



EUROPEAN CENTRAL BANK

EUROSYSTEM

T2S CHANGE REQUEST FORM		
General Information (Origin of Request)		
<input checked="" type="checkbox"/> User Requirements (URD) or GUI Business Functionality Document (BFD) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: Clearstream	Institute: CSD	Date raised: 20/01/2025
Request title: T2S should not create a realignment chain in mixed scenarios where one realignment chain ends in T2S but the other one ends outside of T2S with an External CSD		Request No.: T2S 0846 URD
Request type: Common	Classification: Scope Enhancement	Urgency: Normal
1. Legal/business importance parameter ¹ : High		2. Market implementation efforts parameter ² : Medium
3. Operational/Technical risk parameter ³ : Low		4. Financial impact parameter ⁴ : Medium-low
Requestor Category: CSD		Status: Proposed for a Release

Reason for change and expected benefits/business motivation:

The T2S Realignment chain calculation needs to be adjusted to reject the creation of the chain in a particular mixed cross-CSD settlement scenario where one realignment chain ends outside of T2S with an External CSD while the other one ends with an Issuer CSD inside T2S. This scenario creates an undesired business impact on the CSD operations and should be rejected by T2S.

Generally speaking, the realignment application process handles the cases of:

- Cross-CSD settlements, i.e. settlements between T2S Actors of different CSDs, the latter being in T2S.
- External-CSD settlements, i.e. settlements between T2S Actors of different CSDs, with some of the CSDs involved in the settlement being external to T2S.

Cross-CSD settlement is achieved in T2S with the simultaneous booking of cash and securities for Settlement Instructions between participants of different CSDs. Once incoming Settlement Instructions are matched (or validated for already matched incoming Settlement Instructions), the realignment application process creates automatically all the requested Settlement Instructions between the involved CSDs, referred hereafter as T2S generated realignment Settlement Instructions. This automatic generation relies on links set in the static data between the relevant CSDs and does not request from the T2S Actors any other action. It takes place immediately following either the validation of already matched Settlement Instructions, or the matching of Settlement Instructions matching in T2S.

Upon the matching of Settlement Instructions, or upon the validation of already matched Settlement Instructions, if the need to realign is identified, the realignment application process creates automatically the T2S generated realignment settlement Instructions, based on the securities CSD links set by CSDs in the static data.

In particular, the realignment generic process works as follows:

Starting from the two matched Settlement Instructions which include the counterparts, their CSDs, the security and the securities accounts, the realignment process performs its analysis according to two steps:

1. Building the two realignment chains, starting from both investor CSDs, ending at the issuer CSD of the security. This step is performed by reading the static data, storing the role of all the CSDs (investor, issuer, technical issuer), their participation in T2S (in or external), their links to other CSDs;
2. Generating all the T2S generated realignment Settlement Instructions, using the securities accounts

¹ Legal/business importance parameter was set to 'High' because with this change implemented, the risk that a transaction is accidentally submitted impacting the Issuance account is eliminated.

² Market implementation effort parameter was set to 'Medium' since not a long test campaign would be requested on the side of the CSDs, NCBs or 4CB.

³ Operational/technical risk parameter was set to 'Low' since this change does not create any operational or technical risk.

⁴ Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

(mirror, omnibus and inter CSD) stored in the static data, and linking them to the underlying matched Settlement Instructions.

Building the realignment chain from the delivering investor CSD to the issuer CSD of the security:

The realignment process identifies the investor CSD of the T2S Actor delivering the securities, allowing the identification within the static data of its technical issuer CSD for the specific security. The analysis is performed to identify all CSDs involved in the realignment chain and stops when:

- The investor CSD is its own technical issuer CSD (i.e. it is the issuer CSD), or;
- The technical issuer CSD is not participating to T2S (i.e. with the external CSD party type).

Building the realignment chain from the receiving investor CSD to the issuer CSD of the security

The realignment process then performs the same analysis as for the delivering realignment chain starting from the investor CSD of the T2S party receiving the securities.

Generating the realignment Settlement Instructions

The realignment application process generates the T2S generated realignment Settlement Instructions starting from both investor CSDs and for each step identified in the realignment chains. The T2S generated realignment instructions debit and credit the deliverable securities positions.

At each step, depending on whether the technical issuer CSD is in or outside T2S:

- If the technical issuer CSD is in T2S, a T2S generated realignment Settlement Instruction is created affecting the mirror account of the technical issuer CSD in the investor CSD .
- If the technical issuer CSD is outside of T2S, a T2S generated realignment Settlement Instruction is created affecting the inter-CSD account of the technical issuer CSD in the investor CSD.

