



EUROPEAN CENTRAL BANK

EUROSYSTEM

T2S CHANGE REQUEST FORM		
<b>General Information (Origin of Request)</b>		
<input type="checkbox"/> User Requirements (URD) or GUI Business Functionality Document (BFD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
<b>Request raised by:</b> Eurosystem	<b>Institute:</b> Bundesbank	<b>Date raised:</b> 02/03/2020
<b>Request title:</b> Definition of a classification of transactions for CB T2S data		<b>Request No.:</b> T2S 0733 SYS
<b>Request type:</b> Common	<b>Classification:</b> Maintenance	<b>Urgency:</b> Normal
<b>1. Legal/business importance parameter<sup>1</sup>:</b> High	<b>2. Market implementation efforts parameter<sup>2</sup>:</b> Low	
<b>3. Operational/Technical risk parameter<sup>3</sup>:</b> Low	<b>4. Financial impact parameter<sup>4</sup>:</b> High	
<b>Requestor Category:</b> Eurosystem	<b>Status:</b> Detailed assessed	

**Reason for change and expected benefits/business motivation:**

In the context of the specifications of the T2-T2S Consolidation (CSLD) project, and in view of adapting the current TARGET2 statistical classification framework for the T2 data to the Data Warehouse Common Component (DWH), the TARGET Services Working Group (TSWG) agreed on a new classification of transactions for T2 (i.e. CLM – Central Liquidity Management and RTGS – Real-time Gross Settlement components) to be implemented in the DWH.

The current classification logic of TARGET2 transactions needed to be reviewed because of the next context that the T2-T2S CSLD project brings:

- Broader classification range compared to today that should reflect the distinction between the different TARGET Services. Also, rules for classifying comparable transactions across the different services (e.g. liquidity transfers) should be consistent;
- New static data configurations to be considered e.g. multi-currency aspect or new transaction types as automated liquidity transfers (LTs);
- Technical changes as the migration to ISO20022 also impact the existing rules.

After the go-live of the T2-T2S CSLD project, CB users with the relevant privileges accessing the DWH will be able to access both T2 and T2S data of the CB. However due to the fact that there is no classification defined for the T2S data, CBs would not be able to benefit from the DWH as a tool where they can see and analyse their cash transactional data based on a homogenous framework for T2 and T2S data.

The classification of transaction data is particularly relevant to ensure a common understanding of the definition and perimeter of the different transaction types and related business cases, as well as to provide the basis for the development of an appropriate statistical framework.

A proper classification of transactions can support analytical work from an operational and business perspective. It also ensures that internal and external business statistics are based on a homogeneous framework.

**Description of requested change:**

A classification framework for T2S cash related data should be defined in the DWH following the principles agreed for the classification of transactions in T2 (CLM and RTGS):

<sup>1</sup> Legal/business importance parameter was set to High because by classifying data in a homogeneous way, CR-733 will increase the usability and correctness of the Data Warehouse for users and for analytical purposes

<sup>2</sup> Market implementation effort parameter was set to Low because CR-733 does not require any adaptation by T2S users

<sup>3</sup> Operational/technical risk parameter was set to Low because the classification of data is not expected to interfere with T2S operations

<sup>4</sup> Financial impact parameter was set to High following this classification: Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

- 1) The first layer defines the settlement service classifier and is identified by a letter;
- 2) The second layer defines the transaction class and is identified by a two-digit number;
- 3) The third layer defines the transaction category and is identified by a two-digit number.

The DWH should include the following parameters for the classification of T2S cash related data:

Service classifier	Transaction Class	Transaction Category	Description
S - T2S cash related data	30 - Liquidity Transfers	00 - Intra	Intra-service liquidity transfers between two T2S DCAs.
		10 - CLM	Inter-service liquidity transfers between a T2S DCA and a MCA.
		20 - RTGS	Inter-service liquidity transfers between a T2S DCA and a RTGS DCA.
		40 - TIPS	Inter-service liquidity transfers between a T2S DCA and a TIPS DCA.
	31 - Settlement		All other cash movements on T2S DCAs which are not related to liquidity transfers, auto-collateralisation, reimbursement, substitution or relocation. Settlement restrictions on cash should also be excluded.
	32 - Auto-collateralisation	01 – on flow	Recourse to auto-collateralisation using the securities exchanged in the transaction as collateral to obtain the necessary credit to complete the transaction.
		02 – on stock	Recourse to auto-collateralisation using other securities already held by the buyer as collateral to complete the transaction.
	33 - Reimbursement	01 - Intraday	Manual repayment of T2S auto-collateralisation operations that takes place before the automated. Reimbursement.
		02 - Automated	Automatic reimbursement performed by T2S at 16:30 (RMIC event).

