



T2S CHANGE REQUEST FORM		
General Information (Origin of Request) <input type="checkbox"/> User Requirements (URD) or GUI Business Functionality Document (BFD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: 4CB	Institute: 4CB	Date raised: 17/05/2021
Request title: No intraday update of the Negative Position flag		Request ref. no: T2S-0764-SYS
Request type: Common	Classification: Scope enhancement	Urgency: Normal
1. Legal/business importance parameter¹: High	2. Market implementation efforts parameter²: Low	
3. Operational/Technical risk parameter³: Low	4. Financial impact parameter⁴: Low-medium (provided by 4CB)	
Requestor Category: Eurosystem	Status: Implemented	

Reason for change and expected benefits/business motivation:

T2S is designed in compliance with the URD requirement of preventing undue negative securities positions and cash balances. However, an incident occurred in a sequence of the NTS (Night Time Settlement) period of 25th May 2020 running under highly stressing operational conditions, which caused misfunctions and undue negative securities positions and cash balances.

This situation has among several actions revealed the need of implementing software enhancements to complement the existing design principles.

As such, the Design Review preventing occurrence of undue negative positions/balances in T2S Settlement database has requested to raise a Change request dealing with the use of the Negative Position indicator in the settlement process that may lead to inconsistent value or any misuse of this indicator.

In practice, some types of securities accounts in T2S are allowed to bear negative positions depending on their "Negative Position" attribute. This attribute is subject to intraday updates in the T2S Static data domain (switched from True to False or vice versa) upon request (A2A and U2A) from the account owner. The update is performed and confirmed by the T2S Static data domain (SDMG, or CRDM in T2-T2S Consolidation context) while the T2S settlement domain (SETT) is informed asynchronously.

This attribute is checked in SETT during the Provisioning/Booking process while checking whether a collection of settlement transactions is able to settle or not, preventing by this way the risk of undue negative position.

The main goal of the current change request is to manage properly the impact on settlement of any update request in SDMG of the "Negative Position" attribute, especially when such a request is received while settlement activities are going on.

The issue does not impact cash balances which are allowed to be negative according to the type of account (NCB Account or T2S DCA) which is not subject to intraday change.

¹ Legal/business importance parameter was set to High because the background of this CR is a production incident, and because of the important of avoiding undue negative positions in T2S.

² Market implementation effort parameter was set to Low because the change does not require a long implementation time and any significant resources on the side of Participating CSDs, CBs and their communities

³ Operational/technical risk parameter was set to Low because the CR would reduce the risk of undue negative positions.

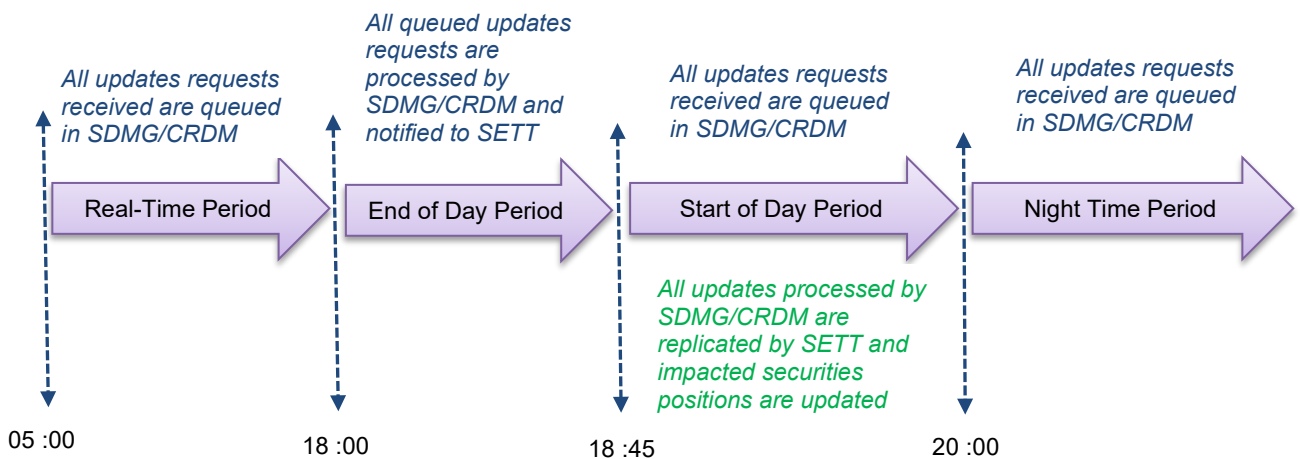
⁴ Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

Description of requested change:

The requested change aims at preventing any impact intraday in SETT of an update request of the “Negative Position” attribute. In other words, if any update request of this attribute is received in SDMG/CRDM out of the End of Day period, it must not be applied until the End of Day period and SETT should consider the new attribute as of the next business day.

