

Change Request form

General Information (Origin of Request)		
<input checked="" type="checkbox"/> User Requirements Document (URD)		
<input checked="" type="checkbox"/> User Detailed Functional Specification (UDFS)		
<input type="checkbox"/> User Handbook (UHB)		
<input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: Danmarks Nationalbank	Institution:	Date raised: 14 January 2022
Request title: TIPS Payment banks cut-off for DKK and consistent snapshot		Request ref. no: TIPS-0049-URD ¹
Request type: Common		
1. Legal/business importance parameter: High	2. Market implementation efforts parameter – Stakeholder impact: Medium	
3. Operational impact: High	4. Financial impact parameter: Medium	
5. Functional/ Technical impact: Medium	6. Interoperability impact: Medium	
Requestor Category: NCB		Status: Allocated to a Release

Reason for change and expected benefits/business motivation:

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

The change request is important for Danmarks Nationalbank in order to exercise the Danish Monetary Policy of keeping Danish Kroner (DKK) pegged towards the Euro. One of the policy tools is to control the money supply by ensuring adequate liquidity 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.

Approaching the end of the business day in DKK, DKCB needs a period of time in which:

- payment banks and ancillary systems under the DKCB DKK system entity (not the DKCB EUR entity) can no longer instruct any cash transfers debiting or crediting CLM, RTGS and T2S accounts, as well as *inter-service* liquidity transfers debiting or crediting TIPS accounts.
- DKCB can still move liquidity between TIPS and T2-CLM without any restrictions until the regular cut-off around 18:00.

This will serve two main purposes:

- Funding participants which have an overall negative cash balance.
- Converting excess liquidity into certificate of deposits for participants with an overall cash balance above a given limit

Both purposes are achieved through liquidity transfers, connected payment and credit line updates, all in DKK, instructed by DKCB.

Description of requested change:

In substance, the requirement implies the following changes in the TIPS service.

New Cut-off processing

DKCB DKK needs a timeslot every business day, from 17:00 (“payment bank cut-off”) until the regular end of day cut-off, when payment banks and ancillary systems under the DKCB DKK system entity cannot instruct inter-service liquidity transfers debiting or crediting TIPS accounts.

¹ XXXX = ECMS /TIPS / CONS, NNNN = 9999, DDDD = URD/UDFS/UHB

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After the newly introduced cut-off in T2 operating day, and until the regular end of day cut-offs, only DKCB can instruct inter-service liquidity transfers debiting or crediting TIPS accounts.

This new cut-off and the relevant processing will only be applicable to DKK currency. Moreover, neither instant payments in DKK nor settlement of intra-service Liquidity Transfer in DKK will suffer of any limitation stemming from the introduction of this new cut-off.

The “payment bank cut-off” should be implemented, into the CSLD-0087 CR, in a flexible way to support the possibility that it can be postponed by the operator from 17:00. to a later point in time. The possibility to postpone the closing should be possible within the day but could also arise if Danmarks Nationalbank in the future decides another time than 17:00.

Snapshot

A consistent snapshot of all DKK account balances in TIPS has to be taken and sent via A2A from TIPS to CLM as soon as algorithms following the newly introduced payment bank cut-off have been executed, i.e. when there are no remaining queued cash transfers or in-flight liquidity after the new payment bank cut-off for DKK is reached.

TIPS shall receive from T2-CLM a dedicated trigger, similar to the one used for the change of business date procedure, in order to (i) prevent the acceptance of any new inter-service LT in DKK and (ii) wait until any pending inter-service LT in DKK is closed.

Once all the pending inter-service LTs in DKK have reached their final status on both systems (i.e. T2-CLM and TIPS), TIPS will receive a trigger² from T2-CLM to take the snapshot of the DKK accounts balance and will deliver it to T2-CLM via a dedicated message. (in the form of a camt.053). All the snapshots (T2, T2S and TIPS) delivered to the Danmarks Nationalbank shall have the same structure. The snapshot must be consistent in the sense that all liquidity should be counted at the same point in time and liquidity must be recorded once and only once. The snapshot should be broken down by accounts. The snapshot must include a booking date time reflecting the time when the account balances were recorded. It should be possible to distinguish this snapshot from a regular GL-file.

