect is translation of the Power of Attorney (PoA) concept into T2S, which allows CMs to grant authorisation to the CCP in order for the CCP to be able to act on behalf of the CMs (or their settlement agents). PoAs can be set up in T2S by configuring T2S privileges on the accounts accordingly.

**The TFAX recommends that all markets should recognise the PoAs granted by CMs to their CCPs. In order to allow for the PoA concept to be effective, CSDs should set up privileges on T2S securities accounts based on the request of their participants (the CCPs' CMs).**

With respect to account set-up, it is crucial that CSDs avoid account segregation that needs to be propagated through the settlement chain and potentially to CCPs and other CSD participants, in line the recommendations in the section "Transmission and maintenance of information in a cross-CSD context". The current segregation between OTC and exchange trades is an example of account segregation that would require to be propagated to CCPs and CMs.

**The TFAX recommends that there should be no segregation of accounts based on OTC and on-exchange trades on a mandatory basis.**

Furthermore, the analysis revealed that in the post-T2S environment processing of cross-border CCP transactions will be as easy as intra-CCP transaction. The settlement processing is adapted by T2S automatically through the generation on realignment messages. Consequently there is no longer the need for restrictions that currently aim at limiting the complexities of CCP interoperability, as these difficulties will no longer exist in a T2S environment. An example of current restrictions is that on the location of securities accounts.

**The TFAX recommends that trading venues, CCPs, CSDs and regulators should not impose any dependency between the locations of securities account of CMs and CCPs (or settlement agents). The CMs and CCPs (or settlement agents) should be allowed to open securities accounts in the CSD of their choice in order to be able to receive/offer CCP services.**

If the above recommendations are followed, it is thus possible that current silo structures can disappear, enabling effective cross-border CCP business.

Taken everything into account, the T2S set-up provides the technical infrastructure that allows for efficient processing of cross-border CCP transactions and which – from a technical perspective – might facilitate CCP interoperability and lead to the disappearance of the current silo structures.

Finally, the TFAX would like to point out that in the context of the TFAX mini-consultation another issue was raised by the market: missing harmonisation with respect to default handling. This applies to the question – when a default is pronounced and published – of how pending transactions should subsequently be handled with respect to the procedures to be adopted by CSDs and CCPs.

## 9. Issuance practices

Issuance of securities is a procedure wherein an entity (e.g. governments, corporations or investment funds), known as the “issuer”, sells securities to raise funds<sup>35</sup>. A typical issuance process consists of activities which may include a number of actors: CSDs, issuers, issuer’s agents (investment banks acting as underwriters, dealers, transfer/payment/settlement agents etc.) registrars, national numbering agencies, custodians, etc.

### 9.1 Implementing issuance with T2S

#### 9.1.1 Account set-up in T2S

There are several possibilities regarding the account set-up for the purpose of issuance. The most important ones are described below. Additional variations might be possible.

##### 9.1.1.1. Option 1: Distribution directly from issuance account

In many cases, the distribution of securities takes place directly from the issuance account i.e. a securities accounts defined with account type ‘Issuance Account’. The CSD has the choice to use either the same issuance account for multiple securities to be issued, or to maintain separate accounts. In addition it might be necessary to maintain separate accounts for operational or regulatory purposes.

The issuance activities can also be conducted by the issuer or issuer’s agent. Please note that in the context of this section the term “issuer’s agent” is used as a generic term to describe any agents supporting the issuance or distribution process for the issuer.

##### 9.1.1.2. Option 2: Issuance account and distribution account

Some issuers/issuer’s agents require the set-up of an additional distribution account for parking the issued securities until final distribution orders are available for crediting the securities accounts of initial owners. This distribution account is a normal securities account in T2S. It could be in the name of the issuer or the issuer’s agent.

In the post-T2S environment, issuers and issuer agents involved in the settlement aspects of issuance will be able to choose the CSDs in which they want to hold their distribution accounts, irrespective of the CSD in which the actual issuance is settled. As a result, it is possible that the distribution account is with a CSD different from the issuer CSD such that all distributions of a given issuer or issuer’s agent take place via one CSD. This gives issuers and issuer agents the chance to pool their distribution activities with one CSD, while issuing securities in different markets.

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<sup>35</sup> Adapted from AFME glossary of financial terms: <http://www.afme.eu/Glossary-of-Financial-Terms.aspx#>.

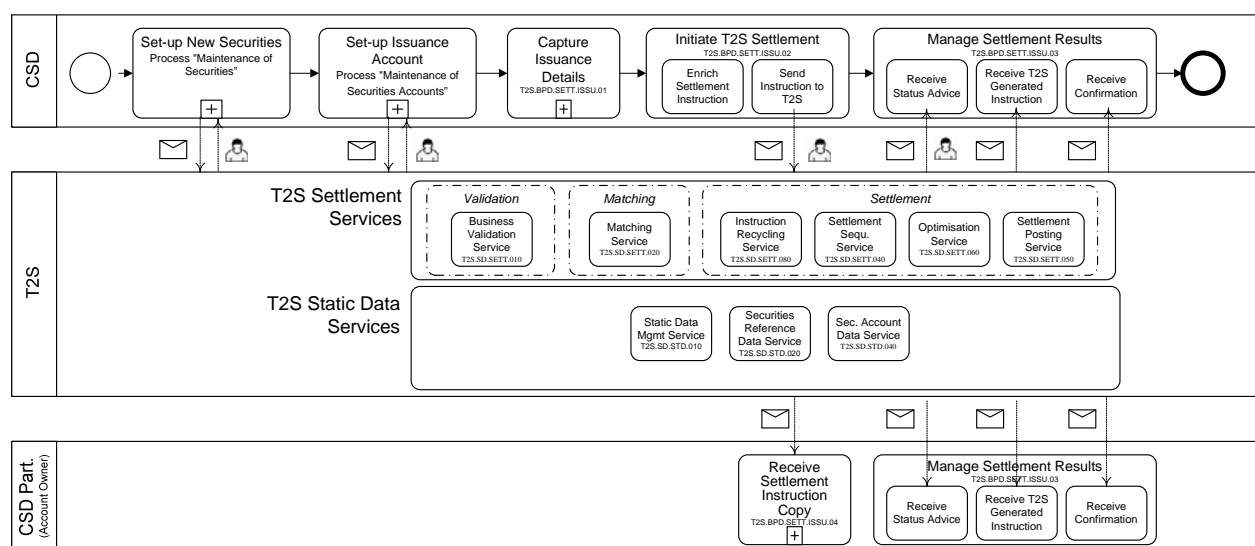


## 9.1.2 Issuance processing with T2S

In the Business Process Description (BPD) the generic issuance process in the post-T2S environment is described. It depicts those steps of the issuance process related to settlement in T2S. For the purpose of clarity it is assumed that the issuer or issuer's agent always instruct via the CSD, however, scenarios of direct instruction by an issuer or issuer's agent are also possible and will be highlighted in the text.

For details, refer to process "Issuance of Securities [T2S.BPD.SETT.ISSU]" in the BPD, available online: <http://www.ecb.int/paym/t2s/about/keydocs/html/index.en.html>.

**Figure 30: Business Process Diagram for Issuance in T2S (source: BPD v1.0)**



The following steps need to be carried out:

1. **Maintenance of Securities:** The CSD needs to set-up the new securities in the CSD systems and T2S. For details on the creation of a security, refer to the process "Maintenance of securities [T2S.BPD.STDA.MSEC]" in the BPD.
2. **Maintenance of Securities Account:** The CSD might need to set-up a new issuance accounts in the CSD systems and T2S. The issuance account in T2S must have the capability to store negative (i.e. debit) values for securities positions. For details on the creation of a securities account, refer to process "Maintenance of Securities Account [T2S.BPD.STDA.MSAC]". The issuer/issuer's agent that already holds an issuance securities account with the CSD (and in T2S) can use the same issuance securities account for all the securities it issues, unless it needs to segregate issuance accounts based on ISINs for tax, regulatory or operational purposes.

The set-up of securities reference data and issuance accounts is a precondition for CSDs to process issuance information regarding the initial owners of the securities.

3. **Capture Issuance Details:** The CSD receives the issuance information from the issuer/issuer's agent and validates it. The issuance information contains details such as the securities account to be credited (e.g. account of investors or intermediaries), the quantity of securities, etc. The CSD validates the issuance information against its securities and securities account reference data.

4. **Initiate T2S Settlement:** The CSD creates and enriches the settlement instructions with T2S specific information such as T2S securities account numbers corresponding to the issuance and participant account numbers in the CSD and delivery and receipt securities position types. While in some markets, the respective CSD may send an already matched instruction for delivering securities from issuance account to CSD Participant account, there are other markets wherein the CSD Participant has to send a matching settlement instruction.

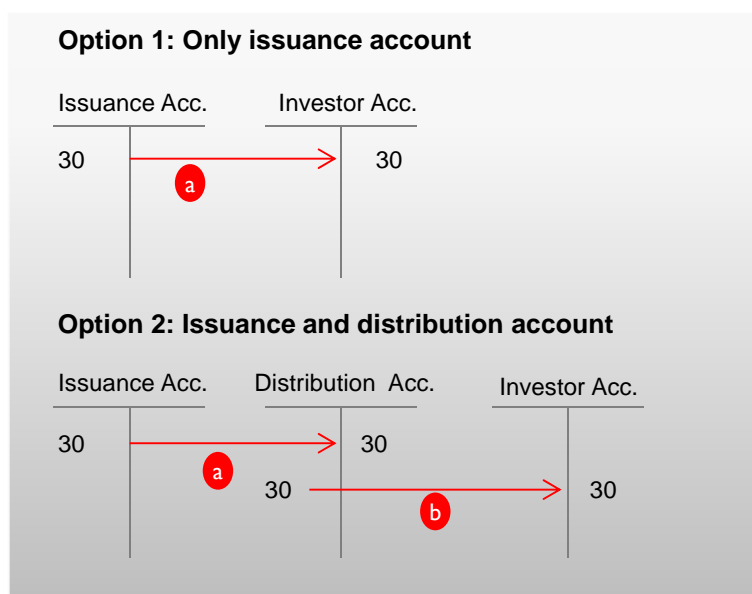
***For option 1 (only issuance account):***

- a) Settlement instructions to debit the issuance account and directly credit the initial holders' securities accounts are sent by the CSD to T2S. Usually this is done as a FoP transaction. If there is a requirement to use DvP instructions for the purpose of issuance, the issuance account needs to be linked to a Dedicated Cash Account (DCA). Otherwise the issuance would be instructed as FoP. There is no limitation regarding the set-up of links between securities accounts and DCAs i.e. one issuance account can be linked to several DCAs (and vice versa).

***For option 2 (issuance and distribution account):***

- b) For the actual issuance step, settlement instructions are sent (by the CSD to T2S) to debit the issuance account and credit the distribution account, usually as FoP.
  - c) For the distribution step, settlement instructions are sent (by the CSD to T2S) to debit the distribution account and credit the initial holders' securities accounts, usually as DvP. Settlement instructions in the distribution step may be instructed to settle individually or on an "All-or-none" basis.
5. **Manage Settlement Results:** The CSD receives status advice messages for every change of status or update of reason code to the settlement instruction within T2S.
  6. The CSD receives and validates settlement confirmation messages for the settlement instructions sent earlier to T2S and also receives the T2S generated settlement instructions.