It is proposed accordingly to implement the following rules in T2S:

1. When receiving a request for updating the “Negative Position” attribute out of the End of Day period, SDMG/CRDM should not apply it until the following End of Day.
2. SETT will not manage anymore any update request impacting the “Negative Position” attribute if notified by SDMG/CRDM out of the End of Day period. The new attribute will be handled by SETT during the next Start of Day replication process.
3. Upon reception of an update notification regarding the “Negative Position” attribute; SETT will consider the new value during the Start of Day Replication process and will control the consistency between the attribute change and the update of the relevant positions. If the impacted securities position becomes unduly negative due to the static data update (Flag switched from True to False with position already negative), a non-blocking alert must be raised to the Operational Team. The settlement engine in RTS as well as in NTS is designed in order to keep settling transactions crediting such securities positions until they become positive.



Example:

Illustration of Use Cases in SDMG/CRDM and SETT

Period of reception	<i>RTS</i>	<i>End of Day</i>	<i>Start of Day (SOD)</i>	<i>Night-Time</i>
Update of the Negative Position Flag	SDMG/CRDM: Request not completed until EOD.	SDMG/CRDM: Pending requests will be completed and notified to SETT.	SDMG/CRDM: New request not completed until next EOD.	SDMG/CRDM: Request not completed until next EOD.
	SETT: No action as the request is not sent to SETT.	SETT: No action as SETT will replicate the new attribute at the following Start of Day.	SETT: The new value of the flag will be replicated, impacting all related securities positions.	SETT: No action as the request is not sent to SETT.

Illustration of Use Cases in SETT

	Flag « T » updated to « F »	Flag « F » updated to « T »
Existing positive positions (Before update)	<p>SETT will settle during the RTS and the Night-Time periods:</p> <ul style="list-style-type: none"> All transactions crediting the related positions. All transactions debiting the related positions as long as they remain positive or null 	<p>SETT will settle during the RTS and the Night-Time periods, all transactions debiting or crediting the related positions.</p>
Existing authorised negative positions (Before update)	<p>SETT will</p> <ul style="list-style-type: none"> Raise an alert towards the Operational Team, Settle during the RTS and the Night-Time periods only the transactions crediting the related positions until they become positive 	N/A (T2S prevents undue negative positions)

In a contingency situation, it must remain possible to perform an intraday update of the 'Negative position' flag, following an operational procedure.

Submitted annexes / related documents:

Outcome/Decisions:

*CRG on 25 May 2021: the CRG agreed to launch the preliminary assessment of CR-764.

*CRG on 09 November 2021: the CRG agreed to recommend CR-764 for authorisation by the T2S Steering Level

*CSG on 17 November 2021: the CSG agreed to authorise CR-764

*PMG on 19 November 2021: the PMG agreed to launch the detailed assessment of CR-764 with a view of scoping in Release 7.0

*NECSG on 17 November 2021: the NECSG agreed to authorise CR-764

*AMI-SeCo on 19 November 2021: the AMI-SeCo agreed with the CRG recommendation of CR-764 for T2S Steering Level Authorisation

*MIB on 24 November 2021: the MIB agreed to authorise CR-764

*CRG on 28 February 2022: the CRG agreed to recommend to the PMG the inclusion of CR-764 in the scope of R7.0

*PMG on 09 March 2022: the PMG agreed to recommend the inclusion of CR-764 in the scope of R7.0

*OMG on 18 March 2022: the OMG identified an operational impact from the inclusion of CR-764 in R7.0

*MIB on 29 March 2022: the MIB approved the inclusion of CR-764 in the scope of R7.0, subject to CSG and NECSG resolution.

*CSG on 30 March 2022: the CSG approved the inclusion of CR-764 in the scope of R7.0.

*NECSG on 30 March 2022: the NECSG approved the inclusion of CR-764 in the scope of R7.0.

Documentation to be updated:

UDFS:

1.6.3.3.3 Validity of static data objects

TABLE 161 - STATIC DATA OBJECTS WITH LIMITED VALIDITY PERIOD

AREA	OBJECT	CREATION	UPDATE	DELETION	USAGE BY OTHER PROCESSES
[...]	[...]	[...]	[...]	[...]	[...]
Securities Account	Securities Account	Validity date may take the value of the current date.	May take effect on the current date ⁵ .	May be performed only on objects that are not valid on the current date.	Taken into account by all processes upon creation or update.
[...]	[...]	[...]	[...]	[...]	[...]

1.6.3.3.6 Static data maintenance instructions processing

[...]

In the specific case of updates of Securities concerning the Minimum Settlement Unit, the Settlement Unit Multiple, the Deviating Settlement Units, the Settlement Type or the Final Maturity/Expiry Date, or update of Securities Accounts concerning the Negative Position flag, the static data maintenance request is queued and then resumed and completed during the End-of-Day phase, by using the same queuing mechanism described below for static data maintenance requests that may have an impact on the settlement process and that are submitted while a night-time settlement sequence is running.

[...]

TABLE 177 - STATIC DATA OBJECTS THAT CAN BE MAINTAINED WHILE A NIGHT-TIME SEQUENCE IS RUNNING

AREA	UPDATE
[...]	[...]
Securities Account	Securities Account ⁶ . CSD Account Link CMB Securities Account Link
[...]	[...]