After the successful reception of the snapshot in T2, TIPS will wait for a further trigger³ from T2-CLM indicating that the inter-service LTs in DKK can be enabled again, for Danmarks Nationalbank only.⁴ The regular cut-off around 18Hrs apply for DKK as well. Following this cut-off inter-service liquidity transfers debiting or crediting TIPS accounts are not available for anyone until CLM sends a status message informing TIPS that Liquidity Transfers can be accepted and processed again.

CRDM configuration parameters

TIPS is by design a multi-currency system capable of settling instant payments transactions in different currencies. Therefore, with the on boarding of the Danish community, the CRDM configuration shall be updated to also include DKK among the active settlement currencies. Specific value for the system parameter related to the maximum amount allowed in DKK shall be implemented accordingly.

More in detail:

- Maximum Amount (DKK): The parameter defines the maximum amount in DKK currency which can be settled with a single Instant Payment transaction involving TIPS accounts and/or TIPS AS Technical Account denominated in Danish Kroner.

The system parameter shall be maintained by the TIPS Operator and shall be applicable only to Instant Payment transactions in DKK currency. No impact is envisaged on the already existing set of system parameters, which shall remain valid for transactions in other currencies (e.g. EUR, SEK).

Furthermore, a TIPS transit account for DKK currency shall be defined in CRDM under the DKCB responsibility.

Delivery

This TIPS change request and CSLD-0087 need to be assessed and implemented together in the November 2023 release as part of the DKCB T2 implementation plan. They share common definitions/requirements, for example: “payment bank cut-off”, snapshot, etc.

Submitted annexes / related documents:

Proposed wording for the Change request:

² The trigger to take the snapshot shall contain a different code compared to the one used for the EoD processing.

³ This further trigger is used to set the system in a new status “*Partially Closed*”, i.e. it is open for CB users only, which is also depending from the currency.

⁴ The TIPS Operator can act on behalf of the DKCB also after the payment bank cut-off.

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High-level description of Impact:

TIPS UDFS v4.1.1

1) 1.4.6 RTGS Systems

TIPS maintains information about the RTGS Systems that interact with it, along with the respective currency, status (i.e. whether they are open and ready to receive liquidity transfers or not), distinguished name and business date. The distinguished name of the RTGS System is recognised as a dedicated RTGS System user authorised to send any messages or queries to TIPS (e.g. to manage the transfer of liquidity from the RTGS System to TIPS and to query the balances of the TIPS Accounts linked to the RTGS System account).

As for the RTGS status field, besides the values (i) 'Open' where any authorised participant can inject inter-service liquidity transfers and (ii) 'Closed' where nobody can inject inter-service liquidity transfers, the status (iii) 'Partially Closed' is used to authorize only the Central Bank(s) to instruct inter-service LTs.

Similarly to status 'Open' and 'Closed', also the 'Partially Closed' is activated per currency. Currently, its activation is only foreseen for the Danish community in the time slot between 17:00 and 18:00 of the RTGS business date for the DKK. During the partial closure window for a currency, TIPS rejects any outbound inter-service LT attempt in that currency from a non-Central Bank user whereas any inbound inter-service LT attempt can only be blocked in the connected RTGS system.

It is worth specifying that Intra-service Liquidity transfers are not impacted by the above-mentioned 'Partially Closed' status as they can be processed in TIPS on a 24/7 basis, without limitations.

The status and the business date are updated automatically upon receiving a [ReturnBusinessDayInformation](#) message from the relevant RTGS System and can be modified manually by the TIPS Operator in contingency situations. RTGS System data includes the following attributes.

Table 1 – RTGS Systems data

Attribute	Description
RTGS System	Identifier of the RTGS System interacting with TIPS.
RTGS Currency	Settlement currency of the related RTGS System.
RTGS Status	Current status of the related RTGS System. Possible values: - Open - Closed - <u>Partially Closed</u>
Business Date	Current business date of the RTGS System.
Distinguished Name	DN of the RTGS System

The following RTGS status transitions are therefore allowed:

- From 'Open' to 'Closed': Any Inter-service Outbound Liquidity Transfer is rejected by TIPS,

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regardless of the sender.

- From 'Closed' to 'Partially Closed': Inter-service Outbound Liquidity Transfers are rejected by TIPS if a sender does not belong to the Central Bank operating on the specific currency for which partial closure applies.
- From 'Partially Closed' to 'Closed': Any Inter-service Outbound Liquidity Transfer is rejected by TIPS, regardless of the sender.
- From 'Closed' to 'Open': Any Inter-service Outbound Liquidity Transfer is accepted by TIPS, regardless of the sender.