In the particular case of multi-issued securities where two issuer CSDs in T2S are affected, the instructions created at the level of these CSDs are affecting their main issuance accounts, instead of a mirror or an inter-CSD account.

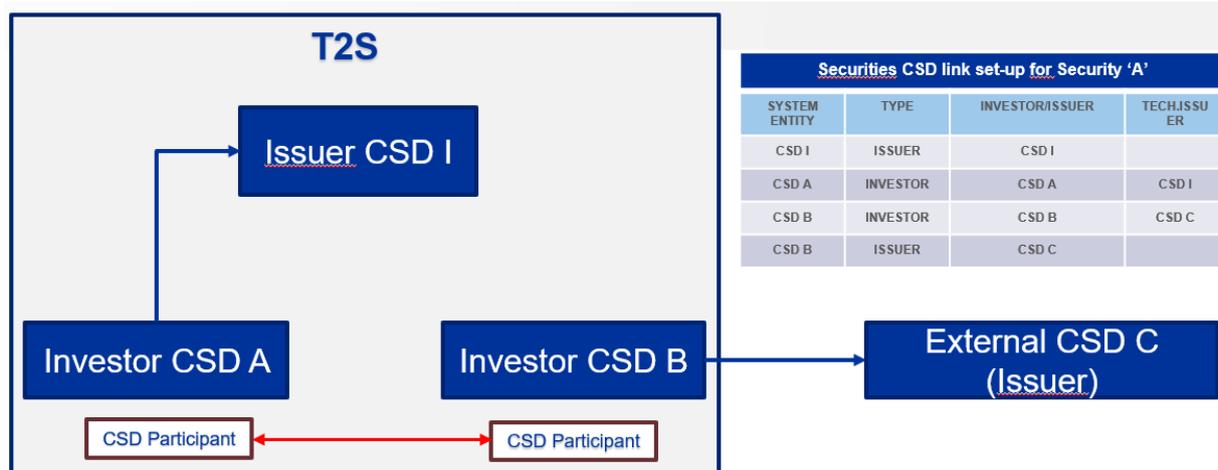
The realignment application process iterates the same process at the level of the technical issuer CSD and, when required, creates at that level two T2S generated realignment Settlement Instructions between the omnibus account of the previous investor CSD and either the mirror or the inter-CSD account of the following technical issuer CSD⁵.

Business case triggering this change:

In the following scenario the realignment chain built by T2S is creating undesired operational issues on the CSD operations. The example detailed is as follows:

- CSD I is defined as Issuer CSD of security A.
- CSD A is defined as Investor CSD of security A with technical issuer 'CSD I'.
- CSD B is defined as Investor CSD of security A with technical Issuer 'CSD C'.
- CSD C is defined as External CSD by CSD B.
- CSD C is defined as Issuer CSD of security A by CSD B.

⁵ For a more detailed information on this process, please check the T2S UDFS and 1.6.1.10.3 Realignment process.



In this scenario, Investor CSD A has configured a T2S link to the Issuer CSD I while Investor CSD B accesses the Issuer CSD I via the external technical Issuer CSD C that has a participant account within Issuer CSD I. Since T2S cannot create realignment instructions in external CSDs, if a counterparty of CSD A wants to deliver securities to a counterparty in CSD B, such flows would generally be handled via two separate transactions in T2S:

- A cross-CSD transaction between the delivering party in CSD A and a receiving party in CSD I which is the external CSD C set up as a participant of CSD I. This would create two realignments:
 - o Intra-CSD realignment to debit the Participant account in CSD A and credit the mirror account of CSD A in CSD I.
 - o Intra-CSD realignment to debit the omnibus account of CSD A in CSD I and to credit the participant account of the External CSD C in CSD I (defined as standard CSD participant but in reality being External CSD C).
- An external CSD transaction in Investor CSD B, from the delivering party 'External CSD C' to the receiving party. This will debit the inter-CSD account of the 'External CSD C' and credit the participants account of the receiving party.

However, even if from a business viewpoint this scenario should be handled with separate transactions, it could be the case that two settlement instructions were submitted to T2S with the following details:

- In Investor CSD A, a delivering settlement instruction from Delivering Party 'Party1' to the receiving party 'Party 2' in Investor CSD B.
- In investor CSD B, a receiving settlement instruction from Delivering Party 'Party 1' to the receiving party 'Party 2' in Investor CSD B.