**Figure 31: Bookings for options 1 and 2**



### 9.1.3 Set-up of privileges and restrictions for issuance processing

#### 9.1.3.1. Limiting access to the issuance account using privileges

The issuance accounts in T2S can only be held in the name of the CSD. However, the CSD has the possibility to grant access to the issuance account, e.g. to issuer agents. In T2S this can be achieved by implementing privileges on the issuance account. Object privileges can be used to grant access on the issuance accounts to specific user groups only e.g. Issuer Agents. The CSD must authorise the issuer's agent to use the issuance account. In this case the privileges check "Send New Settlement Instruction on a Securities Account" shall be used. For details refer to UDFS Chapter 1.3.2.

#### 9.1.3.2. Restricting issuer's agents to specific ISINs using settlement restrictions

In general, an ISIN can be issued by one or more specified issuer agents only. In case the issuer agents are indirectly connected via the CSD, the CSD can validate if an issuer's agent is allowed to issue certain ISIN. If the issuer's agent is directly connected to T2S the CSD must set up settlement restrictions in T2S in order to validate that the issuer's agent is allowed to instruct on the ISIN.<sup>36</sup>

In T2S this can be achieved by setting up settlement restrictions on the settlement instructions such as to permit instructions from issuer agents on specific ISINs only (to prevent that the Issuer Agents do not issue securities that are not assigned to them).

For details refer to UDFS Chapter 1.2.1.8.

<sup>36</sup> In addition CSD can also specify the issuance accounts related to an ISIN when configuring the securities CSD link. This set-up ensures that issuance of an ISIN can only be done from the identified issuance account.

### **9.1.3.3. Freezing of an ISIN using intraday restrictions**

Intra-Day Restrictions: to block settlement on specific parties, securities and securities accounts, external RTGS accounts and T2S dedicated cash accounts; e.g. to block settlement on the issuance account after a certain period of time (in some markets called “initial placement period”).

In addition, it might be necessary to temporarily “freeze” the ISIN being issued in order to prevent settlement of the ISIN before the issuance process is completed.

In T2S, this will usually be achieved by specifying issuance date upon creation of the security (Security Creation Request). In this case, settlement by Investor CSDs or CSD participants cannot occur before the issuance date is reached.

In cases where the Issuer CSD has not completed the issuance process by the start of the issue date, the Issuer CSD may intend to stop settlement on that ISIN. An intraday restriction, which aims at blocking settlement on static data objects (such as parties, securities, securities accounts) can be applied to “freeze” the ISIN: either through the Security Creation Request upon creation of the security, or through the Security Maintenance Request, if the security has already been created in T2S.

The intraday restriction only applies to instructions in the purview of the CSD which has set it up. In the cases where settlement results in realignments in the Issuer CSD, blocking of ISIN in the Issuer CSD (i.e. intraday restriction) would indeed prevent settlement of these instructions. However, whenever an intra-CSD settlement takes place within an Investor CSD, there is no realignment instruction; therefore the intraday restriction set-up by the issuer CSD does not apply. As a result, it is recommended that Investor CSDs where the ISIN is eligible for settlement should as well block the ISIN using an intraday restriction in order to make sure that there is no settlement on the specific ISIN before issuance.

## **9.1.4 Specificities of funds issuance**

### **9.1.4.1. Option A: Use of TA’s issuance account**

In the particular case of funds, another three-tiered account structure is currently frequently used: in addition to the issuance account there is a transfer agent’s issuance account (i.e. a T2S issuance account which can have a negative/debit balance) in the name of the transfer agent (TA), and possibly another distribution account (normal securities account). This approach allows for the CSD to hand the funds issuance settlement over to the TA and giving the TA the freedom to conduct the issuance out of its account. The TA can then conduct mark up and mark down operations in order to increase or decrease the issue amount based on subscriptions and redemption orders received. Keeping issuance accounts for every TA gives CSDs also the possibility to use the services of multiple TAs.

In T2S it is possible to implement this account structure as well. However, it needs to be noted that the T2S issuance accounts need to – from a technical perspective – belong to the CSD. For setting up the TA’s issuance accounts this implies that the CSD will create the issuance accounts and need to grant the respective privileges to the TAs. There is no limitation on the number of issuance accounts per ISIN, only

if the CSD wants to use the Security CSD links to manage the issuance for a respective ISIN; the current limitation of 10 issuance accounts per ISIN applies.

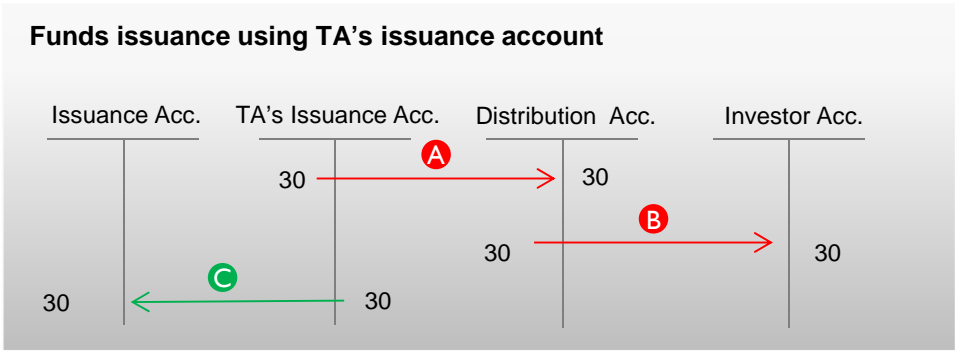
The particularities in the process are the following:

- a) For the issuance step, the TA sends settlement instructions to debit the TA’s issuance account and credit the distribution account. Settlement instructions may be instructed to settle individually or on an “All-or-none” basis. In addition, the TA has the possibility to conduct mark up and mark down operations (on TA’s issuance account against issuance account) prior to the transfer to the distribution account. Analogously to option 1 it is also possible to distribute directly from the TA’s issuance account to the Investor account. In this case distribution can take place as FoP or DvP, provided the issuance account is linked to a DCA. If more than one issuer agent has access to a single issuance account, more than one DCA need to be linked for the issuance account (unless the issuer agents use the same payment bank).
- b) For the distribution step, the TA sends settlement instructions to debit the distribution account and credit the initial holders’ securities accounts. Settlement instructions may be instructed to settle individually or on an “All-or-none” basis.

The TA could link the settlement instructions related to the funds issuance (movement a) with the settlement instructions related to distribution of fund shares to the investors (movement b) in order to ensure that the funds are distributed along with the issuance. There are two options for linking these instructions in T2S: either by specifying a “WITH” link between them or by specifying the same pool reference in all instructions.

- c) Periodically (e.g. daily, monthly or annually), the TA’s issuance account needs to be aligned with the issuance account. The TA sends a settlement instruction to credit/debit the TA’s issuance account and the CSD instructs the debit/credit the issuance account, such that the balance in TA’s issuance account is back to 0.

**Figure 32: Funds issuance using TA’s issuance accounts**



#### **9.1.4.2. Option B: Use of T2S privileges without use of TA's issuance account**

In the context of T2S it could be possible to avoid the use of an additional TA's Issuance Account. By granting privileges to a TA for instructing on the (CSD's) issuance account for specific ISINs only, the use of additional TA issuance accounts is no longer necessary. In this case the bookings would be the same as in Option 1 or 2 above, the only difference being that the TA instructs the issuance account. There is no limitation on the number of issuance accounts per ISIN, only if the CSD wants to use the Security CSD links to manage the issuance for a respective ISIN; the current limitation of 10 issuance accounts per ISIN applies.

For more details on funds in the context of T2S, refer to the result of the T2S funds workshops <http://www.ecb.int/paym/t2s/governance/extmtg/html/mtg24.en.html>.

#### **9.1.5 Issuance and T2S auto-collateralisation**

Securities may be used for auto-collateralisation transactions on their issue date. For this purpose, T2S will always take the collateral price of the previous day.

Securities which are issued intra-day<sup>37</sup> cannot be used for auto-collateralisation transactions "same-day" but only as from next day i.e. the collateral price of the day before the issue date will not exist for intra-day issued securities.

However, it is possible to create a security before its issue date and for the Central Banks to send in the securities valuations also before the issue date (as long as they are sent after the securities have been created in T2S i.e. within a timeframe of 15 minutes). In this case, the securities will be used for auto-collateralisation transactions on their issue date.

#### **9.1.6 Issuance and cross-CSD settlement**

Cross-CSD settlements, i.e. settlements between securities accounts of participants belonging to two different CSDs, are in the context of issuance treated like any other cross-CSD settlement. The TFAX is not aware of any additional requirements in a cross-CSD context.

An impact in a cross-CSD context is therefore not apparent. The settlement will take place according to the normal cross-CSD processing.

### **9.2 TFAX findings**

The TFAX analysis showed that there are multiple ways of handling issuance in T2S: 1) Distribution can take place directly from the issuance account or 2) in addition a distribution account is used. The set-up of T2S restrictions and privileges allows for flexibility in handling additional limitations such as freezing of an ISIN or limiting access to issuance accounts. For funds issuance specifically the T2S privilege model

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<sup>37</sup> A security issued intra-day relates to a security whose issuance process described in this section is performed on the issue date of the security (i.e. those securities having current settlement day equal to the issue date when the security is created in T2S).

allows for a set-up of issuance accounts that is less complex than most models currently in use. In the context of the mini-consultation, no additional issues were raised.

**The TFAX comes to the conclusion that from a T2S and cross-CSD perspective no issues are apparent in the context of issuance.**

## **10. Message fields**

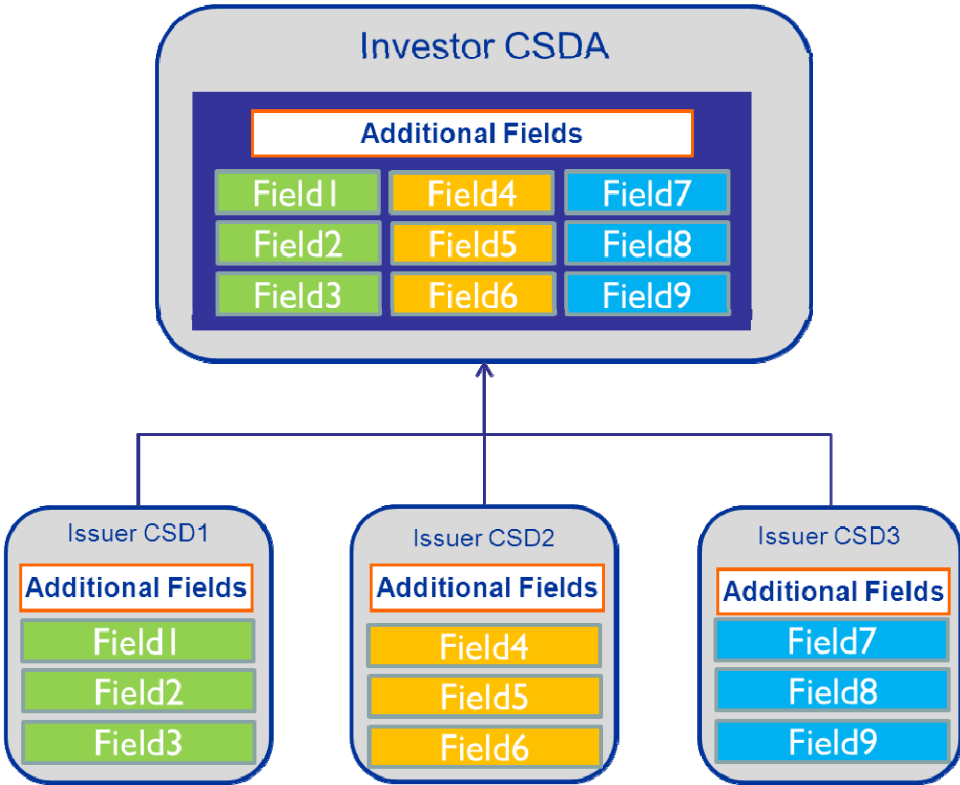
Even though some fields have been removed from the message schemas due to the customisation for T2S, in the particular case of settlement instruction message, there are a lot of fields that T2S will not use for processing (e.g. neither for validation, nor for matching). These additional fields can be used by the T2S actors to pass on additional information they deem required to perform their settlement activities, or to support other adjacent processes (tax related, regulatory or others).

### **10.1 Impacts of requiring additional message fields**

In the case where each CSD requires, its participants and Investor CSDs to populate a certain number of these additional fields, this could lead to substantial complexities for all investor (CSDs) involved, potentially hampering cross-CSD settlement. A CSD participant could have several different ways of instructing settlement depending on where the security is issued, thus needing to distinguish between markets for the population of each field. This would also require participants to collect and maintain the necessary details from their participants, which might in many cases, be highly difficult to achieve. For instance, in the picture below, there is a situation where Investor CSDA is required by three Issuer CSDs to input additional information into the settlement instructions. This will force Investor CSDA (or a DCP) to implement different ways of filling the settlement instruction depending on the security to be settled. This will turn more complex the T2S adaptation for the CSDs and their participants even though the additional information is not relevant for T2S settlement.



Figure 10: Complexities for Investor CSDs



It is important to highlight that the additional fields we are referring to here cannot be used as parameter types for the definition of additional CSD validations in T2S. For instance, Issuer CSD2 cannot set up a restriction rule in order to ensure that a particular value is populated into Field4 for settlement instruction involving a given security. This implies that, should a CSD impose on its market the presence of a given field, this could not be checked STP by the T2S application. The CSD would have to hold the instruction(s) and check it before releasing for settlement; or in case of failure, cancel the instruction of its participant. This would impose a break into the settlement process and potentially cause a delay of the settlement after intended settlement date. In contrast to this, CSD Validation Hold or rejection restrictions can only be placed on certain predefined message fields.

Also it is important to highlight that most fields not used by T2S in the settlement instruction will also not be populated into the realignment messages. As a result, it will not be possible for those fields to be used in a cross-CSD and external-CSD settlement scenario e.g. to pass information to the issuer CSD<sup>38</sup>. To a certain extent, statuses, confirmations and allegement messages do not return all additional fields that are present into the settlement instruction, thus limiting the propagation of the additional information. For more details refer to the [guide](#) to the Excel Spreadsheet attached.

<sup>38</sup> See section “Tax processing (Issue 2)” for more information on the limitations of using T2S messages to pass information to Issuer CSD via the realignment messages.

## **10.2 TFAX findings and recommendation**

In order to estimate the complexities which might occur as a result of message field population it is necessary to analyse the usage of message fields as foreseen by CSDs and other market participants. The results can be used to detect potential new issues which might hamper cross-CSD settlement in the T2S environment.

At the time of the second TFAX mini-consultation, only 6 markets were able to conduct the field assessment, i.e. the fields they plan to use in T2S or those which they think might be required in the future. All other markets were not progressed enough in their analysis or refrained from sending in preliminary results. The answers received show that only few fields were highlighted by markets as missing and none of them constitutes a showstopper based on the status quo. However, the impact of a missing field could not be gauged in all cases, thus the impact is not yet clear.

<p><b>The TFAX invites the HSG to re-conduct the survey on message fields with the markets in order to be able to fully gauge the impact in the second quarter of 2013.</b></p>
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## Annexes

### 11. Annex 1: Registration processing

This annex provides additional information on how to handle selected specificities related to registration in the context of T2S.

#### 11.1 Implementing on-demand registration

It is to be questioned whether an exception to the overall recommendation should be made for the particular case of on-demand registration. In this case, as mentioned in the process description above, the ISIN as a unique criterion (to determine for which securities (de)registration details are to be forwarded, refer to step 4 above) seems to be insufficient for securities with on-demand registration. There is a need to consider the investor's individual decision to trigger registration. There are theoretically two options for materialising the investor's choice:

Option 1) Account segregation: account would need to be segregated (similarly to the “nature de compte” practice in the French market) to determine whether or not a security requires (de)registration. Account segregation in this respect consists in having an account for bearer securities and an account for registered securities. Whether or not a security requires registration can be derived from the account which is being instructed. If this segregation was implemented not only in the intermediary system, but also in the settlement system, this would require all investor CSDs to implement a dedicated account to settle registered securities in their account structures. This approach would raise the complexity of account structures for all investor CSDs and involved intermediaries.

For more details refer to section “Transmission and maintenance of information in a cross-CSD context”.

Option 2) Additional message field: An additional message field could be used to pass on the information whether or not registration is desired. If this information is not only provided to the intermediary but also implemented in the T2S settlement instructions with the aim of using T2S as a vehicle for transmitting the information through the chain of CSDs, it would have the major drawback of being insufficient in some settlement scenarios analogous to the analysis under 2.2.3.

For more details refer to section “Transmission and maintenance of information in a cross-CSD context”.

In all cases, it has to be questioned whether information needed for registration, but not relevant for settlement, should to be sent to T2S by the intermediary and extracted again from T2S by the same intermediary. As established above, the intermediary should receive all details required for registration in step 1) from the investor (or another intermediary). This information should include the details whether registration is wanted by the Investor or not. In this case the information does not need to be transmitted

via T2S just to be extracted again one step later. The only information required from T2S is the confirmation of settlement.

As a result, registration details should be passed on completely outside T2S. T2S should not contain information serving the registration process that is not relevant for settlement.

## **11.2 Implementing registration as a condition for the transfer of ownership**

In the cases where the issuer aims at controlling the transfer securities outside a certain type of shareholders, the issuer needs to verify and authorise (or reject) the transfer of ownership on its securities prior to settlement. In the post T2S environment, for these securities requiring the confirmation by the issuer, T2S Hold and Release mechanisms<sup>39</sup> should be used in order to defer settlement until the authorisation by the issuer is received.

## **11.3 Nationality declaration**

Some companies require the transferees to declare the nationality of beneficial owner(s) or persons having an interest in the securities being transferred, to the registrar. This information is used for monitoring the levels of ownership of the company by foreign nationals. E.g. some companies' securities cannot be held by foreign nationals beyond a certain percentage. The CSD validates that the nationality information is specified in the transactions that are related to the specific companies. Without the nationality declaration, these share transfers cannot be registered. In cases where the company finds that the percentage of securities held by a foreign national are beyond the allowed percentage, the company sells or repurchases the securities from the foreign investor.

The nature of the nationality declaration shows similar traits as that of registration. Just like any other registration, the Nationality Declaration:

- 1) provides issuer with information about shareholders (difference being that merely the nationality is to be disclosed and not the entire identity of the investor);
- 2) serves as a means for issuers to control the ownership of their securities;
- 3) is applicable only for a limited number of ISINs, depending on the issuers' choice;
- 4) requires the passing of information about end-investors up the intermediary chain to the registrar and finally the issuer (in a national and cross-border context).

For this reason the processing of information required for the nationality declaration is to be treated analogously to the registration, in particularly the model of handling registration and settlement as distinct processes. The task force therefore recommends that information required for the nationality declaration should be passed outside T2S to the issuer.

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<sup>39</sup> CSD Validation Hold or Conditional Securities Delivery (CoSD)

## 11.4 Registration as a general condition for settlement

In some direct holding markets, registration is not understood as an issuer service but is attributed a different meaning. Here, the execution of registration by the CSD is tantamount to (1) the finalisation of settlement **and** (2) the completion of the transfer of the security to the end investor. In these countries, omnibus accounts held by the CSD in T2S do not have sufficient legal value to fulfil also the function of a legally valid register (record) for the transfer of ownership [above (2)]. The T2S Framework Agreement requires CSDs to ensure the “irrevocability, enforceability and un-conditionality of securities and cash transfers” in securities and cash accounts in T2S (settlement finality III, SF III)<sup>40</sup>. From this follows that a CSD may not define SF III to be reached after settlement in T2S, but at the time of settlement in T2S.

In adapting to T2S, these markets might conceive that settlement in T2S should be preceded by the “registration” of the settlement transaction on a legal record in the CSD (e.g. the end-investor accounts kept in the local CSD system) that is distinct from the securities accounts in T2S.

In order to implement this mechanism, settlement in T2S would need to be deferred until the “registration” outside T2S has taken place. This would require the systematic use of Hold and Release mechanisms, which will lead to a delay for every single settlement instruction on the accounts of the respective CSDs.<sup>41</sup>

The purpose of this set-up would be to allow for the completion of the transfer of ownership in compliance with the local legislation by means of deferring T2S settlement. Such a solution would lead to a delay of settlement for every settlement instruction of the respective CSDs’ accounts.

CSDs in T2S need to implement a settlement process that complies with the contractual requirement stated in Article 20(4)(b) FA, i.e. that the settlement on securities accounts in T2S is the only relevant reference point for SF III. As a result, implementing a “registration” process prior to settlement would not be necessary and therefore impractical systematic use of Hold and Release mechanisms for all settlement instructions on the accounts of the respective CSDs could be avoided.

## 12. Annex 2: Tax processing

This annex details the potential message fields for tax processing. In addition, the use of Market Specific Attributes and restriction rules is explained.

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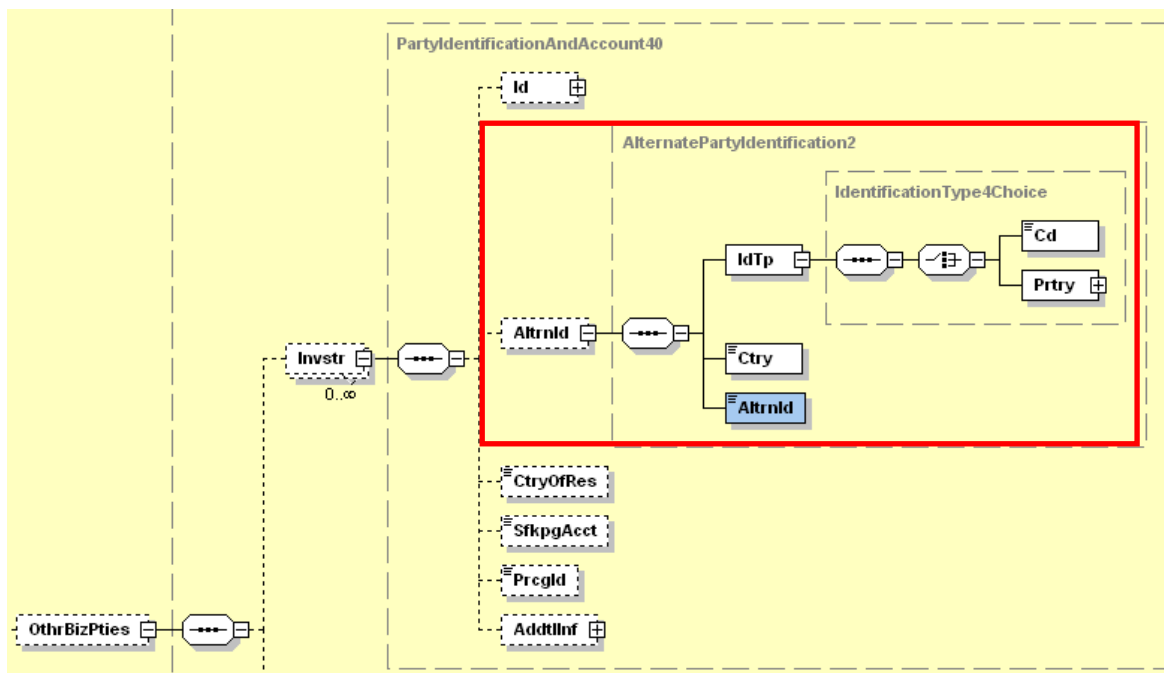
<sup>40</sup> T2S Framework Agreement, art. 21, par. 4.

<sup>41</sup> The Conditional Securities Delivery (CoSD) functionality could, in principle, provide for this set-up.

## 12.1 Tax related fields in ISO20022 settlement instruction message<sup>42</sup>

### 12.1.1 Potential candidates

The <AltrnId> element within the Investor block of the settlement instruction (hereunder circled in red) could be used as per the ISO definition to pass on tax related information such as a Tax Identification number or a Tax exempt Identification number.



<sup>42</sup> sese.023.001.02

### 12.7.15 IdentificationType <IdTp>

**Synonym(s):** :95S::ALTE/[4!c[4c]]/4!c (ISO 15022)

**Presence:** [1..1]

**Definition:** Specifies the type of alternate identification of the party identified.

**Type:** This message item is composed of one of the following *IdentificationType4Choice* element(s):

Ref	Or	Message Item	<XML Tag>	Mult.	Represent./ Type
12.7.16	{Or	Code	<Cd>	[1..1]	Code
12.7.17	Or}	Proprietary	<Prtry>	[1..1]	

### 12.7.16 Code <Cd>

**Presence:** [1..1]

This message item is part of choice 12.7.15 *IdentificationType*.

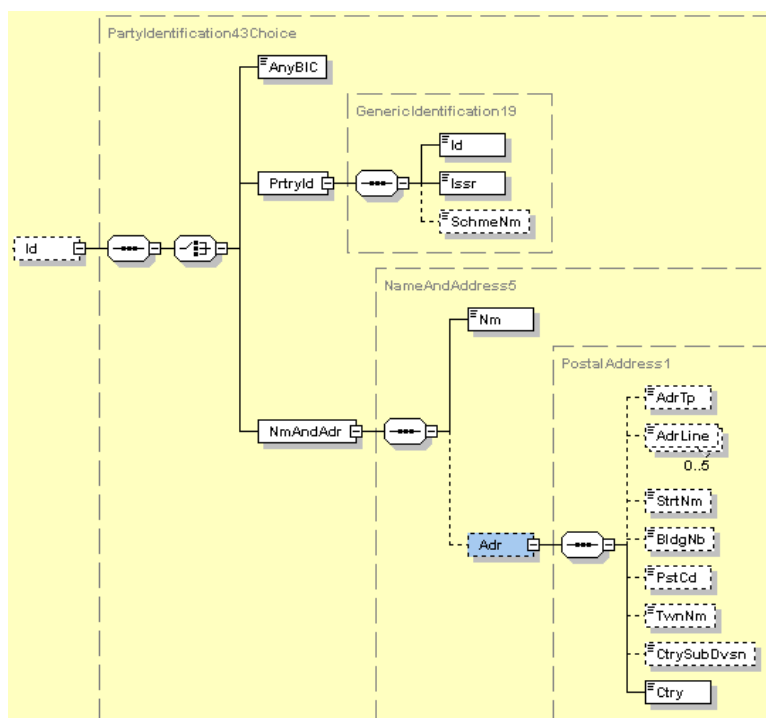
**Definition:** Type of identification is defined using a code.

**Data Type:** Code

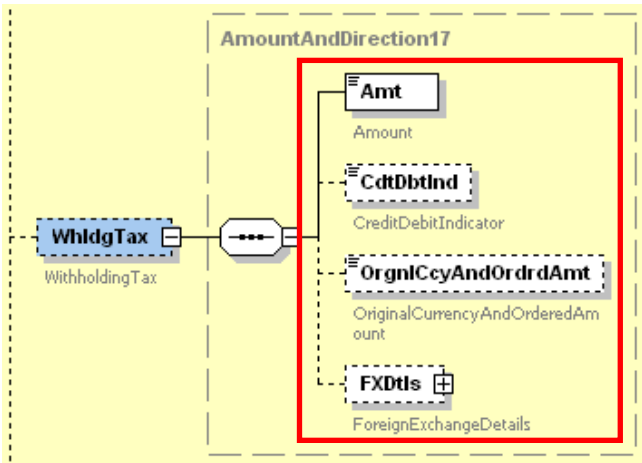
One of the following *TypeOfIdentification1Code* values must be used:

Code	Name	Definition
ARNU	AlienRegistrationNumber	Number assigned by a government agency to identify foreign nationals.
CCPT	PassportNumber	Number assigned by a passport authority.
CHTY	TaxExemptIdentificationNumber	Number assigned to a tax exempt entity.
CORP	CorporateIdentification	Number assigned to a corporate entity.
DRLC	DriverLicenseNumber	Number assigned to a driver's license.
FIIN	ForeignInvestmentIdentityNumber	Number assigned to a foreign investor (other than the alien number).
TXID	TaxIdentificationNumber	Number assigned by a tax authority to an entity.

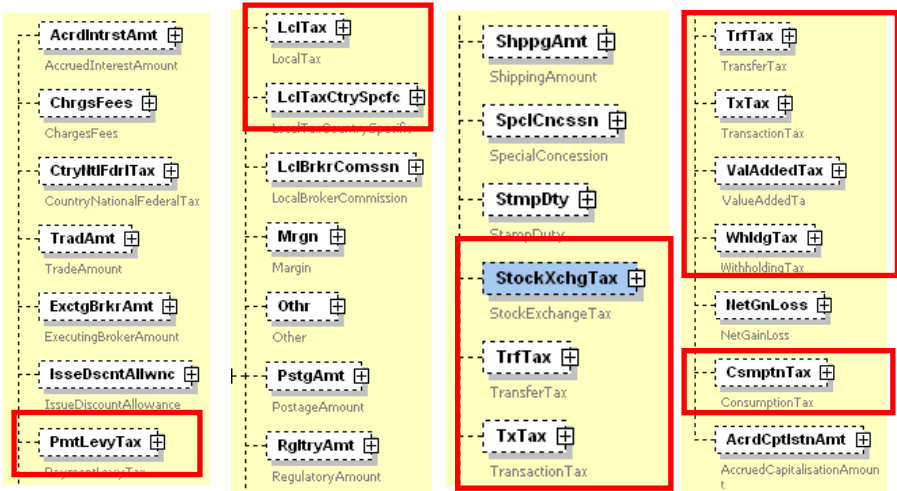
In addition, in the same Investor block, it is possible to specify the Identification of the Investor. The ISO20022 structure allows identifying the Investor either via BIC, proprietary ID, or using Name and address of the Investor.



Finally, other fields can be used to pass on information regarding a particular transaction tax type specifying the amount, a debit/credit indicator, currency and other details.



Different types of tax can be covered by these fields, e.g. Payment Levy tax, Local tax, Transfer tax, Transaction tax, Withholding tax.



### 12.1.2 Availability of fields in T2S messages

As per the description in the section “Transmission and maintenance of information in a cross-CSD context” passing additional details via settlement messages would require having the fields available into the settlement instruction, the realignment message<sup>43</sup> and the confirmation<sup>44</sup>. The availability of the fields in the current T2S customised schema files is the following:

<sup>43</sup> sese.032.001.02

<sup>44</sup> sese.025.001.02



	ISO	T2S
Settlement instruction	YES	YES
Realignment	YES	NO
Settlement confirmation	YES	NO

## 12.2 Use of Market Specific Attributes and restriction rules

As stated earlier, at a technical level in T2S, there are possibilities for any CSD to “flag” its own securities accounts using “Market Specific Attributes”, e.g. for instance the following values are defined for all CSDs:

Name	Values
Tax Type	1,2

The CSD could keep this information internal and maintain a mapping in its system so that it knows which accounts are of type 1 and which accounts are of type 2. Defining these “Market Specific Attributes” in T2S has the advantage to allow afterwards using these flags and their value as parameters for the set-up of restriction rules in T2S. In T2S there is a possibility for the CSDs to define additional validations based on a set of parameter such as account number, ISIN, account owner etc... These additional validations result in either:

- Acceptance of an instruction
- Hold of an instruction for further checks by the CSD (CSD Validation Hold)
- Rejection of an instruction

A CSD could as well define restriction rules not using the Market Specific Attribute of the securities accounts, but using the account itself as a parameter. This would result of course in increasing the total number of rules the CSD has to set-up in static data as rules have to be set-up for each account.

In some cases, the account segregation is not sufficient to define whether a particular instruction is subject to tax or not; therefore other differentiating criteria can be used. For instance, there are in some markets securities for which a certain tax status is applied, independently of the securities’ account tax type.

Here again, a pan European agreement on the possible harmonised tax classification for securities would be required. The security “tax type” could be maintained in T2S using the MSA at Security level. The CSDs would be able to use these market-specific attributes values as parameter types for the set-up of restriction rules (possibly in combination of the ones used for securities account). It is also possible to define MSA to the Party object in T2S, therefore it would also be possible to flag each T2S Party as having a given tax type.

## 13. Annex 3: Portfolio Transfers

This annex details how portfolio transfers are handled in various markets as of today and lists the ISO transaction codes applicable for portfolio transfers.

### 13.1 ISO Transaction codes for portfolio transfers

Type of transfer	ISO20022 Code (SctiesTxTp)	ISO15022 Code
Internal transfer	OWNI	:22F::SETR//OWNI
External transfer	OWNE	:22F::SETR//OWNE

### 13.2 ISO Transaction flag for transfer of beneficial ownership

Change of beneficial ownership	ISO20022 flag	ISO15022 flag
No change of beneficial ownership	SctiesSttlmTxInstr/ SttlmParams/ BnfclOwnrsh/Ind (Value No)	22F::BENE//NBEN
Change of beneficial ownership	SctiesSttlmTxInstr/ SttlmParams/ BnfclOwnrsh/Ind (Value Yes)	22F::BENE//YBEN

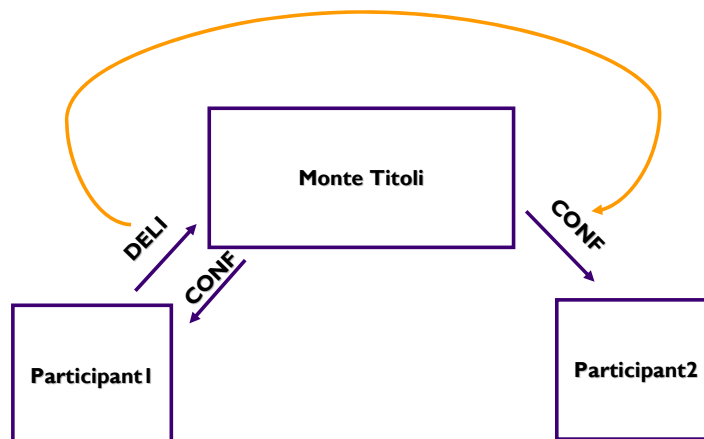
### 13.3 Italian example

#### 13.3.1 Current process

Today, the custodian (CSD participant) delivering the portfolio instructs Monte Titoli with an FOP instruction that do not require matching at the CSD. Upon receipt of this instruction, the CSD settles the instruction and credits the receiving custodian's [CSD participant (new custodian)] securities account. Both CSD participants receive a settlement confirmation from the CSD.

The settlement confirmation received by the receiving custodian contains details that have been provided by the delivering custodian into its instruction.

**Figure 1 – Italy portfolio transfer current process**



### 13.3.2 Information requirements

When instructing the CSD, the delivering custodian provides the following information into the settlement instruction. The information is extracted from the delivering FOP and transmitted into the confirmation that flows to the receiving custodian.

**Table 1 – Italy portfolio transfer information requirements**

Field <sup>45</sup>	Information	Sample data
R717	References fiscal data of the beneficiary	11417076911MT
R77A1	Buying clear price	13.865408
R77A2	Clear price exchange rate	1
R177	Currency of buying clear price	EUR
R77A5	Regime type indicator	A
R77B	Delivery to a different holder	S
R77A3	Net Asset Value	13.909777
R77A4	Net Asset Value exchange rate	1
R032	Value date	20110320
R779	Data of beneficiary	BELLETTI DANILO

## 13.4 French example

### 13.4.1 Current process

Today, a similar procedure is used in France, e.g. the delivering custodian instructs the CSD with an instruction that does not require matching. Once settled, the CSD sends confirmations to the two participants similarly to the Italian process.

### 13.4.2 Information requirements

The information transmitted is the following:

<sup>45</sup> Monte Titoli proprietary message

Information <sup>46</sup>	Sample Data
First Name	Alexandre
Last Name	Dupont
French part of the IBAN of the beneficiary	XXX
Cost price for each line of transferred securities	XXX
Date of purchase of securities	XXX

## 13.5 Dutch example

### 13.5.1 Current process

The participants of the Dutch market have agreed in 2009<sup>47</sup> to abolish the “dump” practice for portfolio transfers, e.g. not to use anymore unilateral FOPs. Matching is required up to 3 levels in the Dutch market except for portfolio transfers where ING Bank receives the securities in a specific account<sup>48</sup>.

### 13.5.2 Information requirement

The Dutch portfolio transfer practice requires matching up to 3<sup>rd</sup> level (e.g. CSD, CSD participant, Intermediary Bank (including safekeeping account held by the beneficiary at the intermediary bank). In some cases, the CSD participant might be the institution in which the beneficiary holds its account.

It is also possible for the Dutch participants to make use of a free text field in the settlement instruction to provide the additional information.

## 13.6 Belgian example

### 13.6.1 Current process

In Belgium the current process makes use of a standardised Fax between the two institutions holding the client’s accounts. Matching is recommended by the market practice; however for some exceptions dumping is allowed (e.g. no matching). It is also allowed that the receiving institution uses proxy (Power of Attorney) to initiate the transfer from the receiving side.

This has to be noted that this market practice was put in place on a temporary basis, e.g. the Belgian market participants agreed that on the long run a STP solution should be put in place.

### 13.6.2 Information requirement

Information	Sample data
<i>Sender Information</i>	
Name	KBC Bank NV

<sup>46</sup> Euroclear Proprietary messages

<sup>47</sup> Decision of the DACSI (Dutch Advisory Committee Securities Industry)

<sup>48</sup> Account #29111

Address	Havenlaan 12-1080 Brussels
BIC/SWIFT	KREDBEBB
<b><i>Sender's contact</i></b>	
Name	Sidonie Peeters
Telephone Number	+32 2 429 89 00
Fax Number	+ 32 2429 00 00
e-mail address	<a href="mailto:Sidonie.peters@kbc.be">Sidonie.peters@kbc.be</a>
<b><i>Client information</i></b>	
Name of instructing client	Jan Janssens
Account number of the client with addressee	056-8242332-36
<b><i>Transaction details</i></b>	
Transaction reference	165300
Quantity of security	500
ISIN code	NL0000009538
Name of Security	Philips Electronics NV
Name of delivering Custodian	KBC Securities
BIC of delivering Custodian	KBSEBE22
A/C with delivering custodian	103001000
Name of Subcustodian (if any)	Kasbank Amsterdam
BIC of Subcustodian	KASANL2A
A/C with Sub-Custodian	223667048
External participant code	NECIGEF 300

Other information is required in the particular case of savings certificates.

## 13.7 German example

### 13.7.1 Current process

In Germany, there are currently portfolio transfers for both retail and institutional investors. For retail investors the process is quite similar to the above mentioned Italian case, e.g. delivery FOP is instructed by the delivering custodian, upon matching and settlement, confirmations are sent out to the delivering and receiving custodians.

In addition, upon the settlement of the transfer, the delivering custodian will provide to the receiving custodian the relevant tax details through a specific application in the CSD mentioning a settlement instruction reference allowing reconciliation of the tax details with the relevant settled instruction; the provision of tax details is only relevant in case of retail portfolio transfers, these details will not be provided to the receiving custodian in case of institutional clients. Since the introduction of the flat-rate

withholding tax (Abgeltungssteuer) in 2009, German banks and capital investment companies are obliged to provide tax-relevant data to the receiving institution in the case of a portfolio transfer of retail clients..

Regarding the matching, the German market gives the choice to either require counter instruction from participant for matching (“active matching participants”) of the delivery FOP or not (“passive matching participants”). Passive matching actually means that the CSD will generate the matching instruction itself on behalf of the custodian receiving the portfolio. In the retail business passive matching is usually used. For the institutional portfolio transfers however, usually the custodian banks require “active” matching.

## 13.8 Information requirement

The tax details are to be exchanged between delivering and receiving custodians in the case of retail portfolio transfers. The following type of information is exchanged:

Information	Sample data
Beneficial owner	XXX
Receiving Bank	XXX
Receiving Bank BIC code	XXX
ISIN	XXX
Name of the security	XXX
Quantity	XXX
Purchase price	XXX
Purchase date	XXX
Accrued interests (FIFO principle)	XXX
Type of transfer	XXX
Change of creditor	XXX

## 14. Annex 4: Bond stripping

This annex details how bond stripping is handled in various markets as of today.

### 14.1 Bond stripping/ reconstitution types

Two different types of bond stripping exist in the markets.

1) Stripping of all outstanding coupons: In some markets case, the stripping request from the participant will always result in one zero coupon Bond (stripped bond), and a number of all outstanding coupons. The participant need not instruct for receipt of the resulting coupons and stripped Bond.

2) Stripping of certain outstanding coupons: In some markets (e.g. Greece), stripping of only a certain number of unpaid coupons from the bond is also allowed. I.e. The stripped bond could still have the remaining set of coupons attached. In such markets the participants send a stripping request to the CSD

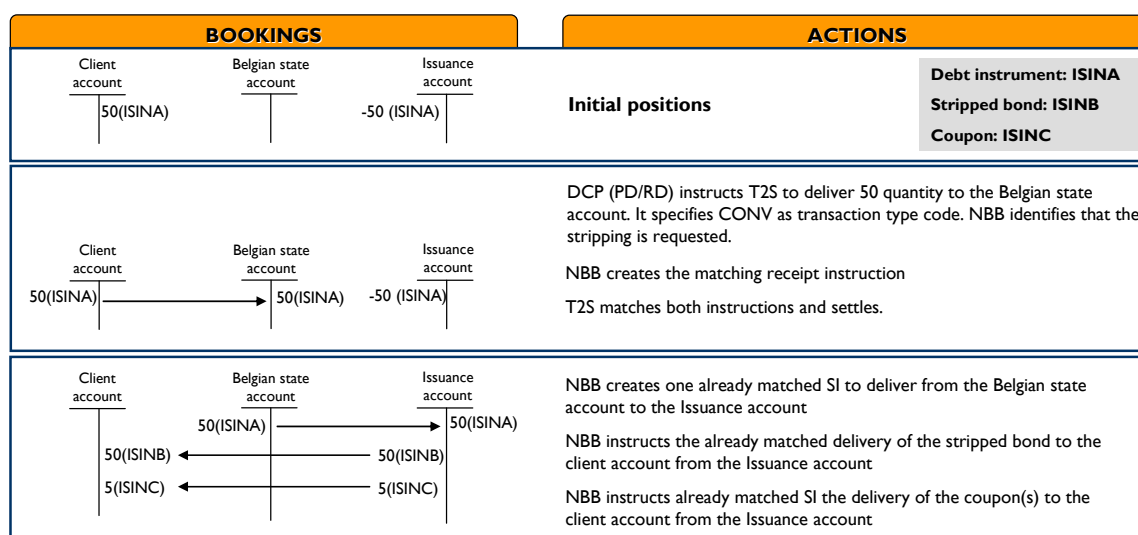
along with the details of which stripped bond and coupons it intends to receive. The participant sends a set of FOP instructions to the CSD, to effect stripping of bonds. There will be at least three FOP instructions; 1) Deliver Bonds ISIN to the issuer 2) Receive a certain stripped bond from the issuer 3) Receive certain coupons from the issuer (as one FOP per coupon). The issuer CSD validates if the amount of bonds requested for stripping is consistent with the amount of stripped bonds and coupons, and processes the instructions.

## 14.2 Belgian Example

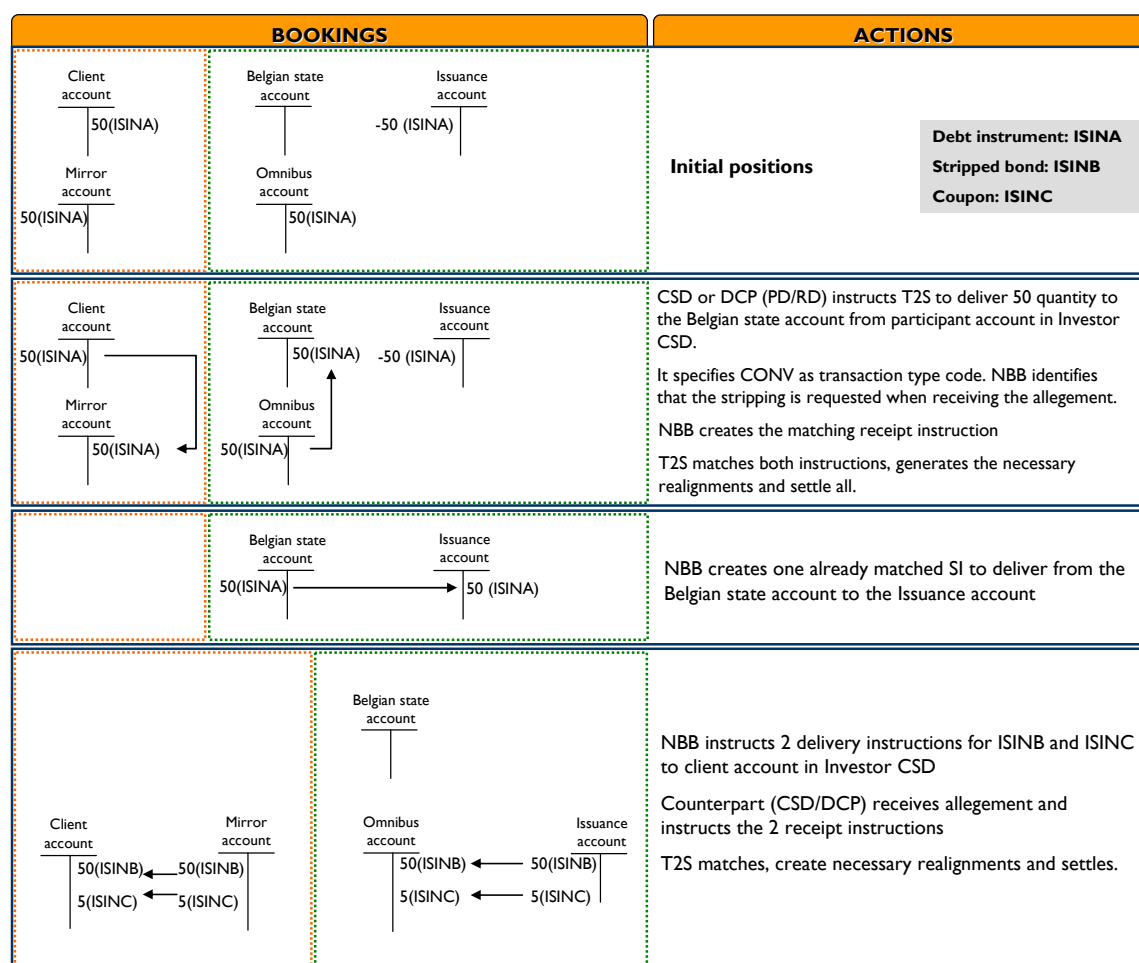
In Belgium, Bond stripping/reconstitution instructions are allowed only from a party who is a PD or a RD. NBB could allow direct connectivity for its participants to instruct stripping/reconstitution.

In this case, NBB can create an MSA at the level of party or at the level of a securities account (if this account has been segregated by the party) to identify a PD or RD. NBB could create rejection restriction rules based on this MSA. Bond stripping instruction could be implemented as a FOP instruction delivering into the Belgian state securities account.

**Figure 33: Intra-CSD scenario – current**



**Figure 34: Cross-CSD scenario – foreseen**



### 14.3 French example

Similar to Belgium, France distinguishes primary dealers and recognised dealers from other market participants. Only the PD/RD can instruct bond stripping instructions to the CSD. France foresees to implement the stripping/reconstitution of bonds as a service provided only via indirect connectivity.

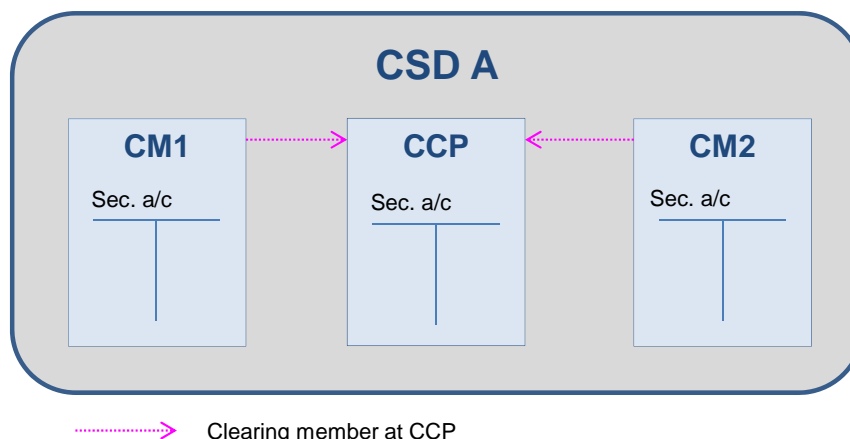
## 15. Annex 5: CCP Instructions

This annex illustrates examples of CCP settlement scenarios.



## 15.1 Intra-CSD CCP transaction (without interoperability)

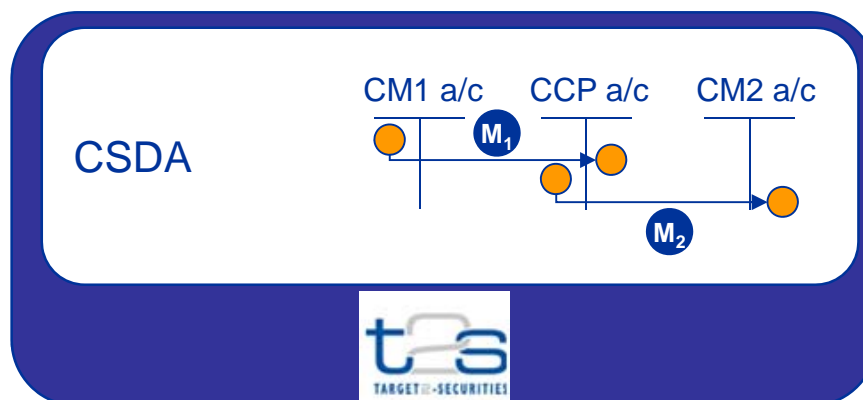
Figure 35: Scenario 1



In this scenario, both the CMs and the CCP maintain their securities accounts in a single CSD. Issuer CSD of the ISIN being settled can be different from CSD A. This scenario is supported currently by all CCPs e.g. EUREX Clearing AG.

In T2S this scenario can be achieved by creation of securities accounts in T2S for CMs, CCP by the CSD. Power of attorney on the securities accounts of the CM to CCP can be implemented using the ‘privileges’ in T2S i.e. CSD or CM can provide object privileges on CM’s securities accounts to the CCP.

Figure 36: Scenario 1 (movements)



After the conclusion of the trade (CM1 sells, CM2 buys) the CCP instructs two sets of settlement instructions to T2S.

Step 1: CCP instructs T2S for delivery of securities on behalf of CM1 against itself as counter party.

Step 2: CCP also instructs T2S for receipt instruction against CM1 as counter party.

The matching and settlement of these instructions (step 1 and 2) in T2S results in movement of securities from CM1 a/c to CCP a/c. (depicted as movement  $M_1$  in the above figure)

Step 3: CCP instructs T2S for delivery of securities against CM2 as counter party.

Step 4: CCP also instructs T2S for receipt instruction on behalf of CM2 against itself as counter party.

The matching and settlement of these instructions (step 3 and 4) in T2S results in movement of securities from CCP a/c to CM1 a/c. (depicted as movement  $M_2$  in the above figure)

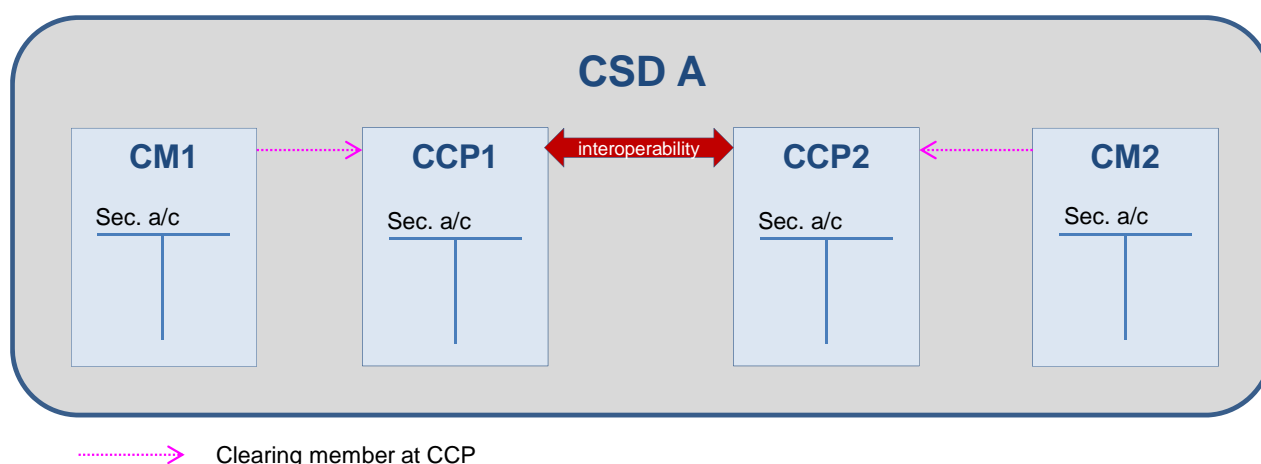
CCP can also instruct the settlement instructions in step 1 and 2 together as 'already matched'. Same applies for instructions in step 3 and 4 as well.

## 15.2 Intra-CSD CCP transaction with interoperability

This scenario includes two CCPs interoperating. The objective of interoperability between CCPs is to provide the trading and clearing participants on various trading venues the possibility to choose which CCP clearing service provider they want to use for different markets. This enables the market participants to consolidate their flows and to better manage their settlement flows and risk exposure. E.g. Swiss market allows participants to clear trades using one of the CCPs SIX-x-clear, LCH Clearnet Ltd. Currently without interoperability the trading parties require to be members of different CCPs (to access clearing services related to certain ISINs) and manage their risk exposure at each CCP separately.

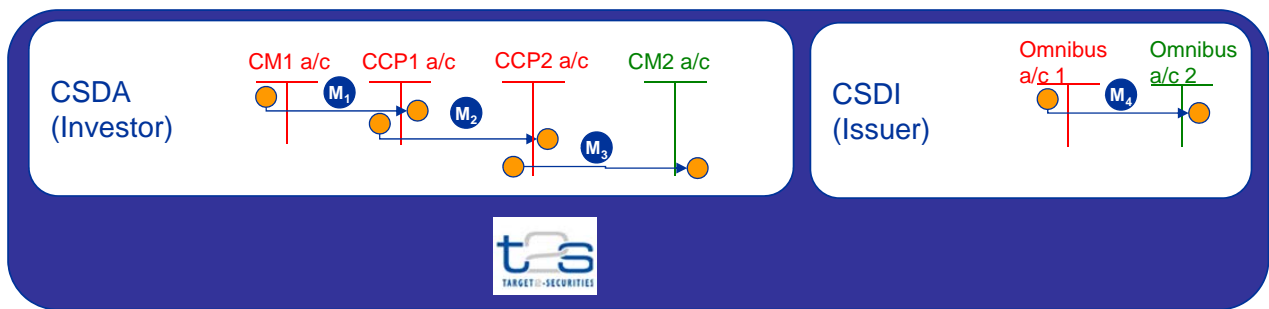
In the interoperability scenario, it is not required for a clearing member to be a member at a CCP, where its counter-part is already a member, in order to trade i.e. it is possible for clearing members to choose different CCPs.

**Figure 37: Scenario 2**



In this scenario the trading venues communicate the trade details to the relevant CCPs involved. E.g. in the above diagram, in case of a sell from CM1 to CM2, CCP1 will receive trade information with buyer as CCP2 (and seller as CM1). Similarly CCP2 will receive the trade information with seller as CCP1 (and buyer as CM2). For this scenario both CCPs must maintain their securities accounts in the same CSD (CSD A). However, CSD A does not need to be the issuer CSD, which can be a different CSD (see example below). Each CCP becomes a participant in other CCP with which it has an interoperability agreement. Considering the trade in the purview of the CCP1, the scenario resembles the one specified in section 5.1.1 (scenario 1)

**Figure 38: Scenario 2 (movements)**



In this scenario, both CMs (CM1, CM2) and CCPs (CCP1, CCP2) maintain securities accounts at the same CSD. CSD A does not need to be the issuer CSD, and for the example it is assumed that CSD I is the issuer CSD. It is assumed that the securities accounts of CM1, CCP1, and CCP2 are linked to omnibus a/c 1 in CSD I and securities account of CM2 in CSD A is linked to a different omnibus account (a/c 2) in CSD I.

The CCP1 has to instruct the transaction (i.e. sell by CM1 and buy by CCP2) as two sets of instructions. I.e. one for the movement of securities from the seller (CM1) to CCP1, second one for the movement of securities from CCP1 to CCP2.

Similarly the CCP2 has to instruct the transaction (i.e. sell by CCP1 and buy by CM2) as two sets of instructions: one for the movement of securities from CCP1 to CCP2, second for the movement of securities from CCP2 to CM2.

Step 1: CCP1 instructs T2S for delivery of securities on behalf of CM1 against itself as counter party. CCP1 also instructs T2S for receipt instruction against CM1 as counter party. The matching and settlement of these instructions in T2S results in movement of securities from CM1 a/c to CCP1 a/c. (depicted as movement 1 in the above figure)

Step 2: CCP1 instructs T2S for delivery of securities against CCP2 as counter party.

Step 3: CCP2 instructs T2S for receipt of securities against CCP1 as counter party.

T2S matches the instructions from Steps 2 and 3 and settlement of these instructions will result in movement of securities from CCP1 a/c to CCP2 a/c. (depicted as movement 2 in the above figure)

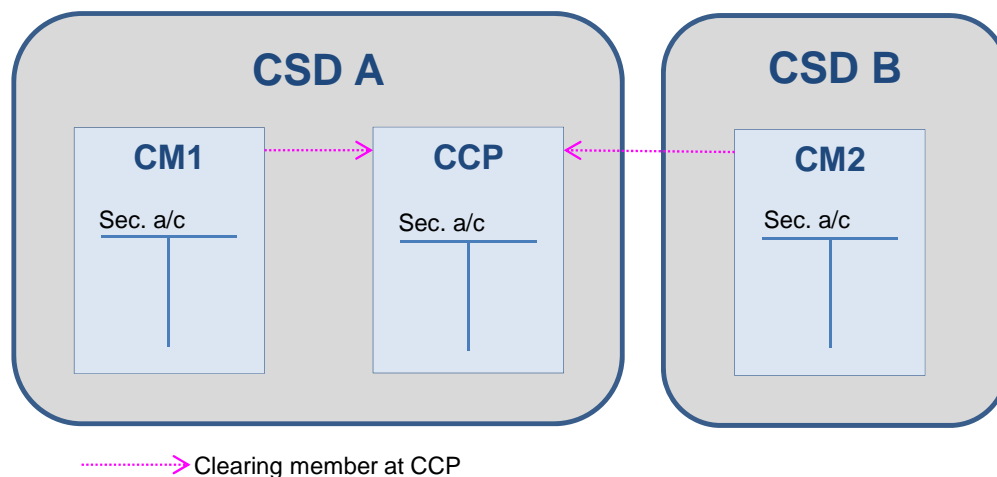
Step 4: CCP2 instructs T2S for delivery of securities against CM2 as counter party. CCP2 also instructs T2S for receipt instruction on behalf of CM2 against itself as counter party. The matching and settlement of these instructions in T2S results in movement of securities from CCP2 a/c to CM2 a/c. (depicted as movement 3 in the above figure). It will result in movement of positions between the omnibus accounts (from Omnibus a/c 1 to omnibus a/c 2) in issuer CSD I (depicted as movement 4 in the above picture) via T2S generated realignment instructions. Please note that since both CCPs and CMs have their accounts within the same Investor CSD, this scenario is considered an intra-CSD settlement scenario. Cross-CSD scenario

Currently, cross-CSD settlement of CCP transactions is handled by very few CCPs. The cost and complexity of realignment between CSDs, or the maintenance of accounts in several CSDs by the CCP

are some of the reasons for the rarity of the scenario. However, it is expected that in T2S context, cross CSDs settlement for CCP transactions will increase as any other cross-CSD transactions. Depending on whether only one or two CCPs are involved in the transaction and the location of CCP's securities account (i.e. which CSD), 4 scenarios are presented below. All scenarios are explained below considering an example of a sell trade from CM1 and a buy trade from CM2.

### 15.3 Cross-CSD CCP transaction: CCP in only one CSD

**Figure 39: Scenario 3**



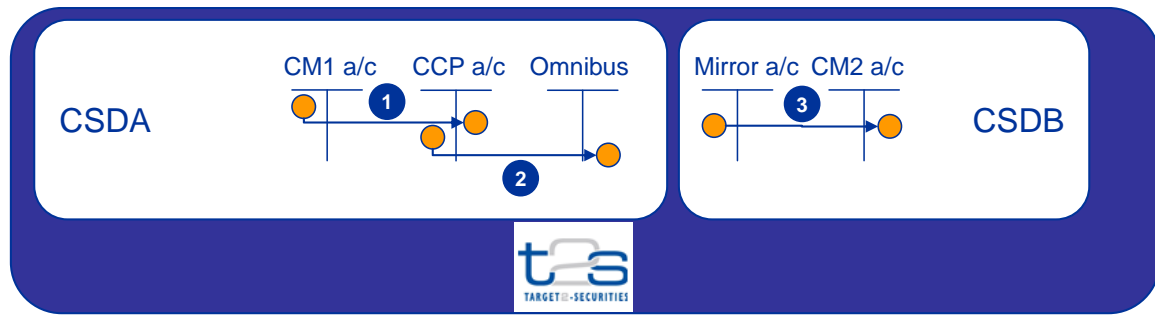
In this scenario CCP is a participant at both the CSDs where it's clearing members are participants, but hold a securities account in only one CSD. Currently, there is no actual example where one CCP offers settlement in 2 national CSDs. As of today, this scenario occurs between 2 ICSDs (bridge between EB<sup>49</sup> and CBL<sup>50</sup>), the CCP (or its settlement agent) can instruct, via one ICSD, all its settlement instructions.

The CCP can instruct all the settlement instructions via one CSD (say CSDA) in order to move the securities from the CM1 securities account to the CM2 securities account with an intermediate booking of the securities on the CCP account in CSDA. In order for this, CCP should have PoA on the securities accounts of CM1 in CSD A and of CM2 in CSD B. Also CSD A should have required agreements with CSD B in order for CSD A to route instructions involving CSD B's accounts to CSD B i.e. when CCP instructs CSD A for a credit into CM2 (account maintained in CSD B), CSD A should be able to identify CM2 as an account held in CSDB and route the instruction to CSD B for crediting CM2.

<sup>49</sup> EB – Euroclear Bank

<sup>50</sup> CBL - Clearstream Banking Luxembourg

**Figure 40: Scenario 3 (movements)**



*For the purpose of simplifying the bookings shown in securities accounts, it is assumed that CSD A is the issuer CSD; CCP holds account in CSD A. However in reality, the accounts of CMs, CCPs can be in any CSD, and need not be in issuer CSD; this may result in realignment of positions in issuer CSD, depending on how the omnibus accounts are organised in issuer CSD. The assumption is applicable for other cross-CSD scenarios as well.*

In this scenario, one CM (CM1) and CCP maintain securities accounts at one CSD (CSD A). The other CM (CM2) maintains securities account at a different CSD (CSD B). CCP instructs settlement instructions as below:

Step 1: CCP instructs a delivery instruction on behalf of CM1 against itself as counter party and a receipt instruction against CM1 as counter party. The settlement of these instructions results in the movement of positions from CM1 a/c to CCP a/c (movement 1).

Step 2: CCP instructs a delivery instruction in CSD A against CM2 as counter party, and a receipt instruction on behalf of CM2 against itself as counter party in CSD B.

T2S, upon matching of these two instructions, will generate re-alignment instructions. The settlement of these instructions along with instructions in step 2 will result in

- i) movement of positions from CCP a/c to omnibus account in CSD A (movement 2)
- ii) movement of positions from mirror a/c to CM2 a/c in CSD B (movement 3)

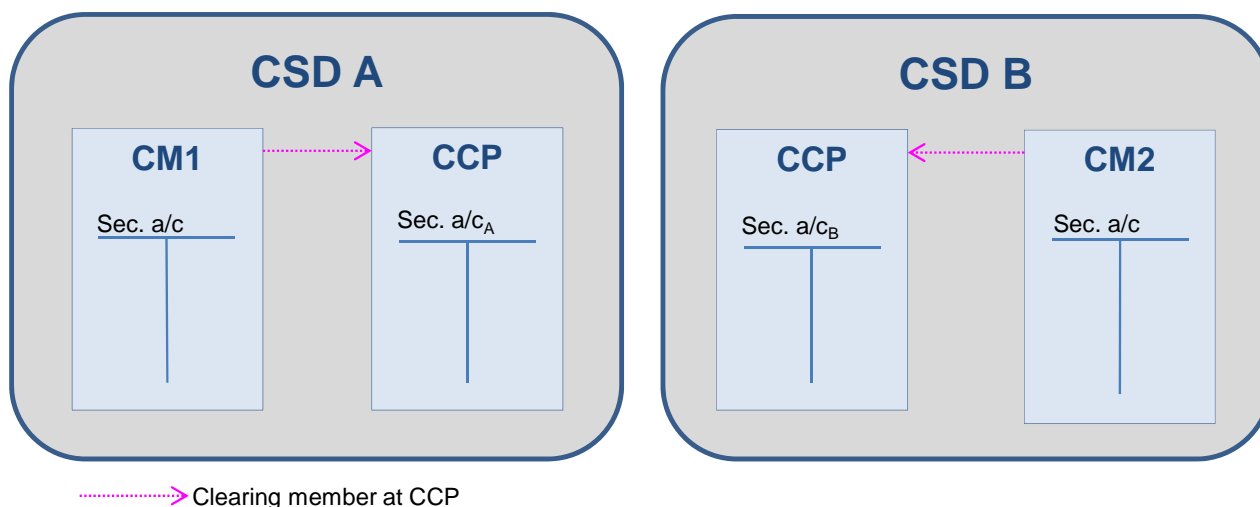
**Remarks:**

Instruction in step 1 can be instructed as “already matched” since the movement is Intra-CSD. Instructions in step 2 along with realignment instructions, will settle on an all-or-none basis.

In this scenario, CCP transactions will result in cross-CSD transactions i.e. between CSD A-CSD B

## 15.4 Cross-CSD CCP transaction: CCP in both CSDs

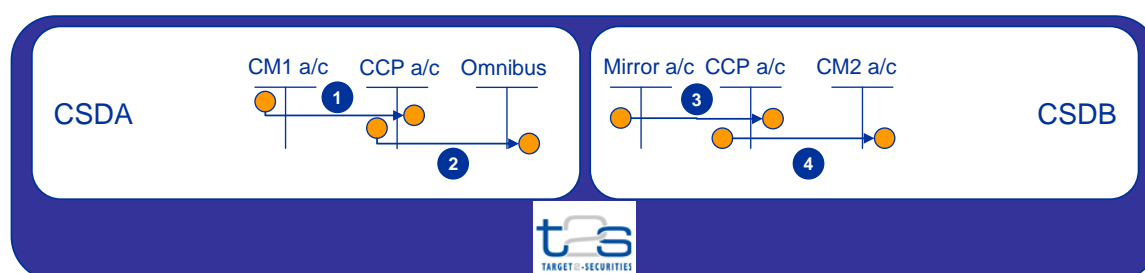
Figure 41: Scenario 4



Today, this scenario is in particular occurring between ESES<sup>51</sup> and EB. The CCP (or its settlement agent) opens an account in each CSD (where its CMs have securities account). CCP instructs one part of the clearing members' transaction in CSDA i.e. for the movement of securities from the seller's securities account (CM1) to CCP's securities account (Sec. a/c<sub>A</sub>) in CSDA; CCP also instructs in CSDB for the movement of securities from CCP securities account (Sec. a/c<sub>B</sub>) to the buyer's account (CM2). CCP has PoA on the securities accounts of CM1 in CSD A and of CM2 in CSD B.

In this scenario, CCP transactions will result in cross-CSD transactions i.e. between CSD A and CSD B.

Figure 42: Scenario 4 (movements)



*For the purpose of simplifying the bookings shown in securities accounts, it is assumed that CSD A is the issuer CSD.*

CCP instructs settlement instructions as below:

**Step 1:** CCP instructs a delivery instruction on behalf of CM1 and a receipt instruction in CSD A. This will result in movement 1 as shown in the above picture.

**Step 2:** CCP instructs a delivery instruction in CSDA against itself as counter party and a receipt instruction in CSDB against itself as counter party. T2S upon matching of these two instructions will

<sup>51</sup> Euroclear Settlement of Euronext-zone Securities

create two realignment instructions. The settlement of these instructions along with instructions in step 2 will result

- i) movement of positions from CCP a/c to omnibus account in CSD A (movement 2)
- ii) movement of positions from mirror a/c to CCP a/c in CSD B (movement 3)

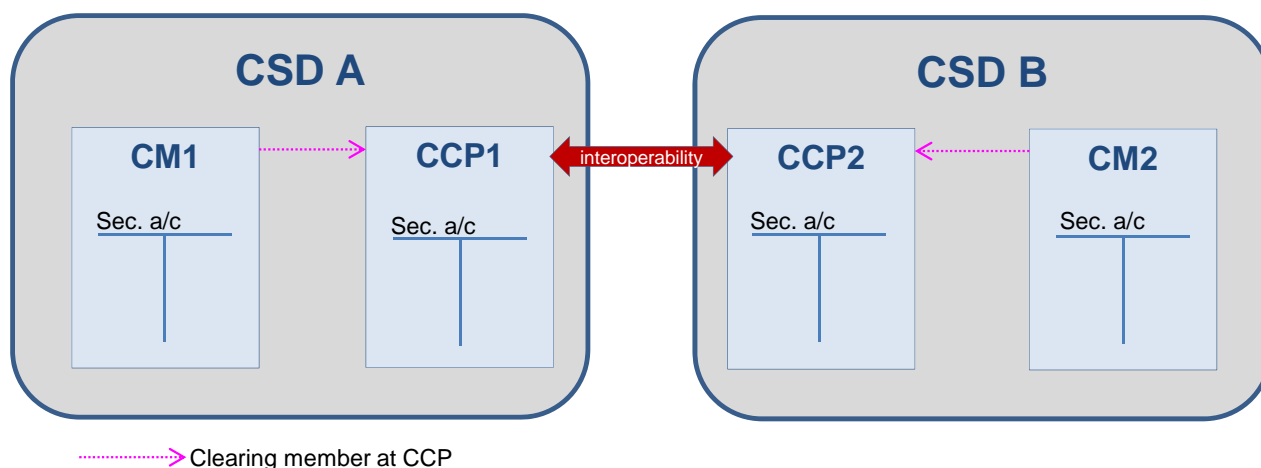
**Step 3:** CCP instructs a delivery instruction and a receipt instruction in CSD B. This will result in movement 4 as shown in above picture.

#### Remarks:

Instructions in step 1 and 3 can be instructed as “already matched”, since the resultant movements are Intra-CSD. Instructions related to the step 2 need to match in T2S.

## 15.5 Interoperability between CCPs: Two CSDs

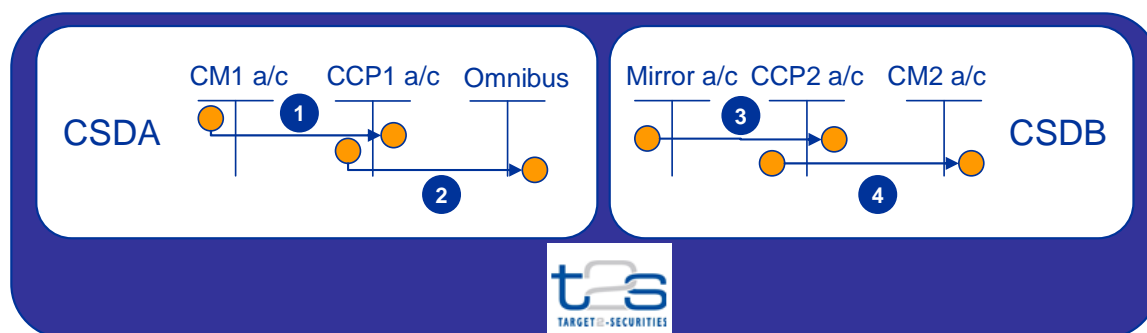
**Figure 43: Scenario 5**



This scenario involves 2 CCPs that have securities accounts in different CSDs. This scenario is not implemented as of today for complexity reason.

As T2S facilitates in making the cross-CSD settlement as efficient as an intra-CSD settlement, this scenario could be achieved in T2S.

**Figure 44: Scenario 5 (movements)**



In this scenario, two CCPs are involved in a trade, and each Clearing member and its CCP maintains securities accounts in one CSD (CSD A as issuer CSD), and the other clearing member and its CCP maintains securities account in a different CSDs. CCPs instruct settlement instructions as below:

CCP1 has to instruct two sets of instructions: one set in CSD A, a delivery from CM1 and a receipt into CCP1 a/c; second set in CSD A for delivery from CCP1 to CCP2 i.e.

Step 1: CCP1 instructs a delivery instruction on behalf of CM1 in CSD A against itself as counter party, CCP1 instructs receipt instruction in CSD A against CM1 as counter party. CCP1 could instruct these two instructions as 'already matched' to T2S. This will result in movement 1 shown in the above picture.

Step 2: CCP1 instructs a delivery instruction in CSD A, with counter party as CCP2, with matching requested in T2S.

CCP2 has to instruct two sets of instructions: one set in CSD B for receipt into CCP2 from CCP1; second set in CSD B, a delivery from CCP2 to CM2 i.e.

Step 3: CCP2 instructs a receipt instruction in CSD B, with counter party as CCP1, with matching requested in T2S.

Step 4: CCP2 instructs a delivery instruction in CSD B against CM2 as counter party. CCP2 instructs a receipt instruction on behalf of CM2 in CSD B against itself as counter party. CCP2 could instruct these two instructions as 'already matched' to T2S. This will result in movement 4 shown in the above picture.

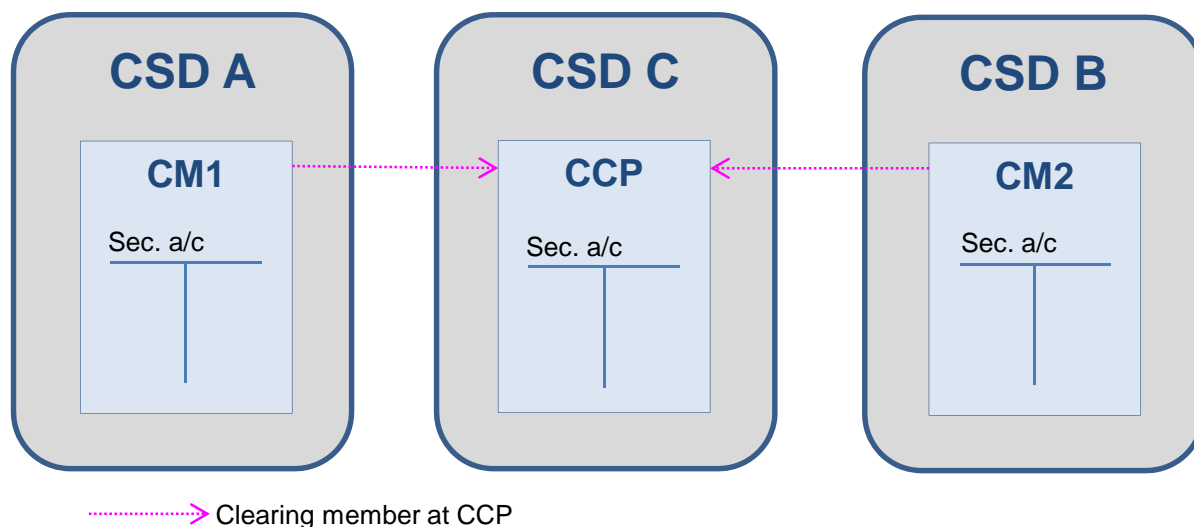
T2S matches the instructions from Steps 2 and 3 and creates two realignment instructions. The settlement of these instructions along with instructions in step 2 and 3 will result

- i) movement of positions from CCP1 a/c to omnibus account in CSD A (movement 2)
- ii) movement of positions from mirror a/c to CCP2 a/c in CSD B (movement 3)



## 15.6 Interoperability between CCPs: Three CSDs

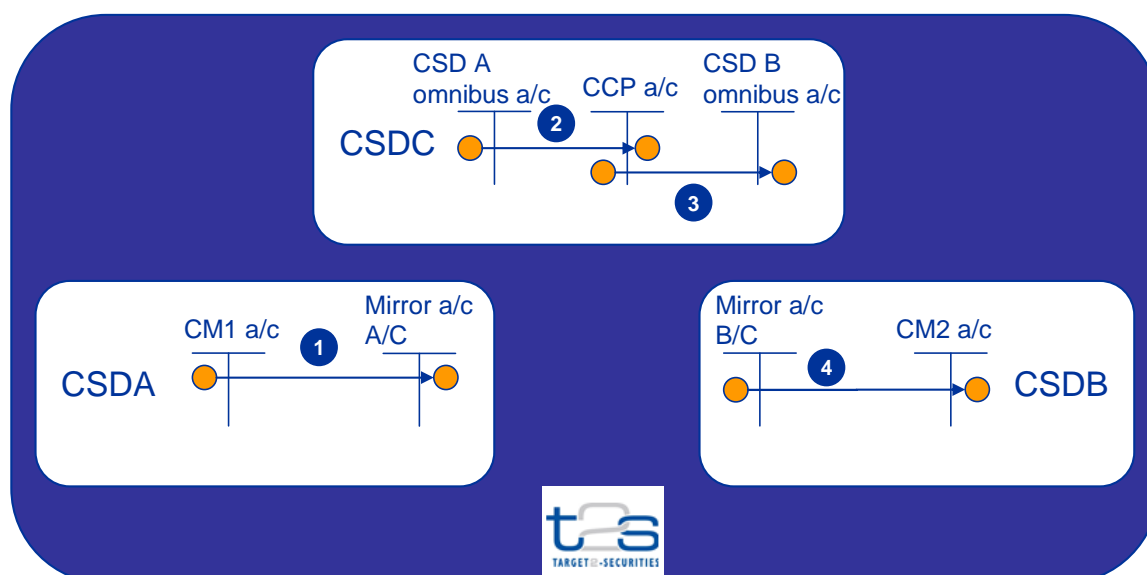
Figure 45: Scenario 6



In this scenario CCP maintains a securities account in one CSD and each CM maintains securities account in other CSDs (different from the CSD of the CCP). The CCP (or its settlement agent) has to instruct one part of the clearing members' transaction (i.e. sell by CM1) in two CSDs. i.e. CCP has to instruct a delivery from CM1 in CSD A, and receipt to CCP a/c in CSD C. Similarly for the second part of the transaction, CCP has to instruct delivery from CCP a/c in CSD C, and receipt to CM2 in CSD B.

In this scenario, each CCP transaction will result in two cross-CSD transactions i.e. between CSD A-CSD C, CSD C-CSD B. CCP maintains its centralised positions in one single CSD i.e. CSD C.

Figure 46: Scenario 6 (movements)



*For the purpose of simplifying the bookings shown in securities accounts, it is assumed that CSD C is the issuer CSD.*

CCPs instruct settlement instructions as below

CCP has to instruct a delivery from CM1 in CSD A, and receipt into CCP a/c in CSD C. Similarly for the second part of the transaction, CCP has to instruct delivery from CCP a/c in CSD C, and receipt to CM2 in CSD B. i.e.

Step 1: The CCP instructs delivery instruction on behalf of CM1 in CSD A

Step 2: The CCP instructs receipt instruction against CM1 in CSD C

Upon matching of instructions in steps 1 and 2, T2S will create two realignment instructions. This will result in

- i) movement of positions from CM1 to the 'mirror a/c A/C' in CSD A (movement 1)
- ii) movement of positions from the 'CSD A omnibus a/c' to the CCP a/c in CSD C (movement 2)

Step 3: The CCP instructs delivery instruction from in CSD C

Step 4: The CCP instructs receipt instruction on behalf of CM2 in CSD C

Upon matching of instructions in steps 3 and 4, T2S will create two realignment instructions. This will result in

- iii) movement of positions from the CCP a/c to the 'CSD B omnibus B/C' in CSD C (movement 3)
- iv) movement of positions from the 'mirror ac/c B/C to CM2 in CSD B (movement 4)

**Remarks:**

All instructions should be sent to T2S as unmatched instructions. They cannot be sent as already matched instructions as the securities accounts involved in each leg of the CCP trade are maintained in different CSDs.