



EUROPEAN CENTRAL BANK

EUROSYSTEM

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: Danmarks Nationalbank	Institute: Central Bank	Date raised: 28/01/2022
Request title: Adaptions due to the decommissioning of Kronos2 and migration to T2		Request No.: T2S 0782 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: Medium
Requestor Category: Central Bank		Status: Implemented

Reason for change and expected benefits/business motivation:

This T2S change request is raised in the context of the on-boarding of DKK community onto T2 and TIPS.

In a press release issued on 8 December 2020, Danmarks Nationalbank (the national central bank of Denmark) informed of its decision to discontinue its current RTGS system, Kronos2, and migrate the settlement of Danish kroner (DKK) to the European payment and securities settlement platform TARGET Services in the course of 2025.

Although already being present on T2S with both DKK and EUR, the decision to migrate to T2 and TIPS will impact the DKK liquidity management in T2S as a number of changes are needed in T2S in order for the migration and subsequent use of T2 and TIPS for DKK to be successful.

The counterparts of this T2S-0782-URD change request is T2 change request CSLD-0087-URD and TIPS change request TIPS-0049-URD. The three change requests, addressing the respective governances, must be jointly implemented for Danmarks Nationalbank to exercise the Danish Monetary Policy of keeping Danish kroner pegged to the Euro. One of the policy tools is to control the money supply for the participants in the DKK domain. Closing procedures of the business day ensures that all outstanding intraday credit has been reimbursed (lower bound) and that any outstanding liquidity in excess of a certain limit is absorbed (upper bound), and converted from free liquidity into securities known as certificates of deposits.

DKCB DKK requests a payment bank cut-off across TARGET services every day at 5:00 p.m. ("DKK payment bank cut-off"). The cut-off must apply to all parties under the DKCB DKK system entity. The cut-off must prevent immediate liquidity transfers debiting or crediting RTGS, CLM, and T2S accounts and inter-service liquidity transfers debiting or crediting TIPS accounts.

For T2S, the DKK payment bank cut-off are implemented indirectly through the LTRC and GOLT events (see specific

¹ Fast-track justification: Due to the fact that CR-0782 has to be deployed together with CSLD-0087 and TIPS-0049, which both of them are currently under detailed assessment, a fast track approached is requested so that CR-0782 can be recommended for authorisation and approval in the short-term.

² Legal/business importance parameter was set to High (like CSLD-0087-URD) because it is necessary for DKK monetary policy purposes

³ Market implementation effort parameter was set to Low because its impact will be included in payment bank's onboarding onto T2 DKK

⁴ Operational/technical risk parameter was set to Low because the changes foreseen does not entail an operational or a technical impact as they are either minor configuration adjustments or new functionalities of a well-tested settlement day process.

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

timing below), thus utilising already available functionality in T2S in due time before 5 p.m. By using the LTRC and GOLT events, DKCB ensures that no participants can hold or move liquidity to and from their T2S DCA accounts after execution of these two events.

The DKCB will create an additional change request to T2S-0782-URD, to implement the DKK payment bank cut-off and snapshot directly on T2S DKK. This change request will be implemented after Go-Live. After this implementation, the mandatory automated cash sweep should be switched to the optional cash sweep similar to the future OSC2 event for T2S EUR.

Thus, in the transition period after Go-Live and before implementation of a payment bank cut-off and snapshot at 5:00 p.m. directly on T2S, the automated cash sweep must remain mandatory. In the unlikely case that a non-zero balance should remain on a DKK account in T2S at the end of day (e.g. a negative balance on a CB account), T2S will foresee an Operational Procedure.

The change requests CSLD-0087-URD and TIPS-0049-URD, implement a DKK payment bank cut-off and snapshot of account balances at 17:00 on T2 (RTGS and CLM) and TIPS, respectively. The DKK payment bank cut-off must be implemented in a flexible way to support the possibility that it can be postponed by the operator from 5 p.m. to a later point in time. The possibility to postpone the closing should be possible within the day but could also arise if DKCB in the future decides another time than 17:00. The DKK payment bank cut-off will keep in line with the existing sequence of events and timing of other currency-specific and non-currency specific events.

Considering above motivation, the timing of the delivery of T2S-0782-URD in the T2S test environments should consider the planned test phases for the onboarding of DKK as settlement currency in T2 and TIPS. The implementation of this CR must have no impact on EUR operations and functionalities in T2S.

Description of requested change:

Please note, that the CR section titles have been marked with either "DKK specific" or "alignment to EUR" in order to clearly indicate, whether the changes are new requirements specific for DKK or are raised in order to harmonise to EUR.

A. RTS Closure: Event schedule – DKK specific

These changes are pure configuration changes, and mentioned in this CR only for the sake of completeness. No T2S software change is required. The change of scheduled times is a T2S operational activity to be listed in the migration playbook of DKK to T2.

DKCB requests to change the RTS Closure schedule of events as indicated in Table 1. Changes are indicated with yellow colour.

T2S settlement day events / processes	EUR TIME	DKK TIME (Current)	DKK TIME (Future)
DVP cut-off	4:00 p.m.	4:00 p.m.	4:00 p.m.
Cash restriction cut-off	4:00 p.m.	4:00 p.m.	4:00 p.m.
Release of unused cash restriction	4:00 p.m.	4:00 p.m.	4:00 p.m.
End of DVP cut-off (EDVP)	At the end of DVP cut-off	At the end of DVP cut-off	At the end of DVP cut-off
Automatic reimbursement of collateralisation	4:30 p.m.	4:10 p.m.	4:30 p.m.
Optional cash sweep (standing liquidity transfers)	4:30 p.m.	4:15 p.m.	4:30 p.m.
Bilaterally Agreed Treasury Management (BATM) cut-off	5:40 p.m.	4:15 p.m.	4:40 p.m.

Central Bank Operations (CBO) cut-off	5:40 p.m.	4.15 p.m.	4:40 p.m.
Inbound liquidity transfers cut-off	5:45 p.m.	4:20 p.m.	4:45 p.m.
Automated cash sweep	5:45 p.m.	4:20 p.m.	4:45 p.m.
Securities restriction cut-off	6:00 p.m.		
FOP cut-off	6:00 p.m.		

DKCB has requested the events 'Inbound liquidity transfers cut-off' and 'Automatic EOD cash sweep' to be scheduled at 4:45 p.m.

B. Messages – Alignment to EUR

Removal of current routing of messages to Kronos2. As shown below in Table 1, T2S DKK is currently configured to exchange a number of messages to Kronos2. This Kronos2 integration routing of messages must be decommissioned and functionality reset to a standard T2S setup (as in T2S EUR). Thus, in case messages are exchanged between T2 and T2S EUR, they should also be exchanged between T2 and T2S DKK. The functionality itself will remain as a generic interface in case other external RTGS systems need to be connected. The detailed assessment of this CR has confirmed that this requirement does not require any changes to the T2S software. It can be achieved by means of configuration activities to be listed in the migration playbook of DKK to T2.

Message types exchanged between T2S and Kronos2			
T2S to Kronos2		Kronos2 to T2S	
acmt.026	AccountListReport	acmt.025	AccountQueryList
admi.007	ReceiptAcknowledgement	camt.003	GetAccount
camt.004	ReturnAccount	camt.025	Receipt
camt.019	ReturnBusinessDayInformation	camt.050	LiquidityCreditTransfer
camt.025	Receipt	camt.076	BillingReportRequest
camt.050	LiquidityCreditTransfer		
camt.051	LiquidityDebitTransfer		
camt.053	Statement of Accounts		
camt.077	BillingReport		

Note: The list shows the messages currently exchanged between T2S and Kronos2.
Source: DKCB.

C. General Ledger File – Alignment to EUR:

From the go-live day, T2S is expected to produce a DKK GL and send it to CLM (like it does for EUR). The creation of General Ledger will be triggered during the EoD phase which requires the completion of all cut-offs (for DKK). The generation of a GL file and its distribution to T2 shall be a parameter set at currency level in T2S. As this can be done specifically for each currency it also applies for further currencies that might join the TARGET Services.

Due to the fact that CR 782 will only provide the full functionality (for DKK) when T2-CR087 "Dedicated End-of-Day processing for DKK" CSLD side is implemented, it is ensured that the process for EUR works independently from this CR.

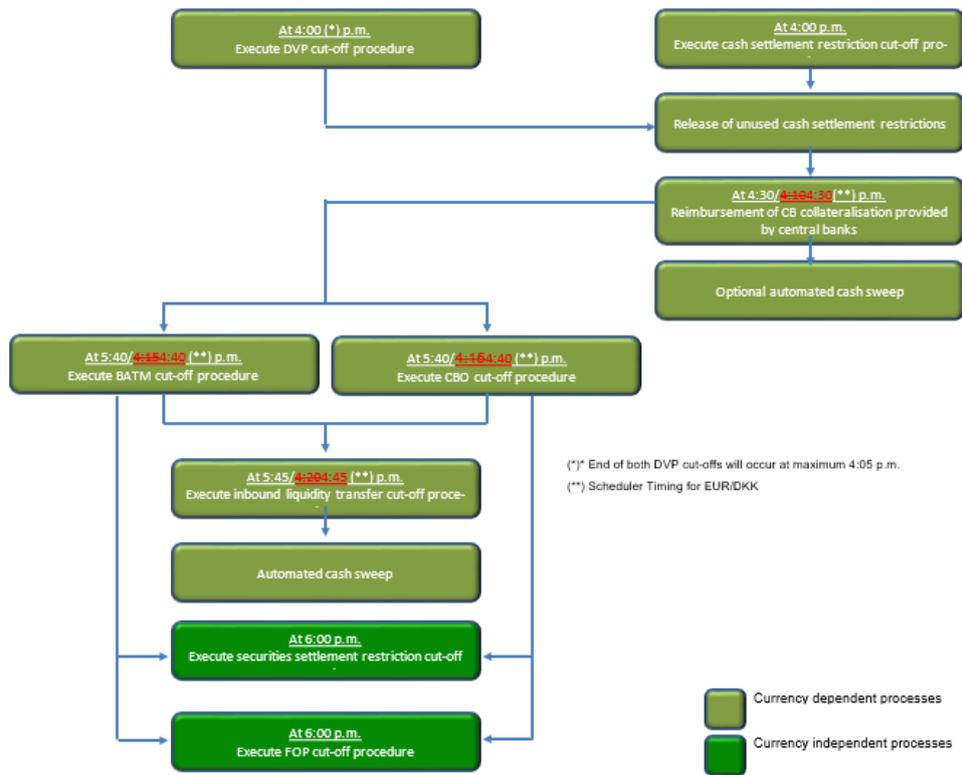
Submitted annexes / related documents:

Outcome/Decisions:

- *CRG Meeting on 25 April 2022: the CRG agreed to recommend CR-782 for authorisation by the T2S Steering Level following a fast-track approach.
- *AMI-SeCo on 3 May 2022: the AMI-SeCo agreed with the CRG recommendation of CR-782 for T2S Steering Level Authorisation
- *CSG on 4 May 2022: the CSG agreed to authorise CR-782
- *NECSG on 4 May 2022: the NECSG agreed to authorise CR-782
- *MIB on 13 May 2022: the MIB agreed to authorise CR-782
- *PMG on 24 May 2022: the PMG agreed to launch the detailed assessment of CR-782 with a view of scoping in Release R2023.JUN
- *CRG on 29 June 2022: the CRG agreed to recommend to the PMG the inclusion of CR-782 in the scope of R2023.NOV
- *OMG on 29 July 2022: the OMG identified an operational impact from the inclusion of CR-782 in R2023.NOV
- *PMG on 9 August 2022: the PMG agreed to recommend the inclusion of CR-782 in the scope of R2023.NOV.
- *CSG on 19 August 2022: the CSG approved the inclusion of CR-782 in the scope of R2023.NOV.
- *NECSG 19 August 2022: the NECSG approved the inclusion of CR-782 in the scope of R2023.NOV.
- *MIB on 22 August 2022: the MIB approved the inclusion of CR-782 in the scope of R2023.NOV.

Documentation to be updated:

UDFS, chapter 1.4.4.4.6 RTS closure dependencies, diagram 66



UDFS, chapter 3.3.3.16.3 The message in business context

Message usage: General Ledger file

Specific message requirements

T2S sends the General Ledger file to an RTGS system after receiving a camt.019 with the code “CHBD” (Change Business Day).

The generation of a GL file and its distribution to T2 shall be a parameter set at currency level in T2S.

Preliminary assessment:

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			
X	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
X	Outbound Processing		Outbound Processing
X	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		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)	
X	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	1.4.4.4.6 RTS closure dependencies	Modify the real-time closure settlement dependencies diagram (diagram 66) with new DKK event times.
	3.3.3.16.3 The message in business context	Addition that GL creation will become currency-dependent
UHB		

Impacted GDPR message/ screen fields		No impact		
Other documentations				
Links with other requests				
Links	Reference		Title	

OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT
<p>Summary of functional, development, infrastructure and migration impacts</p> <p>With CR 709 the General Ledger process with CLM was implemented. Actually this process is only in place for EUR. With this CR the General Ledger process in the INTF should become currency dependent.</p> <p>Therefore the internal camt.019 flows sent to LQMG and to the Outbound processing of INTF needs to be amended by the currency field. This allows the consideration of the currency for further processing. For the outbound processing a currency check must be implemented for the General Ledger sending to ensure that the General Ledger with the currency that is named in the received camt.19 will be sent out to CLM.</p> <p>Liquidity Management receives a camt.019 through the INTF which checks in LQMG if all Liquidity Transfers have a final status. This camt.019 will now be enhanced by the currency. LQMG will be adapted to consider the currency for the processing.</p> <p>The settlement day description will be updated taking into consideration new events and new timing.</p> <p>Main Cost Drivers:</p> <ul style="list-style-type: none"> • Adjustment of the General Ledger process to become currency dependent. Therefore the currency must be considered for the internal flows and the GL processes must be enhanced by currency checks.
<p>Impact on other TARGET Services and projects</p> <p>The impact on CSLD is covered by T2 CR-087 and on TIPS side by TIPS-0049-URD. No other impact on CSLD, ECMS or TIPS has been identified during DA.</p>
<p>Summary of project risk</p> <p>n.a.</p>
<p>Security analysis</p> <p>No adverse effect has been identified during security assessment.</p>



12 July 2022

Cost assessment on Change Requests

T2S-782-SYS – Adaptations due to the decommissioning of Kronos2 and migration to T2			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	233,434.67	Euro
Annual	Operational costs		
	- Maintenance costs	18,339.30	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).