These instructions would match in T2S and be handled as one single transaction instead of two different transactions as the example explained before. The realignment process would be triggered as follows:

- From the delivering party, the process would be stopped at CSD I since CSD I is the Issuer CSD.
- From the receiving party, the process would be stopped at the External CSD C.

Now, T2S generates the following realignment instructions:

- In Investor CSD A, a receiving realignment instruction crediting the mirror account of CSD A and debiting the participant account of 'Party 1'.
- In Issuer CSD I, a receiving realignment instruction **crediting the Issuance account of Issuer CSD I** and matched with a realignment instruction debiting the omnibus account of CSD A in CSD I.
- In Investor CSD B, a delivering realignment instruction debiting the inter-CSD account of External CSD C and matched with the business receiving instruction that credits the participant account of 'Party 2'.

In this scenario, one realignment chain would end with an Inter-CSD account while the other realignment chain impacts the issuance account within the Issuer CSD I. Obviously those chains are not connected, and neither are they consistent. Moreover, since there is no case of multi-issued security, the issuance account of the Issuer CSD I should not be impacted.

In the future, T2S should only accept consistent combinations of realignment chains:

- Delivering and receiving realignment chain end in the same Issuer CSD inside T2S
- Delivering and receiving realignment chain end in two different Issuer CSDs inside T2S
- Delivering and receiving realignment chain end in External CSDs (impacting Inter-CSD accounts.)

This new logic should be implemented after the realignment chain analysis process has assessed the security CSD links to create the chain, being them default links or alternative links, if any.
To prevent other, inconsistent combinations, T2S should adjust the logic of the Realignment chain calculation process to reject the creation of the chain in such cases using new business rules.

Description of requested change:

The T2S Realignment calculation logic should be updated to reject the creation of the realignment chain in the following case, after analysis of the relevant securities CSD links:

- From the delivering Investor CSD, the realignment chain analysis stops at an Issuer CSD inside T2S.
- From the receiving Investor CSD, the realignment chain analysis stops at an External CSD (regardless whether it is configured as External Issuer CSD or not).

The same rejection should be applied in the opposite direction, i.e. when the delivering Investor CSD stops at an External CSD and the receiving Investor CSD stops at an Issuer CSD inside T2S.

In such scenarios, the realignment instructions shall not be generated, and the business settlement instructions shall be cancelled using the following business rule:

Short Name of BR	Description	Incoming Message	Reply Message	Code Utilisation	Reason Code	Error Text
SPRCXXX	Settlement instructions are cancelled if the delivering realignment chain ends at an Issuer CSD inside T2S while the receiving realignment chain ends at an External CSD.	n/a	sese.024	CANC (CANCELLED)	CANS	Settlement instruction is cancelled because of inconsistent realignment chains.
SPRCXXX	Settlement instructions are cancelled if the delivering realignment chain ends at an External CSD while the receiving realignment chain	n/a	sese.024	CANC (CANCELLED)	CANS	Settlement instruction is cancelled because of inconsistent realignment chains.

	ends at an Issuer CSD inside T2S.					
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Submitted annexes / related documents:

Outcome/Decisions:

- *CRG on 25 February 2025: the CRG agreed to request the preliminary assessment of CR-0846.
- *CRG on 14 July 2025: the CRG agreed to recommend CR-0846 for authorisation by the T2S Steering Level.
- *CSG on 18 July 2025: the CSG agreed to authorise CR-0846.
- *NECSG on 18 July 2025: the NECSG agreed to authorise CR-0846.
- *MIB on 31 July 2024: the MIB agreed to authorise CR-0846.
- *PMG on 24 February 2026: the PMG agreed to launch the detailed assessment of CR-0846 with a view of scoping in R2027.NOV.

Documentation to be updated:

Preliminary assessment:

- **Financial impact:** Medium-low
- **Impacted modules:** SETT, DWH
- **Impact on other Eurosystem Services or Projects:** No impact on other Eurosystem Services (T2, TIPS) or Projects (ECMS)
- **Risk analysis:** No risks have been identified

- **Findings:**

The objective of this Preliminary Assessment is to solve an issue faced by one CSD in Production which raised the creation of the INC000000297025 in May 2021. The incident reported that in a Cross-CSD scenario involving a multi-issued security with an Issuer CSD in T2S and an External Issuer CSD, a realignment settlement instruction generated by T2S impacted the Issuance securities account in T2S while such scenario was not clearly described in T2S UDFS.