2) 1.6.1 T2 and other RTGS Systems

[...]

The interactions with the RTGS System aim at informing TIPS about:

- the need for settlement of Liquidity Transfers coming from the RTGS System (see [Error! Reference source not found. "Error! Reference source not found."](#));
- the confirmation of a Liquidity Transfer settlement received from TIPS by the RTGS System (see [Error! Reference source not found. "Error! Reference source not found."](#));
- the current status of the relevant RTGS System, needed for the validation of Inbound and Outbound Liquidity Transfers;
- the current Business Date of the RTGS System, needed for the reconciliation of Recall Responses, Instant Payments and Liquidity Transfers;
- the moment of change of Business Date in the relevant RTGS System, in order to start the creation of reports and the General Ledger message⁵;
- the moment to generate and transmit to the RTGS System a snapshot containing the account balances denominated in a specific currency.

TIPS foresees three main interactions with the RTGS Systems covering the above listed information: the Liquidity Transfer management, the closure of the RTGS System (for the maintenance window and the weekend or holidays) and the change of business date of the RTGS System.

Besides these interactions, on an optional basis, an RTGS System may require specific snapshot in connection to particular cut-offs of their operating day.

The following sub-sections provide detailed information on these three main interactions, with specific reference to T2-CLM.

3) New sections to describe the TIPS snapshot containing the account balances

1.6.1.5 TIPS Snapshot

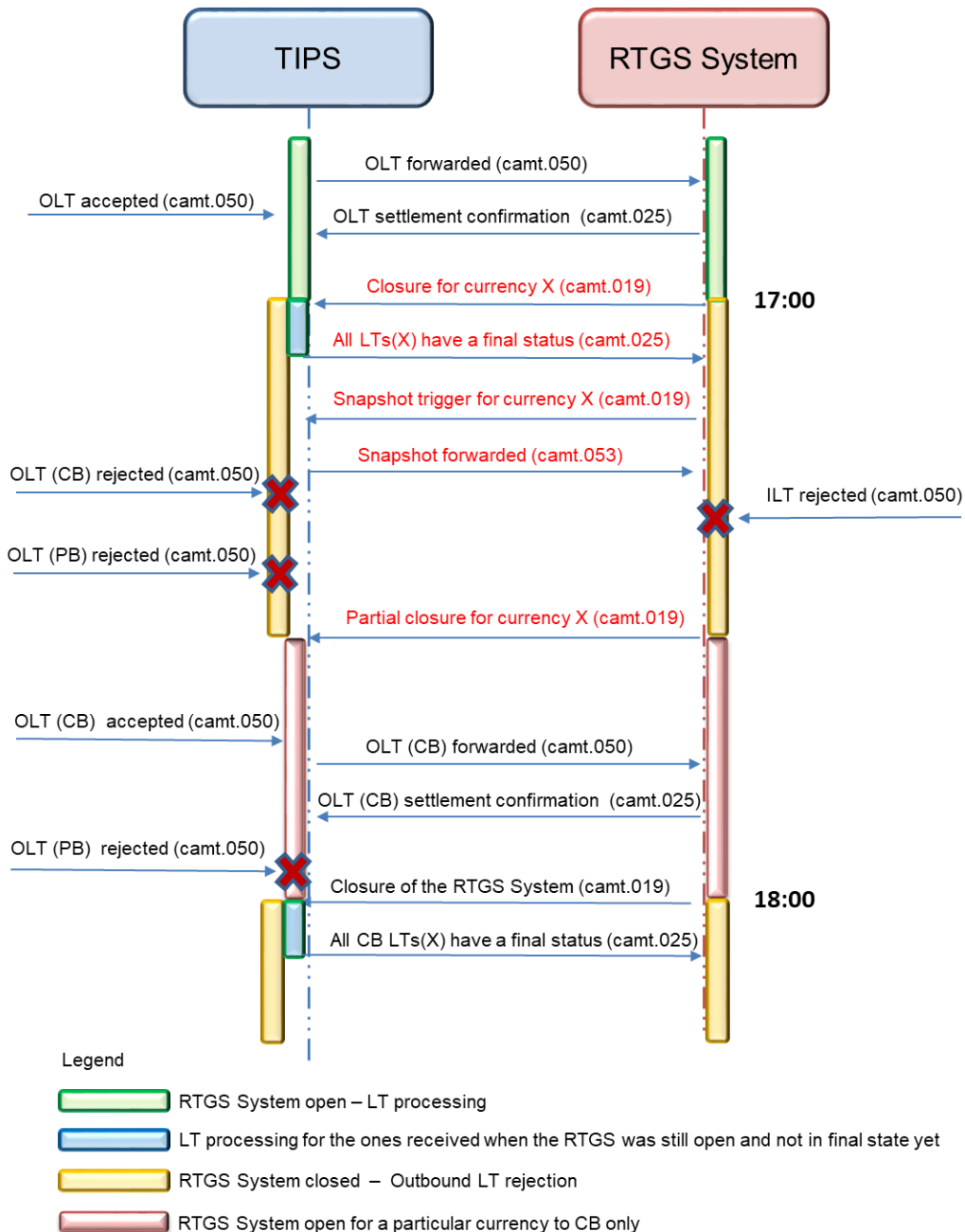
Similarly to the current End-of-Day mechanism, that leads to the generation and delivery of the TIPS General Ledger towards the RTGS System, the TIPS snapshot function is used to take a consistent picture of the balance available on the accounts of a given currency at a specific moment in time.