⁵ In order to avoid undue negative securities positions and cash balances, any update of Securities Accounts "Negative Position" attribute is allowed only under one of the two following conditions:

I updates applied to a securities account inside the End of Day period take effect immediately;

I updates applied to a securities account outside the End of Day period are queued and executed at the start of the following End of Day period;

⁶ Including the updates of MSA Securities Account Attribute values, with the exception of the setup, update and removal of intraday restrictions and updates of the positive/negative flag.

Updates to the "Negative Position" attribute applied to a securities account, outside the End of Day period, are further queued until the next End of Day phase.

UHB:
6.4.2.164 Securities Account - New/Edit Screen

Reference for error message	Field or Button	Error Text	Description
[...]			
DAU1070	<u>Negative Position</u> <u>Submit button</u>	<u>Securities Account update has been queued and will be executed during the End of Day period.</u>	<u>When performing a Securities Account Update request, if the request contains updates to the Negative Position flag, and it is submitted outside of the End of Day period, the request is queued and executed at the start of the End of Day period.</u>

Preliminary assessment:

Financial impact: low-medium

Impact on other Eurosystem Services or Projects: no

Risk analysis: No risks has been identified during the preliminary assessment

New business rule to prevent update of Securities Account Negative Position flag outside of EoD period. The changes of this kind submitted outside of the EoD period will be queued and processed during the EoD period as is currently the case for a number of Securities attribute updates.

New SOD check of positions against SETT negative allowed flag

New intraday check to turn down any intraday update outside of EoD period.

Detailed assessment:

EUROSYSTEM ANALYSIS – GENERAL INFORMATION	
T2S Specific Components	Common Components
LCMM	
	Instructions validation
	Status management
	Instruction matching
	Instructions maintenance
	Penalty Mechanism
Settlement	
X	Standardisation and preparation to settlement
	Night-time Settlement
	Daytime Recycling and optimisation
	Daytime Validation, provisioning & booking
	Auto-collateralisation
Liquidity Management	
	Outbound Information Management
	NCB Business Procedures
	Liquidity Operations
T2S Interface (as of June 2022 without Static Data Management, Communication for SDMG, Scheduler, Billing)	Eurosystem Single Market Infrastructure Gateway (from R6.0 June 2022)

	Communication		Communication
	Outbound Processing		Outbound Processing
	Inbound Processing		Inbound Processing
Static Data Management (until June 2022)		Common Reference Data Management (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	X	Securities account data management
	Rules and parameters data management		Rules and parameters data management
Statistics and archive		Statistics and archive	
	Statistical information (until June 2022)		Short term statistical information
	Legal archiving (until June 2022)		Legal archiving (from R6.0)
			Data Warehouse (from R6.0)
Information (until June 2022 containing reference data)		CRDM business interface (from R6.0 June 2022)	
	Report management		Report management
	Query management		Query management
			Communication
			Outbound Processing
			Inbound Processing
Operational Services			
	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	1.6.3.3.3 Validity of static data objects 1.6.3.3.6 Static data maintenance instructions processing	Footnotes added in the Tables 161 and 177, as updates to the "Negative Position" attribute applied to a securities account, outside the End of Day period, are further queued until the next End of Day phase,
Additional deliveries for Message Specification (UDFS, MyStandards, MOP contingency templates)		
UHB	6.4.2.164 Securities Account - New/Edit Screen	New business rule to prevent update of Securities Account Negative Position flag outside of EoD period.
Impacted GDPR message/ screen fields		No impact
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>The main changes with the CR consist in performing the update of the Negative Allowed flag not before the End of Day period and checking the Securities Positions stored in SETT that would be linked to securities accounts impacted by such a modification.</p> <p>Specifically, all the update requests queued during the intraday by SDMG/CRDM are notified to SETT during the End of Day period. During the Start of Day Replication process, SETT replicates the CRDM data with the new value of the Negative Flag.</p> <p>SETT raises an alert (one alert per security position) towards the Operation Team if the current position is negative while the new Negative Flag is set to FALSE (meaning that such a position is not authorized to be negative).</p> <p>If SETT receives erroneously such a notification during the intraday period, SETT will reject the update request.</p> <p>Addition of a footnote in the Tables 161 and 177, as updates to the "Negative Position" attribute applied to a securities account, outside the End of Day period, are further queued until the next End of Day phase, Definition of new business rule in order to prevent update of Securities Account Negative Position flag outside of EoD period.</p>			
Main cost drivers			
<ul style="list-style-type: none"> • The main cost driver is the update of the Negative Allowed flag functionality • Implementation of the new business rule in CRDM 			
Impact on other TARGET Services and projects			
No impact on ECMS, TIPS, TARGET2 or T2			
Summary of project risk			
None			
Security analysis			
No potentially adverse effect has been identified during the detailed assessment.			

15 February 2022

Cost assessment on Change Requests

T2S-764-SYS – No intraday update of the Negative Position flag			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	124,474.22	Euro
Annual	Operational costs		
	- Maintenance costs	10,911.29	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).