

T2S CHANGE REQUEST FORM		
General Information (Origin of Request) ☐ User Requirements (URD) or GUI Business Functionality Document (BFD) ☒ Other User Functional or Technical Documentation (SYS)		
Request raised by: 4CB	Institute: 4CB	Date raised: 07/04/2025
Request title: Operational and Technical upgrade of the DMT tool to support increase in the number of Securities Accounts		Request No.: T2S 0850 SYS
Request type: Common	Classification: Scope enhancement	Urgency: Fast-track ¹
1. Legal/business importance parameter² : High	2. Market implementation efforts parameter³ : Low	
3. Operational/Technical risk parameter⁴ : Low	4. Financial impact parameter⁵ : (provided by 4CB)	
Requestor Category: Eurosystem		Status: Authorised by T2S Steering Level

Reason for change and expected benefits/business motivation:

On 11 September 2023 five new CSDs successfully migrated to T2S: the Bulgarian National Bank Government Securities Settlement System (BNBGSSS) and Central Depository AD (CDAD) in Bulgaria, Središnje klirinško depozitarno društvo d.d. (SKDD) in Croatia, Euroclear Finland and Euroclear Bank. The number of CSDs connected to T2S therefore increased to 24, and the number of European countries with CSDs relying on T2S increased from 20 to 23.

Euroclear Finland brought all its 2.3 million end-investor accounts to T2S as part of its migration. This approach contrasts with the “layered model” and less securities used by some other markets already active in T2S. The direct holding model is a model where securities accounts are segregated at the level of end-investor in T2S. This results in a very high number of accounts that have to be accessed when processing and settling settlement instructions.

While the migration was successful, the pre-migration activities detected some performance issues during the EOD reporting which were caused by the very high number of securities that T2S needed to handle. These issues were promptly handled before the migration weekend but highlighted the need to implement long term enhancements with the aim to prepare T2S for potential onboarding of new markets with an end-investor business model.

Deeper investigations have shown that increasing the number of accounts could create adverse effects on system performance. To mitigate the risk of adverse effects on the performance, some short-term measures have already been put in place. These are:

- ad hoc fast track queries for selected criteria and search on small number of accounts.
- prevention of ARM scan of securities accounts outside the system entity of the requestor.

These measures have been effectively improving response time but, given the growing number of securities accounts in T2S and potential onboarding of other direct holding markets to T2S, long term solutions must be put in place.

The objective of this change is to achieve the best performance for Direct Holding markets, during the pre-migration phase and the migration phase, both in principle based on usage of the Data Migration Tool (DMT), without any negative effect on the markets relying on different account structures.

¹ Fast-track justification: A fast-track approach is requested due to the urgent need to implement this change, considering the onboarding of additional end-investor markets to T2S, and to mitigate the risk of adverse effects on the overall T2S performance.

² Legal/business importance parameter was set to “High” because the change is strongly advisable to mitigate the risk of adverse effects on the overall performance from usage of the Data Migration Tool (DMT) for pre-migration and migration activities for the onboarding of new Direct holding markets to T2S.

³ Market implementation effort parameter was set to “Low” because the change does not imply significant changes to T2S Actors.

⁴ Operational/technical risk parameter was set to “Low” because it is not expected that this change will have an operational impact on the T2S Actors.

⁵ Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

Description of requested change:

Several options have been assessed to mitigate the risk of adverse effects on the performance. Currently, during the pre-migration phase (and/or the migration phase, depending on how the overall onboarding is agreed with the customer migrating to T2S), there is a concurrent⁶ workload on mainframe sub-systems (CRDM BE and DMT for securities accounts and SAC-CMB links), because all sub-systems will be running on mainframe at the same time, including their DB2 databases.

Considering the current Securities Account volume (2,8 millions) and the expected increase during the pre-migration phase for Euronext Copenhagen (4 millions), combined with the expected increase of CMB links volumetrics (up to 8 million additional SAC-CMB links, 2 per SAC EUR/DKK) and taking into account also the foreseen volumetric related to positions (3,7 millions) during the migration phase, it is strongly advisable to update the DMT tool, with the aim to reduce concurrent workload on mainframe subsystems (DB2 and WAS), with the following changes:

- 1) currently DMT uses a GUI for files upload; this GUI is running on WAS (Websphere Application Server) allocated on mainframe; the change is for a GUI running on Jboss/Angular allocated outside mainframe;
- 2) currently DMT uses a database for file handling, file unpackage, file enrichment and file (re)package; this database is running on DB2 allocated on mainframe; the change is for a database (Oracle) allocated outside mainframe;
- 3) introduce into the DMT GUI the information related to the number of records for each file uploaded, with the aim to facilitate Operational Team decision for release phase.

The proposed changes will allow the logical and physical segregation of the Data Migration Tool (DMT) resources consumption outside the mainframe system, so reducing the workload on mainframe sub-systems and then mitigating the risk of adverse effects on the overall performance.

This solution implies an accurate testing phase and evaluation of resources consumption (Jboss/Oracle), with the aim to support foreseen volumes flows into and from CRDM BE.

The changes described in CR-850 apply to the whole DMT functionality.

Submitted annexes / related documents:

Outcome/Decisions:

*CRG on 18 June 2025: the CRG agreed to recommend CR-0850 for authorisation by the Steering Level, following a fast-track approach.

*CSG on 27 June 2025: the CSG agreed to authorise CR-0850.

*NECSG on 27 June 2025: the NECSG agreed to authorise CR-0850.

*MIB on 4 July 2025: the MIB agreed to authorise CR-0850.

Documentation to be updated:

Preliminary assessment:

Detailed assessment:

⁶ The meaning of concurrent workload is manifold. The pre-migration phase for Euronext Copenhagen in PROD is foreseen to be done during normal business hours. During this timing CRDM BE (DB2) and ESIMIG A2A for T2S (WAS, DB2) are running on mainframe sub-systems. DMT usage for the pre-migration phase encompass files upload (WAS, DB2), files unpackage (WAS, DB2), CRDM BE invocations (WAS, DB2, MQ), files enrichment and file (re)package (WAS, DB2). So high resource consumption for DMT (WAS and/or DB2) could cause adverse effects on the performance for ESMIG A2A (T2S) and vice versa. The same, high resource consumption for DMT could cause adverse effects on the performance for CRDM BE and vice versa.