⁵ As for the communication with TARGET2, until the go-live of the T2-T2S Consolidation project, the General Ledger will be transferred via the existing flat-file.

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In order to ensure consistency, there should be no liquidity transfer⁶ “in flight” between TIPS and the RTGS system. For this reason the following workflow between the RTGS system and TIPS shall be implemented.

Figure 1 – Snapshot generation and partial closure status



After the snapshot generation and delivery to the relevant RTGS System, the RTGS System communicates to TIPS the new status of partial closure where only the responsible Central Bank (or the TIPS Operator acting on its behalf) is authorized to instruct Inter-service Liquidity Transfers in a specific currency. All the other settlement currencies active in the system are not impacted by this processing.

⁶ Denominated in the same currency for which the account balances snapshot is requested.

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1.6.1.5.1 TIPS Snapshot production

When the appropriate currency-specific Snapshot cut-off, configured in the RTGS system operating day, is reached the RTGS system sends a [ReturnBusinessDayInformation](#) to TIPS, in order to inform that for the corresponding currency:

- liquidity transfers from RTGS to TIPS are no longer accepted by the RTGS system;
- any new outbound liquidity transfers received by TIPS shall be rejected;
- TIPS should finalise all pending liquidity transfers and notify the RTGS system.

After the finalisation of all the pending liquidity transfers, TIPS delivers a [Error! Reference source not found.](#) to the RTGS system.

Once the processing on the pending liquidity transfer in the specific currency is completed in the RTGS system, it delivers a second [ReturnBusinessDayInformation](#) that is used by TIPS as a trigger to generate the [Snapshot message](#) reporting the current balances available on all the TIPS Accounts denominated in the specific currency.

Once the generation is complete, TIPS delivers the Snapshot messages to the RTGS system. After reception of the snapshot in the RTGS system, a third [ReturnBusinessDayInformation](#) communicates that the status of the RTGS system can be set to 'Partially Closed', i.e. from that moment onward only the Central Bank operating the specific currency can instruct inter-service Outbound Liquidity Transfer. The corresponding block on the inter-service Inbound Liquidity Transfers has to be set up in the RTGS system.

4) 1.7.1. Service configuration

Table 2 – System Parameters

Parameter name	Description	Default value
[...]	[...]	[...]
Sweeping Timeout	<p>The time window after which the sweeping daemon looks for pending payments for which:</p> <p>(i) a valid and timely confirmation from the Beneficiary Participant has not been received yet and</p> <p>(ii) the SCT^{Inst} Timestamp Timeout is elapsed.</p> <p>The value can impact on the performances of the system and must be changed only after green light received by the technical support. The parameter is expressed in seconds.</p>	30
Maximum Amount	<p>Maximum amount – defined for each settlement currency – which can be transferred by a single Instant Payment transaction. The parameter must allow an "unlimited" value.</p>	<p><i>Unlimited (for Euro)</i></p> <p><i>Unlimited (for SEK)</i></p> <p><u>7.500.000 (for DKK)</u></p>
[...]	[...]	[...]

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5) 2.5.2 Outbound Liquidity Transfer

[...]

The table below describes each single step of the Outbound Liquidity Transfer process.

Table 3 – Outbound Liquidity Transfer Order steps

Step	Involved messages	Involved actors	Description
[...]	[...]	[...]	[...]
7		TIPS	<p>TIPS successfully completes the execution of the following checks:</p> <ul style="list-style-type: none"> - RTGS opening hours Check; - RTGS partial closure Check; - Error! Reference source not found. <p>See Error! Reference source not found.- Error! Reference source not found. for details.</p>
[...]	[...]	[...]	[...]

6) 3.3.2.2.6 ReturnBusinessDayInformation (camt.019.001.07)

The ReturnBusinessDayInformation message is sent by the RTGS system to TIPS to:

- Notify the change of RTGS Business Date;
- Notify the partial closure for inter-service liquidity transfers;
- Trigger the generation of the snapshot containing all the TIPS accounts balances in a given currency;
- Enable or disable the acceptance of outbound liquidity transfers instructed to TIPS.

Table 4 – ReturnBusinessDayInformation (camt.019.001.07)

Field Name	Description	XML path	Mand.	TIPS Usage
[...]	[...]	[...]	[...]	[...]
System Date	Business date of the RTGS System.	RtrBizDayInf/RptOrErr/BizRpt/BizDayOrErr/BizDay Inf/SysDt	Yes	In case the message is sent for the change of business date, this field contains the next RTGS business date.
System Status	Status of the RTGS System	RtrBizDayInf/RptOrErr/BizRpt/BizDayOrErr/BizDay Inf/SysSts/Sts/Prtry/Id	Yes	<p>Status change of the RTGS System. Possible values:</p> <ul style="list-style-type: none"> - CHBD: for Change Business Date; - STRT: for Start Inbound/Outbound Liquidity Transfers; - STOP: for Stop Inbound/Outbound Liquidity Transfers; - SNAP: for taking <u>the snapshot of the accounts denominated in the field RTGS</u>

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Field Name	Description	XML path	Mand.	TIPS Usage
				<u>interested currency:</u> - STCB: for preventing any <u>Outbound Liquidity Transfer</u> <u>denominated in the field RTGS</u> <u>interested currency</u> <u>from a non-Central Bank user.</u>
[...]	[...]	[...]	[...]	[...]

7) 3.3.2.2.13 BankToCustomerStatement (camt.053.001.08)

The Bank To Customer Statement (camt.053.001.08) is used as General Ledger message sent by TIPS to the RTGS Systems.

Furthermore, the same message type is also used as Snapshot message to convey to the RTGS System the account balance status.

[...]

Table 5 – BankToCustomerStatement (camt.053.001.08) – Snapshot message

Field Name	Description	XML path	Mand.	TIPS Usage
Message Identifier	Identification of the message	BkToCstmrStmnt/GrpHdr/MsgId	Yes	
Creation Date Time	Timestamp of the creation of the message	BkToCstmrStmnt/GrpHdr/CreDtTm	Yes	
Page Number	Page number for message pagination	BkToCstmrStmnt/GrpHdr/MsgPgntn/PgNb	Yes	Message pagination not used. Fixed value 1 .
Last Page Indicator	Last Page Indicator for message pagination	BkToCstmrStmnt/GrpHdr/MsgPgntn/LastPgInd	Yes	Message pagination not used. Fixed value true .
Statement Identifier	Identifies the Settlement Service generating the General Ledger	BkToCstmrStmnt/Stmnt/Id	Yes	Fixed Value TIPS
Account Identification	Account reported	BkToCstmrStmnt/Stmnt/Acct/Id/Othr/Id	Yes	
Account Owner BIC	BIC of Financial Institution owning the account reported	BkToCstmrStmnt/Stmnt/Acct/Ownr/Id/OrgId/AnyBIC	Yes	
Account Owner country of residence	Country of residence of the Financial Institution owning the account reported	BkToCstmrStmnt/Stmnt/Acct/Ownr/CtryOfRes	Yes	