		03 - Forced	Forced reimbursement due to negative remaining amount after a decrease of the auto-collateralisation limit set by a CB.
		04 - Dynamic	Dynamic reimbursement performed by T2S in case securities used as collateral should be needed for the settlement of another transaction
	34 - Substitution	NA	Cash movements related to the automatic mechanism through which T2S replaces the securities used as collateral in an auto-collateralisation operation if they are needed for settling a settlement transaction.
	35 - Relocation	NA	Cash movements related to the relocation of collateral from T2S to RTGS at EOD.

The access to data in DWH based shall follow the same principle on data segregation that exists today in T2S based on access rights configuration. This means that a CB user in the DWH shall only be able to access those transactions or data which are within his data scope according to its access rights configuration.

In addition to the above, additional filters are defined to complement the classification. Such filters shall be available in the DWH to be applied by users to further streamline specific business cases within one category. There can be "global filters", when they apply to transactions across all TARGET services, or "local filters", if they apply only to a specific service and can be "mandatory" [M] or "optional" [O].

Global filters	Filter values
<u>Liquidity Transfer Direction [M]:</u>	<ul style="list-style-type: none"> <li>- I: Incoming Liquidity.</li> <li>- O: Outgoing Liquidity.</li> <li>- T: Technical Liquidity Transfer (only for CLM).</li> <li>- S: Intra-Service Liquidity Transfer.</li> </ul>
<u>Settlement Window [M]:</u>	<ul style="list-style-type: none"> <li>- 1: CLM Real time Settlement-Window 1 – Transactions settled during the Real Time CLM Settlement phase.</li> <li>- 2: RTGS Settlement-Window 1 – Transactions settled during the RTGS Settlement Window 1.</li> <li>- 3: RTGS Settlement-Window 2 – Transactions settled during the RTGS Settlement Window 2.</li> <li>- 4: T2S Night-Time-Settlement – Transactions settled during the T2S night-time phase.</li> <li>- 5: T2S Real-Time-Settlement – Transactions settled during the T2S real-time phase.</li> </ul>

	<ul style="list-style-type: none"> <li>- 6: TIPS – Payments settled in TIPS (available around the clock).</li> </ul>
<u>Component System Payments [O]:</u>	<ul style="list-style-type: none"> <li>- I: Intra-Component system payments, for which the debited and the credited accounts belong to the same central bank.</li> <li>- E: Extra-Component system payments, for which the debited and the credited accounts belong to different central banks.</li> </ul>
<u>Liquidity Transfer Type [M]:</u>	<ul style="list-style-type: none"> <li>- I: Immediate – In case immediate liquidity transfers initiated by the participant.</li> <li>- A: Automated – Transfer of liquidity initiated by CLM sent to RTGS in order to transfer liquidity from the linked RTGS DCA due to a queued/pending CBO (Central Bank Operation).</li> <li>- R: Rule-Based Floor/Ceiling: A CLM/RTGS Account Holder can define a rule-based inter-service liquidity transfer due to a floor and/or ceiling rule, in order to push/pull the needed liquidity to/from the linked DCA in RTGS/MCA in CLM.</li> <li>- Q: Rule-based Queued: An RTGS Account Holder can define a rule-based inter-service liquidity transfer due to pending urgent payment orders, AS transfer orders or high priority payment orders, in order to pull liquidity from the linked MCA in CLM.</li> <li>- S: Standing order – In case of recurring order to transfer liquidity.</li> <li>- P: Predefined – Liquidity transfer with which a T2S actor can specify to move liquidity from a T2S Dedicated Cash Account to an external RTGS account once at a predefined point in time or related to business event.</li> </ul>

<b>Local filter (T2S cash data)</b>	<b>Filter values</b>
<u>Asset type<sup>5</sup> [O]:</u>	<ul style="list-style-type: none"> <li>- SHRS: Shares</li> <li>- SOVR: Sovereign bonds</li> <li>- DEBT: Bonds or securitised debts</li> <li>- SECU: any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures</li> <li>- ETFS exchange-traded funds (ETFs)</li> <li>- UCITS units in collective investment undertakings, other than ETFs</li> <li>- MMKT Money Market Instruments</li> </ul>

<sup>5</sup> These are taken from the Classification of Financial Instruments (CFI) as defined in the Article 4(1)(61) of Directive 2014/65/EU (MIFID 2).