The editorial Change Request for R2025.JUN has included in the T2S UDFS the missing scenario as a workaround solution.

With the CR-846, following changes should be implemented in T2S in order to prevent impacting the Issuance accounts in such a scenario:

- Implementation in the Realignment Chain Analyser function of the new Business Rules to trigger the cancellation of the business settlement instructions in the scenario where one chain (delivering or receiving) stops at an Issuer CSD inside T2S whereas the other chain (receiving or delivering) stops at an External CSD (regardless whether it is configured as External Issuer CSD or not).
- SDD (GFS + UDFS) updates in order to:
 - Remove the clarification previously added via an editorial Change Request for R2025.JUN (INC000000297025), to explicit the current behaviour in T2S for the scenario targeted by this CR.
 - Add the description of the new solution proposed by the CR, consisting of cancelling the business settlement instructions in such a scenario.

Working Assumptions:

- It is assumed that the CR-846 will not modify the logic of the CR-797 when it comes to make the choice between using the “Default” Security CSD links or “Alternative” links. In other words, T2S will trigger the new BRs for instructions cancellation after the realignment chain has been built according to the logic introduced by the CR-797. Once the logic in the CR-797 has been followed, T2S will thus cancel the business instructions if one chain ends at a T2S-IN issuer CSD and the other chain ends at an External CSD.

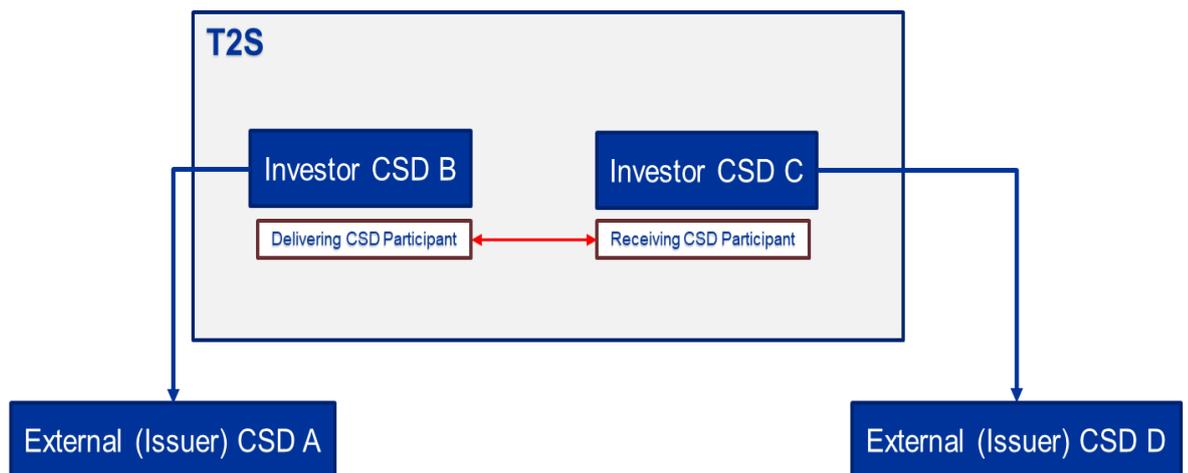
[CRG answer] Correct, the logic of CR-0797 should not be modified by CR-0846 since the realignment logic will be first built and afterwards the logic of CR-0846 will be triggered.

- Considering the scenario triggering this change (as drafted at Page 3) and if an “Alternative” link configured between the Investor CSD A and the Investor CSD B is usable, it is assumed that the realignment chain will be built according to this “Alternative” link and thus, the new Business Rules will not be triggered.

[CRG answer] Correct.

- The scenario where the delivering chain ends at an External CSD and the receiving chain also ends at another External CSD is out of scope of this CR. Such a scenario will not trigger the new Business Rules (See the diagram below):