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Field Name	Description	XML path	Mand.	TIPS Usage
Balance Type	Type of the balance reported	BkToCstmrStmt/Stmt/Bal/Tp/CdOrPrtry/Cd	Yes	Possible values: - OPBD : for Balance at Start of Day; - CLBD : for Balance at End of Day; - ITBD : for <u>snapshot balance</u> .
Amount	Balance Amount with currency	BkToCstmrStmt/Stmt/Bal/Amt	Yes	
Credit/debit Indicator	Specifies if the Account balance is positive or negative	BkToCstmrStmt/Stmt/Bal/CdtDbtInd	Yes	
RTGS business date	RTGS business date for which the information is retrieved	BkToCstmrStmt/Stmt/Bal/Dt	Yes	It is filled with the stored RTGS business date.
Total Credit entries	Sum of Credit entries of the reported account	BkToCstmrStmt/Stmt/TxsSummary/TtlCdtNtries/Sum	Yes	
Total Debit entries	Sum of Debit entries of the reported account	BkToCstmrStmt/Stmt/TxsSummary/TtlDbtNtries/Sum	Yes	

8) 3.3.2.2.8 Receipt (camt.025.001.04)

The Receipt message (camt.025.001.04) is used in TIPS in the interaction with the RTGS Systems for the Liquidity Credit Transfer scenarios and for the change of business date of the RTGS System scenario.

[...]

In the RTGS System change of business date and Snapshot⁷ message scenarios, it is used by TIPS to inform the RTGS System that TIPS received the confirmation of settlement or the rejection for all the transient Liquidity Transfers.

Table 6 – Receipt (camt.025.001.04)

Field Name	Description	XML path	Mand.	TIPS Usage
[...]	[...]	[...]	[...]	[...]

⁷ The snapshot message is optional and configured on the basis of the business requirements. For the time being only snapshot for DKK accounts is envisaged.

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Field Name	Description	XML path	Mand.	TIPS Usage
Instructing Agent	Debtor of of the originating Liquidity Transfer	Rct/RctDtls/OrgnPmtId/ShrtBizId/InstgAgt/FinInstnId/BICFI	No	For camt.025 sent by RTGS System to TIPS, it must be filled with the Debtor BIC of the originating Liquidity Transfer. It is not filled in camt.025 generated by TIPS.
[...]	[...]	[...]	[...]	[...]
Status Code	Specifies the status of the originating liquidity credit transfer	Rct/RctDtls/ReqHdlg/StsCd	Yes	Possible status codes: - RREJ : for rejection; - RCON : for confirmation; - CMPT : for completed. The latter status is sent by TIPS to the RTGS System to inform that all transient LT have been processed.
[...]	[...]	[...]	[...]	[...]

9) 4.1 Business rules

Business process	BR Name	Check ID	Input Fields and parameters	Business check	Error codes	Error Description
[...]	[...]	[...]	[...]	[...]	[...]	[...]
Liquidity Transfer business process	RTGS opening hours Check	040008	RTGS system data - RTGS Status	The value of the attribute "RTGS Status" is "Open" for the RTGS system.	If the check is not respected: - error code L008	RTGS system is closed
<u>Liquidity Transfer business process</u>	<u>RTGS partial closure Check</u>	<u>040015</u>	<u>RTGS system data - RTGS Status</u> <u>Sender DN</u>	<u>The value of the attribute "RTGS Status" is "Partially Closed" and the Sender DN corresponds to a CB user.</u>	<u>If the check is not respected:</u> <u>- error code L015</u>	<u>User not authorised when RTGS System is partially closed</u>
[...]	[...]	[...]	[...]	[...]	[...]	[...]

10) 4.2.2 List of non-ISO Error codes

The table below contains the exhaustive list of non-ISO error codes generated by TIPS in case of error detected during the validation processes.

Error Code	Error description
[...]	[...]
L014	Intra-service LT not allowed
<u>L015</u>	<u>User not authorised when RTGS System is partially closed</u>

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Error Code	Error description
[...]	[...]

11) Amendment of XSD for camt.053 General Ledger

TIPS UHB v4.1.1

12) 4.4.1.1 Liquidity Transfer – new screen

[...]

Buttons

Buttons	
Submit	<p>This function enables to submit the Liquidity Transfer according to the information entered. Upon clicking on the submit button the user will be asked to enter their PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor.</p> <p>References for error messages: [▶]:</p> <ul style="list-style-type: none"> L005 L006 L007 L008 L009 L011 L012 L014 <u>L015</u> TBL1
[...]	[...]

13) 6.1.1 Error Codes

Reference for error message	Field or Button	Error text
[...]	[...]	[...]
L014	<ul style="list-style-type: none"> Debtor BIC field Debtor Account field Creditor BIC field Creditor Account field 	Intra-service LT not allowed
<u>L015</u>	<ul style="list-style-type: none"> <u>Submit button</u> <u>RTGS Status</u> 	<u>User not authorised when RTGS System is partially closed</u>
[...]	[...]	[...]

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TIPS User Training material

14) FN.050 Liquidity management shall be amended to reflect the new business rule for Outbound LT processing and the new scenario of interaction between TIPS and a generic RTGS system

Impacts on other projects and products:

No impact is foreseen on other TARGET services:

- T2 no impact
- ECMS no impact
- T2S no impact
- TARGET2 no impact

A T2 CR (CSLD-0087-URD) is raised and must be assessed with this CR. The two CRs are linked to each other and should be assessed and implemented together in the November 2023 release as part of the DKCB T2 implementation plan. The format and structure of the snapshot taken in T2 and TIPS must be consistent.

Outcome/Decisions:

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L3 analysis - General Information	
Impact on TIPS	
Business Interface	
X	A2A Interface
X	U2A Interface
Settlement Engine	
	Payment Transaction
X	Liquidity Transfer
	Recall
Queries and Reports	
	Queries
X	Reports
Other functions	
	Local Reference Data Management
	Statistics
	Complex Queries and Reports
	Mobile Proxy Look-up
Common Components	
	ESMIG
	CRDM
	Archiving
	Billing
	DMT
Operational Tools	
	SLA Reporting
	TMS
	Technical Monitoring

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	Change Management	
	Capacity Management	
X	Contingency Message Application / Testing Tool	
Infrastructure request		
	Application components impacted	
	Application components not impacted	
Operational activities		
	Business activities impacted	
	Technical activities impacted	
New functionalities		
Impact on documentation		
Document	Chapter	Change
TIPS UHB	§4.4.1.1 Liquidity Transfer – new screen	Reference to new error code
	§6.1.1 Error codes	Reference to new error code
TIPS UDFS	§1.4.6 RTGS system	New status and new workflow for snapshot handling
	§1.6.1 T2 and other RTGS systems	New business scenario
	§1.6.1.5 TIPS snapshot	New section
	§1.6.1.5.1 TIPS snapshot production	New section
	§1.7.1. Service configuration 1.7.1 Service configuration	New value for DKK system parameters
	§2.5.2 Outbound Liquidity Transfer	New business rule reference
	§3.3.2.2.6 ReturnBusinessDayInformation	New business scenarios for camt.019
	§3.3.2.2.13 BankToCustomerStatement	New business scenarios for camt.053
	§3.3.2.2.8 Receipt	New business scenarios for camt.025
	§4.1 Business rules	New business rule for partial closure of inter-service LTs
	§4.2.2 List of non-ISO Error codes	New error code L015
Amended XSD for camt.053GL	New Balance Type ITBD for the snapshot	
TIPS User Training material	FN.050_Liquidity management	Amendment of the slides n.29 and n.30 New slides for the Snapshot scenario (i.e. the interaction between TIPS and a RTGS system).

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Overview of the impact of the request on TIPS (L2 view)

Summary of functional, development, infrastructure, operational and security impacts

Summary of functional impact:**TIPS U2A**

The *Liquidity Transfer* – new screen shall be adapted to manage the new error code (L015).

TIPS processing

- New snapshot functionality currency-dependent to get the balance of all the accounts denominated in a given currency. The snapshot is generated in a form of camt.053GL and transmitted towards the RTGS system that requested it (e.g. for DKK it will be delivered to T2-CLM).
- New status of 'partial closure' for inter-service LTs which prevents any non-CB user to submit inter-service LTs in the corresponding currency. The new status will be communicated by the RTGS system following a workflow similar to the one used during the End-of-Day to make sure there are no liquidity transfers "in flight" in the corresponding currency between the two systems when the snapshot is taken.
- New business rule to block the execution of Outbound LTs submitted by a non-CB user when the RTGS system's status is set to "*Partially Closed*", i.e. it is open for CB users only.

TIPS A2A

- Adaptation of XSD for camt.053GL which is used in the internal interface between TIPS and the connected RTGS systems. New balance type 'ITBD' is defined to cope with the Snapshot scenario.
- As the status codes are not enumerated in the XSD of the camt.019, we do not see the need to publish an updated XSD and example for this message. The validation of the codes is expected to be done at message router level.
- No functional impact is envisaged on the CLM Adapter component, as all the message types (i.e. camt.019, camt.025, camt.053) needed for the snapshot are already in use in the TIPS-CLM interface for the End-of-Day procedures.

Scope Defining documents

- TIPS URD (ECB)
- TIPS UDFS and TIPS UHB
- TIPS User Training material
- Adapted XSD for camt.053GL

Summary of application development impact:

Assumptions:

- a. TIPS does not implement any logic to trigger cut-offs or to enforce the correct transitions between RTGS states: it is up to the RTGS to submit the state transitions with the proper flow. Consequently, impacts on RTGS and Common Component (SCHED) stemming from the new cut-off sequence are not taken into account in this CR;
- b. The sentence above "*The snapshot must include a booking date time reflecting the time when the account balances were recorded*" is intended as "*The snapshot must include the date time when balance data are read*". This point in time does not reflect the moment when balances were updated.

The following application components have to be changed:

1. **TIPS GUI:** When the user enters a new Liquidity Transfer, the new error condition triggered by the "partial closure" of the RTGS must be handled.
2. **TIPS Reports:** Production of the new camt.053GL for the given currency and sending to the relevant RTGS.
3. **TIPS Message Router:**

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3.1. Change of the RTGS status from 'Open' to 'Closed'.

When a cut-off notification is received (camt.019) for the transition of the RTGS status from 'Open' to 'Closed', then the "wait cycle" must be started until all the in-flight LTs reach their final status. At the end of the cycle.

This transition of status has not been taken into account in computation of cost/effort this CR, as the needed functionalities are already in place for the regular cut-off (h18.00), and new cut-off only needs some configuration activities to be duplicated, for the DKK currency, in the OPDAY.

3.2. Snapshot.

When the specific message (camt.019) is received by the RTGS, then:

3.2.1. An (internal) snapshot of all the data of all the TIPS accounts is taken.

3.2.2. To trigger the production of the new camt.053 "ITBD" for the given currency, taking data from the above internal snapshot;

3.3. Change of the RTGS status from 'Closed' to 'Partially Closed'.

When the new cut-off notification is received (camt.019) for the transition of the RTGS status from 'Closed' to 'Partially Closed', then:

3.3.1. The Settlement Core must be instructed to change the RTGS status to "Partially Closed".

3.4. Change of the RTGS status from 'Partially Closed' to "Closed".

When the new cut-off notification is received (camt.019) for the transition of the RTGS status from 'Partially Close' to "Close", then the "wait cycle" must be started until all the in-flight LTs reach their final status.

This transition of status has not been taken into account in computation of cost/effort this CR, as the needed functionalities are already in place.

3.5. Change of the RTGS status from 'Closed' to 'Open'.

When the new cut-off notification is received (camt.019) for the transition of the RTGS status from 'Closed' to 'Open', then the Settlement Core must be instructed to change the RTGS status.

This transition of status has not been taken into account in computation of cost/effort this CR, as the needed functionalities are already in place.

3.6. Check of LTs needed for the new RTGS status "Partially Closed": When an outbound Liquidity Transfer (camt.050) order is received, the legal entity of the originator has to be identified as the central bank linked to the currency of the order (as above the TIPS operators will be also allowed). TIPS, regardless of the RTGS Status, always processes inbound LT orders.

3.7. Rejection of LTs due to the new status "Partially Closed": In case of rejection of the outbound LT order settlement request by the Settlement Core the proper reply has to be formatted into a camt.025 and sent to the originator (TIPS operators will be also allowed). TIPS, regardless of the RTGS Status, always processes inbound LT orders.

4. TIPS Settlement Core:

4.1. The new status for "partial closure" for each RTGS, has to be stored within the component; it has to be updated when a cut-off is received.

4.2. Every settlement request stemming from outbound Liquidity Transfer order has to be checked, if the system status is "partial closure" to check if the requestor is the currency's central bank or the TIPS Operator. In case of failure the order must be rejected to the Message Router.

5. **TIPS Contingency Message Application / Testing tool:** Screens that submits LTs must be adapted with new RTGS status code. New camt.019 messages triggering new status transition have to be

Change Request form

envisaged by the tool. New camt.053 format have to be supported.

Summary of infrastructure impact:

Minor infrastructural impacts are foreseen, mainly related to setting up new queues.

Summary of operational impact:

The Operational Team has to manage the system parameter for the maximum amount that can be settled for DKK payments and the CLM cutoff to reject PBs and ACHs inter-service LT. An integrated test is required to check that EOD process works properly.

Summary of security impact:

See Change Request analysis.