	<ul style="list-style-type: none"> <li>- EMAL Emission allowances</li> <li>- OTHR Others (miscellaneous)</li> </ul>
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#### Submitted annexes / related documents:

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#### Outcome/Decisions:

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- \* CRG on 30 March 2020: The CRG agreed to initiate the preliminary assessment of CR-733.
- \* CRG on 28 August 2020: The CRG took note of the results of the preliminary assessment and recommended CR-733 for authorisation by the T2S Steering level.
- \* AMI-SeCo on 8 September 2020: The AMI-SeCo agreed to the recommendation of the CRG.
- \* CSG on 9 September 2020: the CSG agreed to authorise the CR.
- \* NECSG on 9 September 2020: the NECSG agreed to authorise the CR.
- \*MIB on 3 November 2020: the MIB agreed to authorise CR-733.
- \* PMG on 19 January 2021: the PMG launched the detailed assessment of CR-733 in a view to R6.0.
- \*CRG on 07 July 2021: the CRG agreed to the inclusion of CR-733 in the scope of R6.0.
- \*OMG on 07 July 2021: the OMG identified no additional operational impact from the inclusion of CR-733 in R6.0.
- \*PMG on 08 July 2021: the PMG launched the detailed re-assessment of CR-733 in a view to R6.2.

#### Documentation to be updated:

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#### Preliminary assessment:

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- **Financial impact:** Low-medium
- **Impacted modules:** DWH, T2S INTF
- **Findings:**
  - Potential dependencies to the T2 Classification of transaction must be analysed during the DA
  - Detailed feasibility for the single classifications and filters will be analysed during the DA
  - In the global filter "Settlement Window" the filter value "TIPS - Payments settled in TIPS" is mentioned. As the DWH has no TIPS data, the DWH cannot provide such filter.
  - Initiator/ TAG answer, shared with CRG in written procedure started 13/8/2020: *Already applied in SCF for RTGS and CLM. The statistical classification is designed in order to take already a potential integration of TIPS data into account. Nevertheless, if the DWH is not able to provide this data, the attributes for TIPS would never be used.*
- **Open issues:**
  - General answer: *In general, the SCF-TF had the goal to draft business requirements for classification. The 4 CB are in charge to provide a feasible implementation logic. Several of the comments could only be answered by the 4 CB. Several issues can be addressed by taking the solution of the current T2S operational reports (CR 646) as a reference.*
  - With regard to the transaction class "Settlement": what kind of transactions does it contain? All transactions with a cash leg (DVP, PFOD, Cash SR ...) or is it more restrictive?
  - Answer: *In our proposal, "Settlement" was defined as a residual category ("All other cash movements on T2S DCAs which are not related to liquidity transfers, auto-collateralisation, reimbursement, substitution or relocation."), therefore your understanding is in principle correct. However, since cash SR do not lead to movements of cash between two different accounts, we would prefer not to include them in this category. In general, we would be interested to know if there is there a possibility to further distinguish between the different transactions within the class "settlement" (e.g. DVP, PFOD as you mention). Please let us know so that we can provide information for a more detailed classification/distinction of that class.*
  - How does it work for transactions which are both cash and securities related?
  - Answer: *Only the cash-related transactions (bookings on DCAs) are to be classified.*

- In certain situations (e.g. CR720), it could be useful to distinguish between pull LTs and push LTs between T2S and CLM: maybe the transaction category values could be enhanced to serve that purpose? Is it answered by the global filters?
  - Answer: *The global filters foresee a possibility to distinguish between different LTs, though not distinguishing push and pull. As implementing this additional filter would have impacts also on the CLM/RTGS classifications, it is not considered for the time being.*
- Regarding the Auto-collateralisation settlement transactions generated by SETT (Transaction Class 32), there is no attribute allowing identifying whether it results from ACO on flow or on stock. Moreover, a settlement transaction related to Auto-collateralisation may combine collateral securities on flow and on stock. How do you expect to make the difference?
  - Answer: *The information are provided in the CR 646 report. If it is feasible to provide this information there, it should also be possible to make this differentiation in the DWH.*
- About the Transaction Class 34 (Substitution), SETT currently provides no information about whether a reverse transaction has been released or a new Auto-collateralisation settlement transaction has been generated during a substitution mechanism.
  - Answer: *The information are provided in the CR 646 report. If it is feasible to provide this information there, it should also be possible to make this differentiation in the DWH.*
- What kind of transactions are covered by the different values of the "Liquidity Transfer Direction" global filter? In particular, how are the inter-services liquidity transfers managed?
  - Answer: *All LTs are covered by this filter. Inter Service LTs are captured by the values "Incoming" or "Outgoing", depending if the respective T2S DCA is credited (incoming) or debited (outgoing).*
- Distinction between "CLM/RTGS settlement window 1" and "CLM/RTGS settlement window 2": Owing to T2S-0710-URD/CSLD-0012-URD the maintenance window during the week is optional. Therefore, it should be clarified how the distinction between settlement window 1 and 2 shall be defined (especially in CLM). Is it foreseen to use a time? Is this time in CET or in UTC? (Details on the business day are provided in CLM UDFS /RTGS UDFS chapter 4)
  - Answer: *This is an issue addressed in the classification of CLM and RTGS transactions (the filter as such is global as it applies to all transaction regardless of the service, but the respective values by definition make sense only for specific service(s)). The text of the CR proposal was modified accordingly. As a general principle, the settlement windows are distinguished based on Event Timestamp of the respective service for the respective business day and currency.*
- Liquidity transfer type: As defined in the CR, the information on "R" (rule-based floor/ceiling) is only available for rule-based LTs exchanged between CLM and RTGS. In case rule-based LTs are also introduced in T2S and TIPS, this does not automatically mean that the same level of granularity is provided there as according to our understanding of the respective draft CRs (in TIPS and T2S) no dedicated codes is used to allow an distinction between "immediate LTs" and "rule-based LTs".
  - Answer: *If and how a distinction between "immediate LTs" and "rule-based LTs" could be first addressed after the implementation of the referred CR. In case there are already information available how the implementation will look like, we would kindly ask you to provide this information. Otherwise, we suggest to find a suitable classification logic when the CR is implemented.*

EUROSYSTEM ANALYSIS – GENERAL INFORMATION			
T2S Specific Components		Common Components	
<b>LCMM</b>			
	Instructions validation		
	Status management		
	Instruction matching		
	Instructions maintenance		
	Penalty Mechanism		
<b>Settlement</b>			
X	Standardisation and preparation to settlement		
X	Night-time Settlement		
	Daytime Recycling and optimisation		
	Daytime Validation, provisioning & booking		
X	Auto-collateralisation		
<b>Liquidity Management</b>			
	Outbound Information Management		
	NCB Business Procedures		
	Liquidity Operations		
<b>T2S Interface</b> (as of June 2022 without Static Data Management, Communication for SDMG, Scheduler, Billing)			
	Communication		
	Outbound Processing		
	Inbound Processing		
<b>Static Data Management</b> (until June 2022)		<b>Common Reference Data Management</b> (from R6.0 June 2022)	
	Party data management		Party data management
	Securities data management		Securities data management
	Cash account data management		Cash account data management
	Securities account data management		Securities account data management
	Rules and parameters data management		Rules and parameters data management
<b>Statistics and archive</b>		<b>Statistics and archive</b>	
	Statistical information (until June 2022)		Short term statistical information
	Legal archiving (until June 2022)		Legal archiving (from R6.0)
		x	Data Warehouse (from R6.0)
<b>Information</b> (until June 2022 containing reference data)		<b>CRDM business interface</b> (from R6.0 June 2022)	
	Report management		Report management
	Query management		Query management
			Communication
			Outbound Processing
			Inbound Processing
<b>Operational Services</b>			
	Data Migration (T2S DMT)		Data Migration (CRDM DMT, from R6.0)
	Scheduling (until June 2022)		Business Day Management (from R6.0) Business Day Management business interface (from R6.0)
	Billing (until June 2022)		Billing (from R6.0) Billing business interface (from R6.0)
	Operational Monitoring		Operational and Business Monitoring
	MOP Contingency Templates		



Impact on major documentation				
Document	Chapter		Change	
Impacted GFS chapter				
Impacted UDFS chapter				
Additional deliveries for Message Specification (UDFS, MyStandards, MOP contingency templates)				
UHB				
External training materials				
Links with other requests				
Links	Reference		Title	
OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT				
Summary of functional, development, infrastructure and migration impacts				
<p>Regarding the impact on DWH it has to be considered that the object for classification is related to the Cash Posting, other objects e.g. Settlement Instruction and Liquidity Transfer.</p> <p>The following filter values are not applicable for the T2S classification:            Global filter: Liquidity Transfer Direction, Filter value: T            Global filter: Settlement Window, Filter values: 1, 2, 3, 6            Global filter: Liquidity Transfer Type, filter values: A, R, Q,</p> <p>In principle transaction class 30 can be identified, but distinction of LTs by service for the categories will be complex due to differences in the underlying operational data model compared to CLM/RTGS, but it seems feasible at current stage. Details to be confirmed during implementation.            In principle transaction class 32 can be identified, for the further breakdown into on stock/on flow further investigation during the implementation phase are needed.            Further investigation on how to identify class 34 is needed during the implementation phase. It is currently available in CR646 but it needs to be confirmed if it is possible on individual transaction level as well.            The same iterative procedure as for the definition of T2 classification will be used (involvement of TAG).</p> <p>Following impacts are foreseen on SETT side:</p> <ul style="list-style-type: none"> <li>• Creation of a new function in charge of extracting and analysing at a given point of the Business Day (to be defined) all the settled collections with ACO related settlement transactions (intraday credit setup) or settled reverse settlement transactions (reimbursement).            For each ACO settlement transaction, the function will calculate the amount of collateral used on flow and/or stock, according to functional criteria.            For each Reverse settlement transaction settled in a collection, the function will identify whether it belongs to one of following categories:           <ul style="list-style-type: none"> <li>○ Intraday Reimbursement: Reverse settled following to a release requested by the credit consumer,</li> <li>○ Forced Reimbursement: Reverse settled following to a NCB Limit update which leads to a negative auto-collateralisation headroom,</li> <li>○ Automatic Reimbursement: Reverse settled following to the event RMIC,</li> <li>○ Dynamic Reimbursement: Reverse selected and settled by the Booking process in order to solve a lack of securities.</li> </ul> </li> </ul> <p>NB: It shall not be possible to design the function in order to identify the ACO or Reverse settlement transactions settled in the context of the Substitution due to the complexity of this mechanism.</p>				



- Update of the Hold Release Cancel service in order to log the Release of a Reverse settlement transaction requested by the Credit consumer, so that the new function may rely on such an information to identify such a settlement transaction as belonging to the Intraday Reimbursement category.
- Update of the Forced Reimbursement Manager function in order to log the Reverse settlement transactions selected upon the reception of the “Decreased NCB limits Event” so that the new function may rely on such an information to identify those settlement transactions as belonging to the Forced Reimbursement category.

#### Main cost driver

- The main cost driver is the analysis of the data needed for the classification and the mapping of the classes/filter
- Statistical sorting criteria must be stored persistently in the database. For this purpose, the datamodel is to be enhanced with dedicated structures to store this information. A process to fill these data structures is to be designed and implemented in the ETL processing
- Creation of a new function in charge of extracting and analysing at a given point of the Business Day all the settled collections with ACO related settlement transactions) or settled reverse settlement transactions (reimbursement)
- Update of the Hold Release Cancel service in order to log the Release of a Reverse settlement transaction requested by the Credit consumer
- Update of the Forced Reimbursement Manager function in order to log the Reverse settlement transactions selected upon the reception of the “Decreased NCB limits Event”
  - Creation a new table
  - Impact on RTS components
  - New treatment for extraction of new table data for STSI/LTSI/DWH
  - Modification of existing MPP (created for CR646) for calculation with new table

#### **Impact on other TARGET Services and projects**

CSLD: no impact.  
 ECMS: no impact.  
 TIPS: no impact.  
 TARGET2: no impact

#### **Summary of project risk**

#### **Security analysis**

No potentially adverse effect has been identified during the detailed assessment.



01 July 2021

## Cost assessment on Change Requests

T2S-733-SYS – Definition of a classification of transactions for CB T2S data			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	481,263.75	Euro
Annual	Operational costs		
	- Maintenance costs	41,606.57	Euro
	- Running costs	0.00	Euro

\*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).