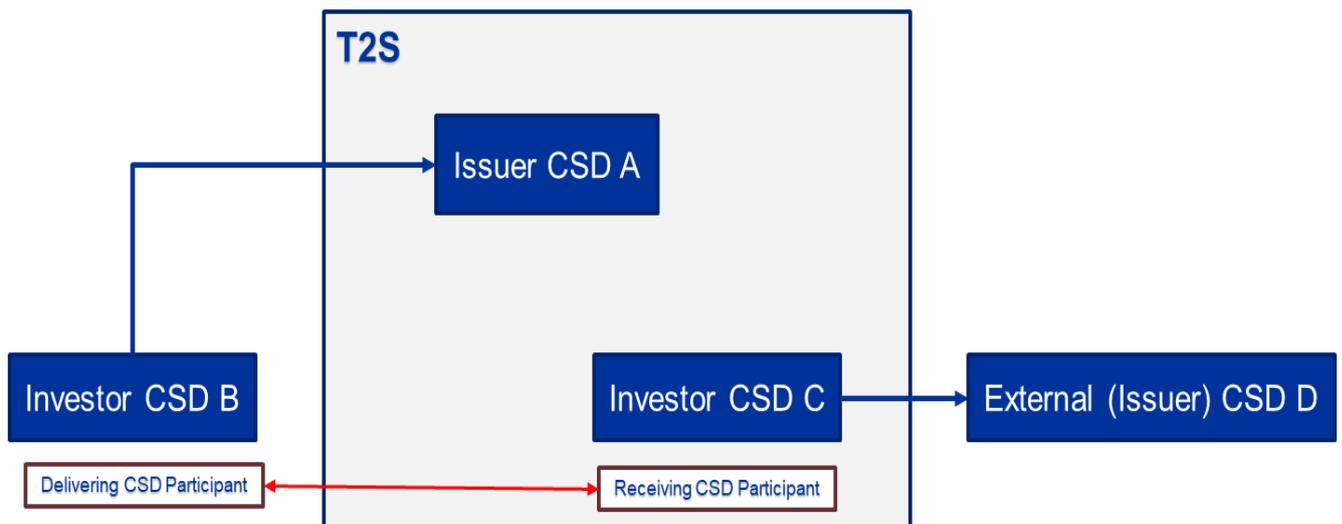
[CRG answer] Correct, the scenario where both legs end at an External CSD is out of the scope of this CR-0846.



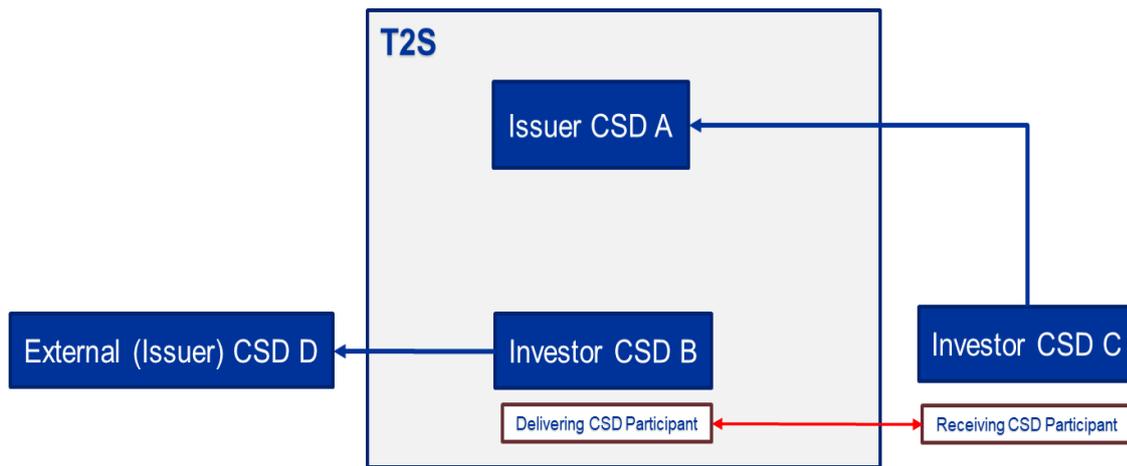
- **Open issues/ questions to be clarified by the originator:**

The two diagrams drafted below also correspond to mixed scenarios where one realignment chain ends in T2S but the other one ends outside of T2S with an External CSD. Even if they are a bit different from the scenario highlighted in the CR, the common context is that one In-T2S Issuer and one External Issuer CSD are involved. To prevent any confusion or misunderstanding, 4CB invites the originator of the CR to clarify how T2S should manage the two following scenarios where:

1. The delivering chain starts outside T2S and stops at In-T2S Issuer CSD whereas the receiving chain starts in T2S and stops at an External CSD (issuer or not).



2. The delivering chain starts in T2S and stops at an External CSD (issuer or not) whereas the receiving chain starts outside T2S and stops at In-T2S Issuer CSD.



[CRG answer] Correct, both cases depicted above should be covered by CR-0846.

Detailed assessment:
