



BANQUE CENTRALE DU LUXEMBOURG

EUROSYSTÈME

Target Consolidation Training

Virtual Info session n°10 on RTGS Liquidity Management

2021-11-24

9h30 – 12h

WEBEX EVENT



Event rules

Join Event Now

To join this event, provide the following information.

First name:

Last name:

Email address:

Event password:



6. Q&A

- Make sure you respect the naming convention
 - First name = Full name (first name + last name)
 - Last name = Bank name
 - Email = Professional email address
- Camera off by default
- Microphone off by default
- Questions allowed in the chat or by raising hand
 - In case of too many questions, send your question to Target.conso@bcl.lu
- Do not forget to lower hand after having asked a question

Agenda

0. Welcome
1. Introduction
2. Liquidity Transfer Orders: principles
3. Immediate Liquidity Transfer Orders
4. Standing Orders
5. Floors and Ceilings
6. High priority payments / AS transfers
7. Reservations
8. Limits
9. Liquidity monitoring



1. Introduction

INTRODUCTION

Clarification - agenda

The agenda of the day is **limited to the liquidity management principles**.

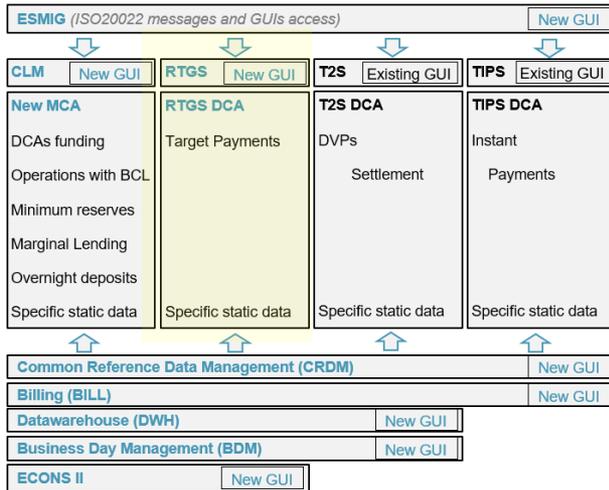
Further aspects are also key to master the usage of the Target RTGS component, e.g.:

- Reference data set up
- T2 calendar and detailed Business Day events
- RTGS Payments activities in the new user interface
- RTGS ISO20022 usage

These topics are addressed in distinct training sessions.

INTRODUCTION

RTGS part of the Target Services



RTGS, the Target real time gross settlement system, is part of the broader Target services.

RTGS supports the Target payments activities, besides:

- **CLM**, used for central banks operations and for funding the target DCAs
- The **Common Components**, for support functions (e.g. static data, historic data)
- **T2S**, Target2securities
- **TIPS**, the Target instant payments system

INTRODUCTION

RTGS documentation

The RTGS functioning is explained in the RTGS UDFS v2.2
The user interface is further illustrated in the UHB v1.5

The **UDFS v.3.0** will be published in **October 2022** containing a few changes requests required in the light of the User Testing experience, or asked by other Standards.

You must already consider today these changes, without waiting for October 2022. They are published in the 'change requests' section.



The summary table allows identifying which changes have not been integrated in the UDFS or UHB yet

Change Request	RTGS UDFS 3.0	RTGS UHB v2.0
CSLD-0044-URD	X	X
CSLD-0050-URD	X	X
CSLD-0053-UHB	X	X
CSLD-0054-SYS		
CSLD-0057-UDFS		
CSLD-0058-URD	X	

All documents on the ECB web site:

<https://www.ecb.europa.eu/paym/target/consolidation/profuse/html/index.en.html>

INTRODUCTION

Participation schemes

As per the existing Target 2 principles, payment banks can be configured under several schemes:

- **Direct participation:** the participant holds a RTGS DCA
- **Multi Addressee:** the participant has no DCA but can instruct himself the DCA of a direct participant
- **Indirect Participant or Addressable BIC*:** the participant holds no DCA but can be reached, as beneficiary of a payment, through the DCA of a direct participant

**Note – The two technical set ups continue to exist but the contractual documentation will treat similarly these two configurations, only referring to as ‘Addressable BIC ‘*

INTRODUCTION

RTGS account types

Several account types exist in RTGS:

RTGS DCA	Settlement of real time interbank payments Settlement of customer payments Ancillary Systems (AS) transfers
 Note:	<ul style="list-style-type: none">➤ a RTGS DCA holder must hold at least one CLM MCA➤ a RTGS DCA must be linked to a party➤ a RTGS DCA must be linked to the default CLM MCA
RTGS sub-account	Belongs to a RTGS DCA, holds liquidity for the settlement of Ancillary System procedure C
AS guarantee funds account	Account for maintaining funds linked to settlement of Ancillary Systems procedures A or B
AS technical account	Ancillary Systems transfers account
RTGS dedicated transit account	Technical account, only for Central Banks.
RTGS central bank account	Settlement account, only for Central Banks.



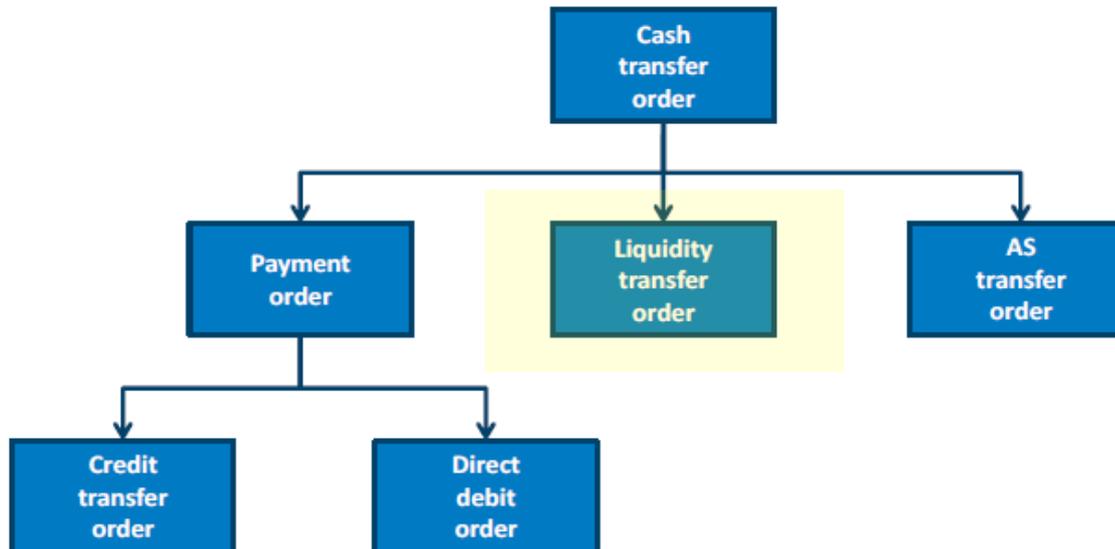
2. Liquidity Transfer Orders - principles

LTO - principles

LTO, one type of cash transfer order

RTGS allows three types of [cash transfer orders](#)

Today's agenda is about the [liquidity transfer orders](#), which can be initiated manually in the GUI or via an ISO20022 message (camt.050)



LTO - principles

Multiple use cases

Use cases

Central Bank	<p>LTO From CB account RTGS to RTGS DCA and Sub-Account (intra)</p> <p>LTO From CB account RTGS to CB account CLM, T2S and RTGS (inter)</p> <p>LTO From account RTGS to MCA (inter)</p> <p>LTO From account RTGS to Overnight Deposit Account (inter)</p>	
RTGS account holder or authorised RTGS actor	<p>LTO Between RTGS DCAs and RTGS DCAs (intra, LT group)</p> <p>LTO From RTGS DCA to CB account in RTGS or other service/component</p> <p>LTO Between RTGS DCA and Sub-Account (intra, AS procedure C)</p> <p>LTO Between MCA, ODA, T2S DCA, TIPS DCA and Sub-Account (inter, AS procedure C)</p> <p>LTO From RTGS DCA to Overnight Deposit Account (inter)</p> <p>LTO Between RTGS DCA and T2S DCA (inter)</p> <p>LTO From RTGS DCA to TIPS DCA (inter)</p> <p>LTO Between RTGS DCA and MCA (inter)</p>	<p>U2A <or> A2A camt.050</p>
RTGS account holder or authorised RTGS actor	<p>LTO From RTGS DCA to AS Technical Account (intra, AS procedure D)</p>	<p>U2A <or> A2A pacs.009/Code SBTI</p>
Ancillary system	<p>LTO From RTGS DCA to Sub-Account (intra, AS procedure C)</p> <p>LTO From RTGS DCA to AS Technical Account (intra, AS procedure D)</p>	<p>A2A only pain.998</p>

LTO - principles

Several triggers 1/2

A liquidity transfer order can be triggered:

➤ By the participant

A participant can instruct an immediate liquidity transfer whenever needed

- manually in the user interface
- by sending an ISO message (camt.050)

➤ Automatically by RTGS

Several events may lead to a system generated LTO

- **Standing order**: if a participant configured a standing order
- **Rule based LT**: if a participant configured a rule based LT for
 - Floors & ceilings
 - and/or pending urgent or high priority payment
 - and/or pending AS transfer order
- **Automated LT** : when a Central Bank Operation fails to settle

LTO - principles

Several triggers 2/2

	Initiation	Features
Immediate liquidity transfer order	By the participant	<ul style="list-style-type: none"> • Allows the immediate transfer of liquidity to or from a RTGS DCA • Available in A2A and U2A • If initiated by RTGS DCA holder or NCB: no partial settlement • If initiated by AS: Partial settlement possible & no further attempts
Standing order liquidity transfer	By the system	<ul style="list-style-type: none"> • Recurring transfer of a fixed amount processed <u>every business day at certain business day events</u> • Optional configuration in CRDM • Partial settlement possible & no further attempts
Automated liquidity transfer order	By the system	<ul style="list-style-type: none"> • Transfers liquidity from a pre-defined RTGS DCA to a MCA <u>when pending central bank operations (CBO)</u> • Mandatory configuration (by CB) in CRDM for all RTGS DCA holders • Partial settlement possible & further attempts
Rule-based liquidity transfer order	By the system	<ul style="list-style-type: none"> • Transfer initiated <u>upon the breach of a pre-defined limit (floor / ceiling) <OR> when pending urgent payment order or high priority payment order</u> • Optional configuration in CRDM • Partial settlement possible & no further attempts

LTO - principles

Bi directional flows

Liquidity Transfers can work in two directions, either push or pull.

- **Push:** the RTGS DCA sends liquidity to another cash account
- **Pull:** the RTGS DCA takes liquidity from another cash account

However, participants can exclusively instruct push liquidity transfers.

Pull transfers (from the linked CLM MCA) are only created by the system in case of

- Floor / ceiling breach
- Pending urgent or high priority payments
- Pending AS transfer order

LTO - principles

Processing rules

LTOs are processed in accordance with the following principles:

- FIFO: first in first out
- Limited queuing
 - LTOs are executed **immediately** or **rejected**.
 - exception: automated liquidity transfers on the RTGS DCA
- Limited Partial settlement
 - No partial settlement for immediate LTOs
 - Only possible for rule-based LTOs, standing orders and LTOs initiated by ancillary systems

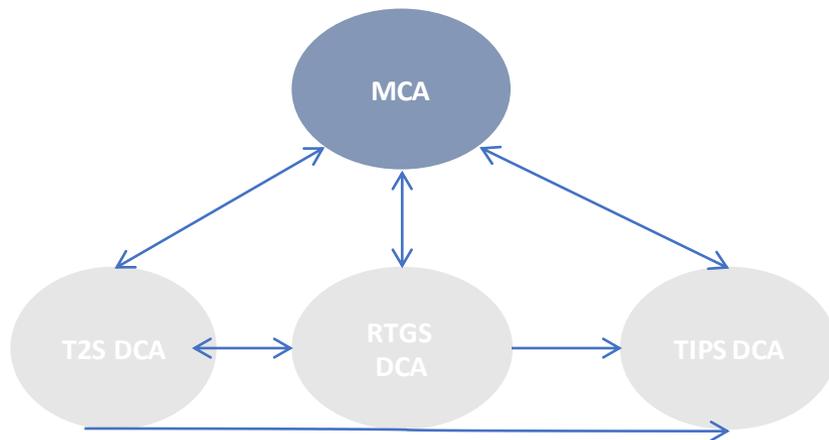
LTO - principles

Intra service vs. Inter service LT

A liquidity transfer is possible within RTGS between two RTGS DCA, but can also involve another type of Target cash account

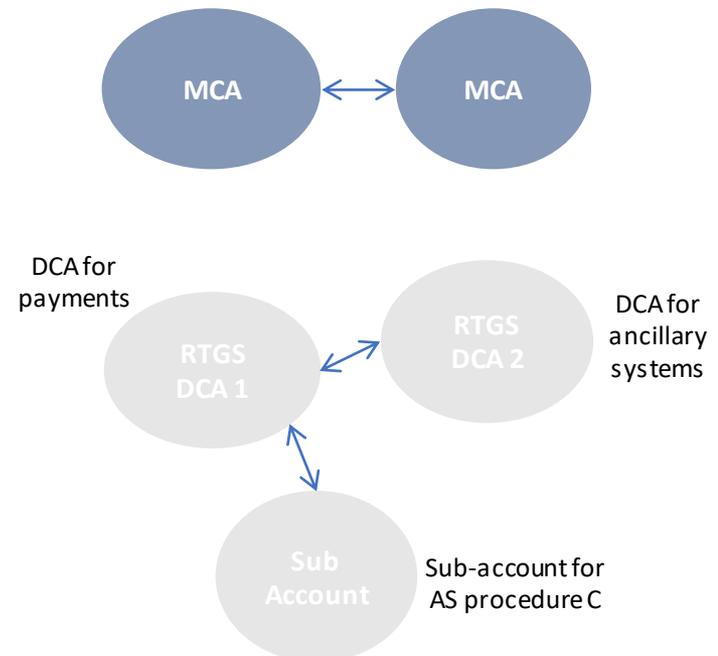
Inter-service liquidity transfer

LT between RTGS and CLM, T2S or TIPS



Intra-service liquidity transfer

LT within a settlement service

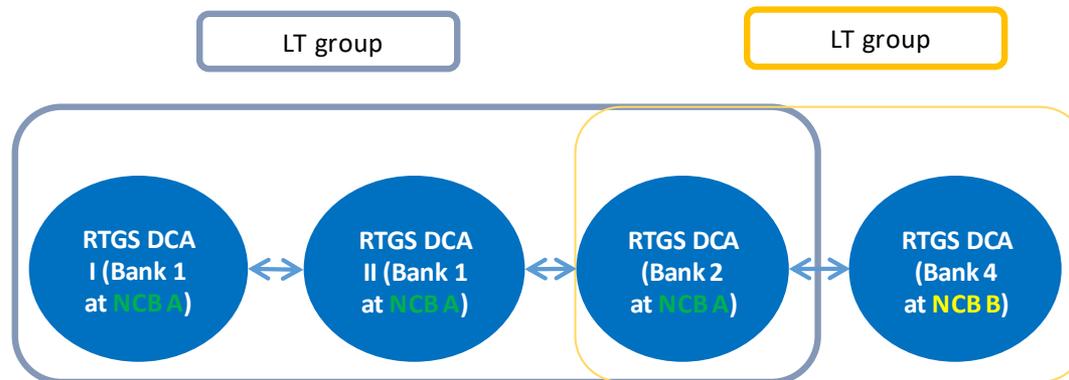


LTO - principles

Liquidity Transfer Group

A **intra-service LT** is only possible between accounts belonging to a same **liquidity transfer group (LT group)**

- LTG are configured by a Central Bank, upon request of a participant.
- A RTGS DCA can be part of one or more LTGs.
- A LTG can be made of RTGS DCAs of different parties (also cross-border).
- A LTG is not necessary when
 - a Central Bank account is involved
 - is between an RTGS DCA and a sub-account (AS procedure C)
 - is between an RTGS DCA and an AS Technical Account (AS procedure D)



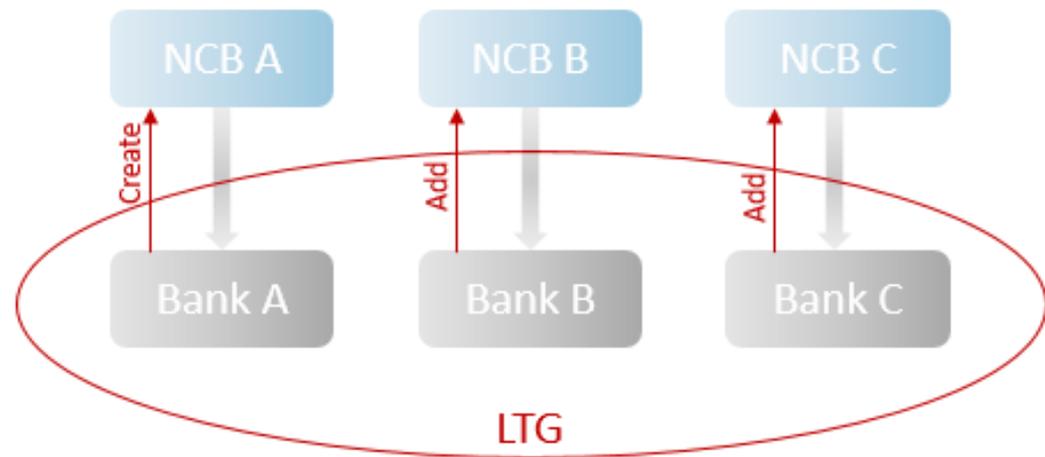
LTO - principles

Liquidity Transfer Group

Participant can ask* its Central Bank to implement a LTG by sending a [registration form](#).

E.g. 3 banks in 3 different countries want to create a LTG:

1. Bank A request NCB A to create the LTG with Bank A only
2. Bank B requests NCB B to add Bank B in the LTG
3. Bank C asks NCB C to add Bank C in the LTG



** before contacting the BCL, participants are invited to check in [CRDM](#) that a LTG does not already exist, see next slide*

LTO - principles

Liquidity Transfer Group 1/2

- **CRDM GUI path:** T2 >> Cash >> Liquidity Transfer Group >> Search
- **Privileges:** Liquidity Transfer Group query
- **Screen:** Liquidity Transfer Group – search/list screen

LIQUIDITY TRANSFER GROUP LIST

Status: Active Group Name:

Search Reset + New

Status	Group Name
Active	AN
Active	Group SB
Active	LRG BR 3
Active	LTG 21
Active	LTG ARG
Active	LTG BR20
Active	LTG BR3
Active	LTG Test
Active	LTG for LTO
Active	LiqTransfGroupBR16
Active	LiqTransfGroupProva
Active	Liquidity Transfer Group Test
Active	Liquidity Transfer Group Test 2
Active	Liquidity transfgroup NCBXITRR001

Edit
Delete
Restore
Details
Revisions

LTO - principles

Liquidity Transfer Group 2/2

- **CRDM GUI path:** T2 >> Cash >> Liquidity Transfer Group – search/list screen >> Click on the search and/or details button
- **Privileges:** Liquidity Transfer Group query
- **Screen:** Liquidity Transfer Group – details screen

LIQUIDITY TRANSFER GROUP DETAILS

Status: Active Group Name: AN

Accounts		
Cash Account Number	Valid From	Valid To
RTGSDCA999	2019-10-09	2020-06-02
RTGSDCA999	2019-10-08	2019-10-08

Total rows: 2

Actions: Edit, Delete, Restore, Revisions



3. Immediate Liquidity Transfer Orders

Immediate Liquidity transfer U2A

How to initiate LTs in U2A?

- RTGS GUI path: Liquidity >> Liquidity Transfer – New
- Privileges: Liquidity >> Liquidity Transfer – New Screen
- Screen: Liquidity Transfer – New

New Liquidity Transfer
New Liquidity Transfer

Liquidity Transfer Account Information

Debit Account

Account Number*

Display Liquidity

Credit Account

Account Number*

Display Liquidity

Liquidity Transfer Details

Amount*

EUR

End To End ID*

Submit Reset

Immediate Liquidity transfer A2A - overview

How to initiate LTs in A2A?

- A participant can initiate a LT using the [camt.050](#) LiquidityCreditTransfer message
- The participant receives in return a [camt.025](#) Receipt message
- The participant owing the credited account can (optional) subscribe to a [camt.054](#) to be notified of the credit



The camt.050 must be sent to the service of the debited account.

The camt.025 is generated by the service where the camt.050 was sent to.

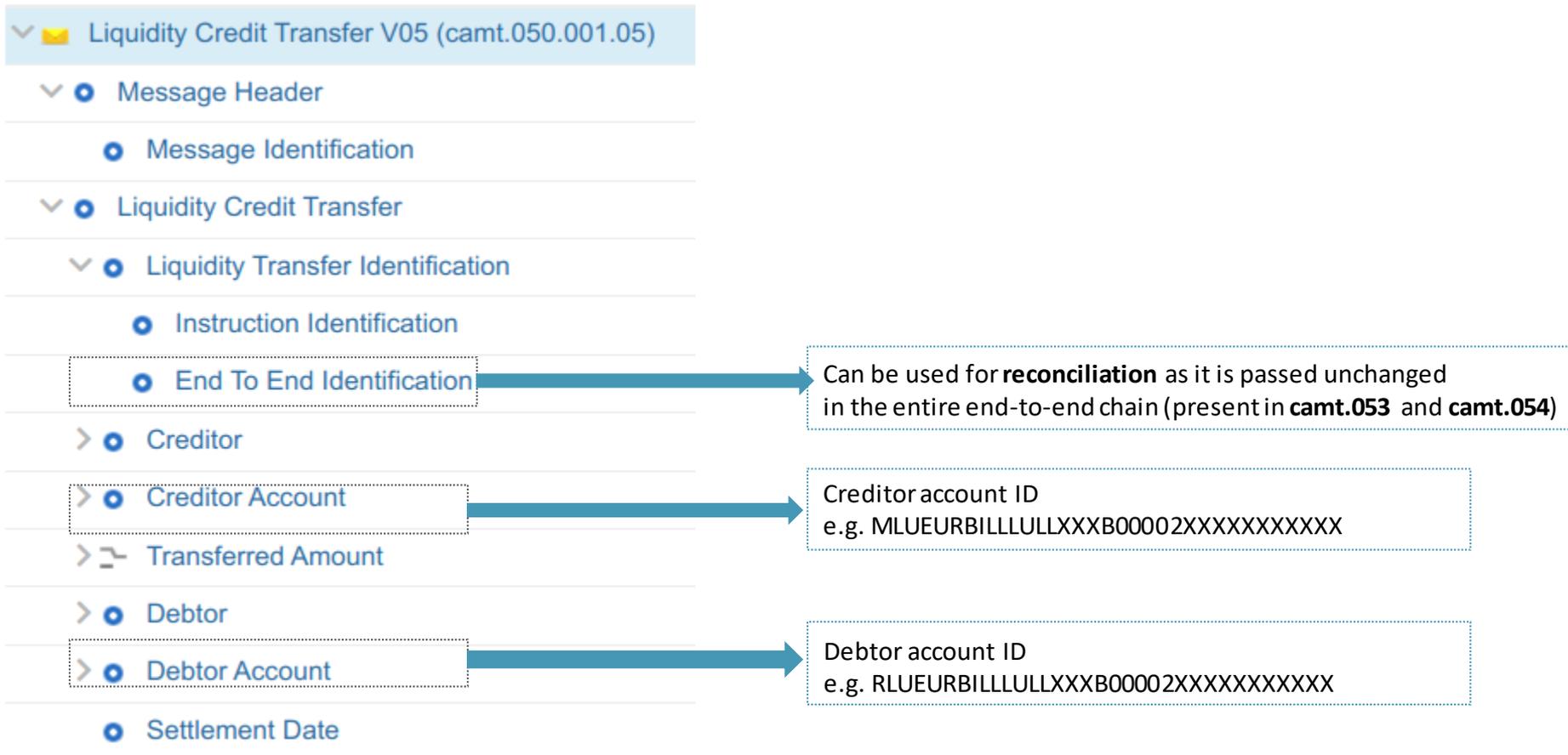
e.g. transfer liquidity from a RTGS DCA to a CLM MCA:

- the **TO** part of the *head.001* linked to the camt.050 must contain the RTGS BIC i.e. **TRGTXEPMRTG**
- the **FROM** part of the *head.001* linked to the camt.025 will also contain the CLM BIC

Immediate Liquidity transfer A2A – camt.050

How to initiate LTs in A2A?

- Main elements of the **camt.050** message are detailed in the T2MyStandards



Immediate Liquidity transfer A2A – camt.050

How to initiate LTs in A2A?

Sample: camt.050 message, the head.001 envelope

```
- <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
  - <Fr>
    - <FIId>
      - <FinInstnId>
        <BICFI> Sender BIC11 </BICFI>
        - <ClrSysMmbId>
          <MmbId> As per NSP </MmbId>
          </ClrSysMmbId>
        </FinInstnId>
      </FIId>
    </Fr>
    - <To>
      - <FIId>
        - <FinInstnId>
          <BICFI> TRGTXEPMRTG </BICFI>
        </FinInstnId>
      </FIId>
    </To>
    <BizMsgIdr> End To End Id </BizMsgIdr>
    <MsgDefIdr> camt.050.001.05 </MsgDefIdr>
    <CreDt> 2021-10-15T08:33:43Z </CreDt>
  </AppHdr>
```

Immediate Liquidity transfer A2A – camt.050

How to initiate LTs in A2A?

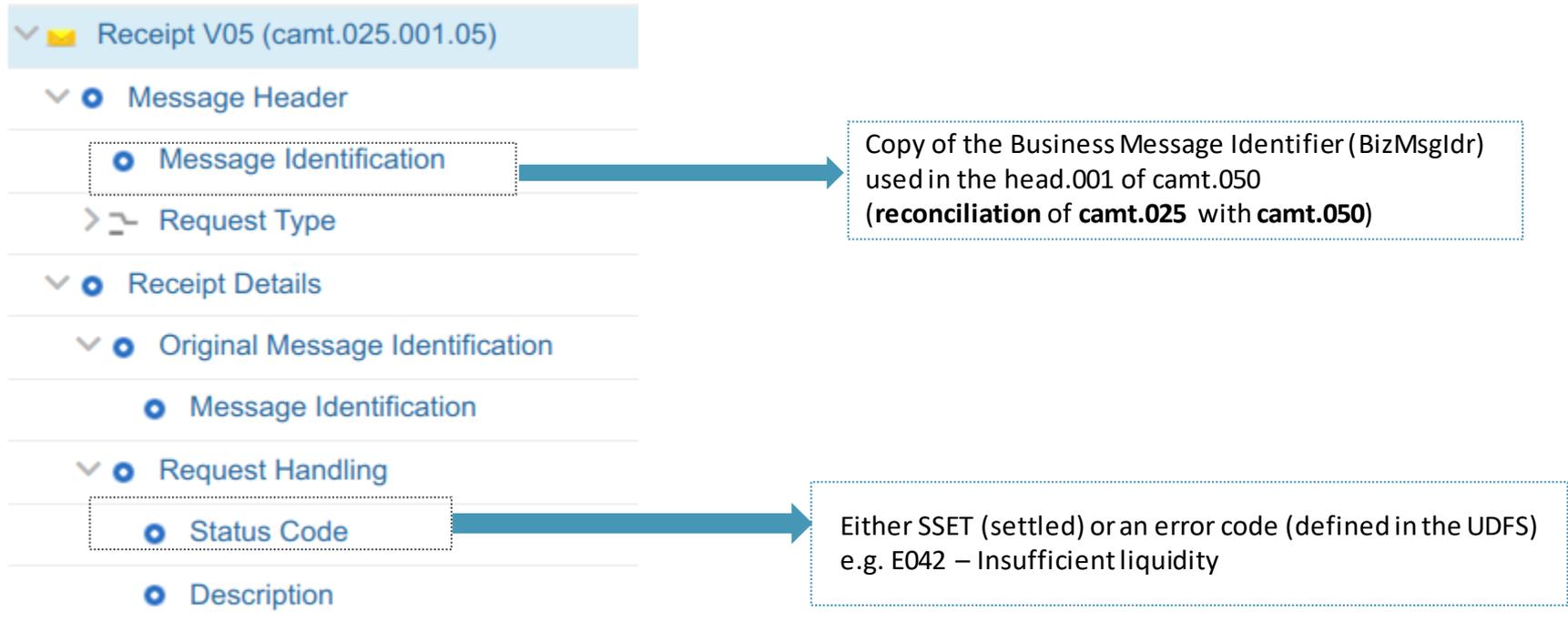
Sample: **camt.050** message, the core of the message

```
- <IGXMMessage>
  - <Document xmlns="urn:iso:std:iso:2002:tech:xsd:camt.050.001.05">
    - <LqdtCdtTrf>
      - <MsgHdr>
        <MsgId>NONREF</MsgId>
      </MsgHdr>
    - <LqdtCdtTrf>
      - <LqdtTrfId>
        <EndToEndId>End To End Id</EndToEndId>
      </LqdtTrfId>
      - <CdtrAcct>
        - <Id>
          - <Othr>
            <Id>MLUEURBCLXLULLXXXB00000BCLXLULLXXX</Id>
          </Othr>
        </Id>
      </CdtrAcct>
      - <TrfdAmt>
        <AmtWthCcy Ccy="EUR">7</AmtWthCcy>
      </TrfdAmt>
      - <DbtrAcct>
        - <Id>
          - <Othr>
            <Id>RLUEURBCLXLULLXXXB00000BCLXLULLXXX</Id>
          </Othr>
        </Id>
      </DbtrAcct>
    </LqdtCdtTrf>
  </LqdtCdtTrf>
</Document>
</IGXMMessage>
```

Immediate Liquidity transfer A2A – camt.025

How to initiate LTs in A2A?

- Main elements of the **camt.025** message are detailed in the T2MyStandards



Immediate Liquidity transfer A2A – camt.025

How to initiate LTs in A2A?

Sample: camt.025 message, the head.001 envelope

```
- <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
  - <Fr>
    - <FIId>
      - <FinInstnId>
        <BICFI>RGTXEPMRTG</BICFI>
      </FinInstnId>
    </FIId>
  </Fr>
  - <To>
    - <FIId>
      - <FinInstnId>
        <BICFI>BIC11</BICFI>
      </FinInstnId>
    </FIId>
  </To>
  <BizMsgIdr>72450</BizMsgIdr>
  <MsgDefIdr>camt.025.001.05</MsgDefIdr>
  <CreDt>2021-10-15T12:11:15.527Z</CreDt>
  - <Sgntr>
    - <ds:Signature Id="_b4d680e0-3efa-4fb9-add4-fb8c63798765" xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      - <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256" />
        - <ds:Reference URI="#_b12a8319-6b1a-4f4d-89ae-82c3d84c2616">
          - <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
          <ds:DigestValue>f2W6W+gpDP1FzPqh/B+fe+ubB0Gjv+KtbYVwWranIRk=</ds:DigestValue>
        </ds:Reference>
        - <ds:Reference URI="">
          - <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
          <ds:DigestValue>/cLvXJogox0a43ccjOUziGIdZGin43wvasuwmp+3edw=</ds:DigestValue>
        </ds:Reference>
        - <ds:Reference>
          - <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
          <ds:DigestValue>+wcAxnhnnnOE129dNM/EwxnSNHm2S3q2dQa9q3DexXQ=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
      <ds:SignatureValue>ZPAK/qSCkrzVvOLASBxtP3ImCdyiIOEurUYRQR8sH0Ly/a3Y7hzqFcEuNBXl1hHz7fITPK97bTVKfut804
    - <ds:KeyInfo Id="_b12a8319-6b1a-4f4d-89ae-82c3d84c2616">
      - <ds:X509Data>
        <ds:X509Certificate>MIIF3DCCA8SgAwIBAgITaAAABFzh5G4TDzBGJwAAAAAEXDANBgkqhkiG9w0BAQsFADA8MQ
      </ds:X509Data>
      <ds:KeyInfo>
    </ds:KeyInfo>
  </ds:Signature>
</Sgntr>
</AppHdr>
```

Immediate Liquidity transfer A2A – camt.025

How to initiate LTs in A2A?

Sample: [camt.025](#) message, the core message

```
- <IGXMMessage>
  - <Document xmlns="urn:iso:std:iso:2002:tech:xsd:camt.025.001.05">
    - <Rct>
      - <MsgHdr>
        <MsgId>NONREF</MsgId>
        - <ReqTp>
          - <Prtry>
            <Id>SSTS</Id>
          </Prtry>
        </ReqTp>
      </MsgHdr>
      - <RctDtls>
        - <OrgnMsgId>
          <MsgId>Orig End To End Id</MsgId>
        </OrgnMsgId>
        - <ReqHdlg>
          <StsCd>SSET</StsCd>
        </ReqHdlg>
      </RctDtls>
    </Rct>
  </Document>
</IGXMMessage>
```

Request Type

/Document/Rct/MsgHdr/ReqTp/Prtry/Id

- | VSTS = Validation status
- | SSTS = Settlement status
- | XSTS = Execution status

Status Code

/Document/Rct/RctDtls/ReqHdlg/StsCd

- | If ReqTp = VSTS, then error code
- | If ReqTp = XSTS, then error code or PDNG (= Pending) or PPDN (= Partially pending) or COMP (= Completed) or ACPT (= Accepted).
- | If ReqTp = SSTS, then error code or SSET (=Settled)



4. Standing Orders

Standing Orders Principles

A Liquidity Transfer Order is automatically created when

- The participant has **configured in CRDM** a standing order
- The conditions defined in those orders are met

The following principles apply:

- **Partial execution** is possible ✓
- Such a LTO is **never queued** (no further settlement attempted) ✓
- If conflicting LTO for the same event, they are executed **"pro rata"** ✓

Standing Orders U2A management

How to create a SO in U2A?

CRDM GUI path: *Common >> Cash >> Standing/Predefined Liquidity Transfer Order >> New*

Privileges: *Create Liquidity Transfer Order & Update Liquidity Transfer Order*

Screen: *Standing/Predefined Liquidity Transfer Order New*

The screenshot displays the 'STANDING/PREDEFINED LIQUIDITY TRANSFER ORDER NEW' form. The breadcrumb navigation at the top shows the path: Common > Cash > Standing/Predefined Liquidity Transfer Order > + New. The form fields are as follows:

- Order Reference:** A text input field.
- Valid From:** A date input field with a calendar icon and a refresh icon, containing the placeholder 'yyyy-mm-dd'.
- Valid To:** A date input field with a calendar icon and a refresh icon, containing the placeholder 'yyyy-mm-dd'.
- Amount:** A text input field.
- Currency:** A dropdown menu.
- Dedicated Amount:** A checkbox.
- All Cash:** A checkbox.
- Order Type:** A dropdown menu.
- Event Type:** A dropdown menu.
- Execution Time:** A time input field with up/down arrows and a refresh icon, showing '0 : 0'.
- Creditor Account Type:** A dropdown menu.
- Creditor Cash Account Number:** A dropdown menu with 'Choose...' as the selected option.
- Debited Cash Account Number:** A text input field with 'Choose...' as the placeholder.
- AS Procedure:** A dropdown menu.

On the right side of the form, there is a vertical toolbar with four buttons: a menu icon (three horizontal lines), a '+' button labeled 'Submit', a circular arrow icon labeled 'Reset', and an 'x' button labeled 'Cancel'.

Standing Orders A2A management

How to manage a SO in A2A?

Participants also have the possibility to **manage their Standing Orders via ISO20022 messages**:

Message type	Use case	Sent by
camt.024 ModifyStandingOrder	Create/update a Liquidity Transfer Order	Business sender
camt.069 GetStandingOrder	Query standing order details	Business sender
camt.070 ReturnStandingOrder	Return standing order details (requested via camt.070)	CRDM
camt.071 DeleteStandingOrder	Delete a Liquidity Transfer Order	Business sender



4. Automated Liquidity Transfers

Automated Liquidity transfer Processing rules

- An *Automated LTO* is created to pull liquidity from the RTGS DCA when the CLM MCA balance is insufficient to settle a Central Bank Operation or a seizure of funds
- *Automated LTOs* are processed before any other pending transaction in RTGS
 - If insufficient funds on the RTGS DCA, the LTO is **queued**
 - **Any incoming liquidity** on the RTGS DCA is **transferred to the MCA** until the automated LTO is fully settled. Until then the RTGS DCA will not be used for any other settlement.
- *Automated LTOs* are adjusted in case of incoming **liquidity on the CLM MCA**
 - A **new automated LTO** for a reduced amount is created while the initial LTO is rejected
 - The **automated LTO is deleted**, if the incoming liquidity on the MCA is sufficient to execute the pending CBO.



5. Floors and Ceilings

Floors and Ceilings

Two options

Floor and Ceilings are liquidity management **optimisation mechanisms** configured in **CRDM**

Two behaviours, that can be combined, can be defined when the floor or ceiling amount is breached:

- Option 1: RTGS **notifies** the account holder about the breach.
- Option 2: RTGS triggers a **rule-based LTO** with the linked MCA.



Floors and Ceilings Configuration 1/2

How to configure floor and ceiling in U2A?

- **CRDM GUI path:** Common >> Cash >> Cash Accounts >> Search
- **Privileges:** Cash Account list query
- **Screen:** Cash account List

CASH ACCOUNT LIST

Status: Active | Cash Account Number: | Account Type: All | Linked Account: | Parent BIC: Choose BIC | Party BIC: Choose BIC | Party Type: All | Currency: All | Opening Date From: yyyy-mm-dd | Opening Date To: yyyy-mm-dd | Closing Date From: yyyy-mm-dd | Closing Date To: yyyy-mm-dd

Search [x] Reset [New]

Status	Cash Ac...	Account...	Linked...	Parent...	Party BIC	Party Short...	Party Ty...	CUR	Opening...	Closing...
Active	ACT TEST DC	T2S Dedicated	PBBKITRR102	NCBXITRR00	PBBKITRR102	PB OF NCBXITRR	Payment Bank	EUR	2019-10-31	2019-11-01
Active	ANSYTECHAC	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2019-10-11	2020-06-12
Active	ANSYTECHAC	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2020-04-07	2020-05-31
Active	ANSYTGUAARI	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2020-06-15	2020-06-30
Active	BR Testing	Marginal Lendi	MCAACCOUN	TCSOTCS0XX	NCBXITRR00	NCB of N8IT	National Centr	EUR	2020-06-22	2020-06-26
Active	CONTINGENC	Contingency A		NCBXITRR00	PMBKITRR20	Test CSLD PMBK	Payment Bank	EUR	2019-09-16	2019-09-25
Active	CONTINGENC	Contingency A		NCBXITRR00	PMBKITRR20	Test CSLD PMBK	Payment Bank	EUR	2019-09-27	2020-08-03

click on Edit button

Floors and Ceilings Configuration 2/2

How to configure floor and ceiling in U2A?

- **CRDM GUI path:** After clicking Edit in the previous screen, the Edit screen allows to modify/enter a new floor/ceiling
- **Privileges:** Update Cash Account
- **Screen:** Cash account Edit

Account Threshold Configuration

Target Amount After ...	Target Amount After ...	Associated LT Acco...	Floor Notification	Ceiling Notification	Rule-based LT for ...	Rule-based LT for ...
100,002	100,000,002	RLUEURBCEELULLXXXE	Yes	Yes	No	No

Total rows: 1

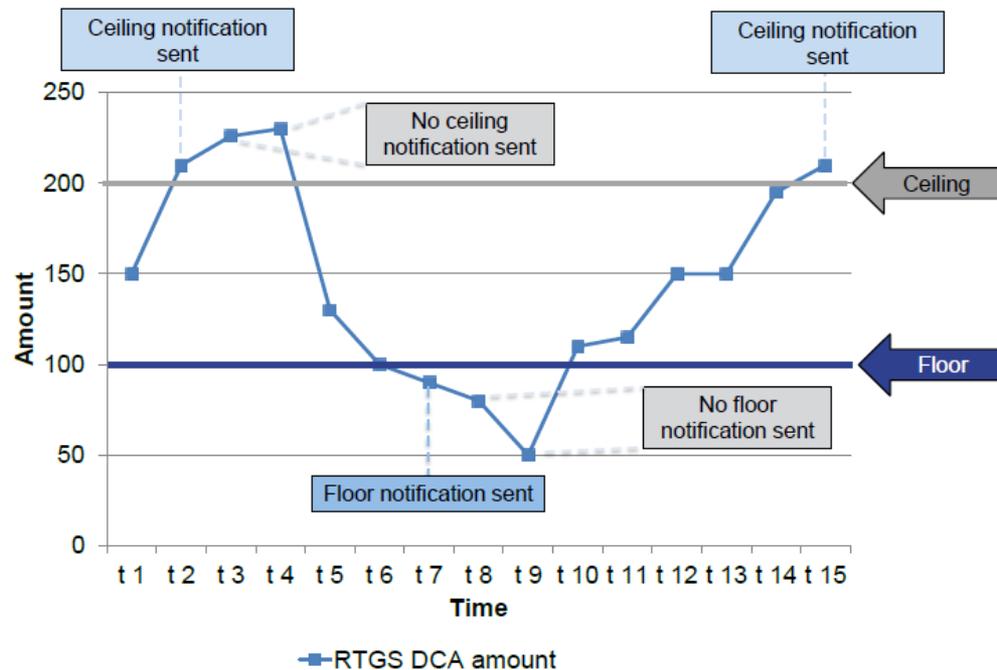
Can only be updated in U2A

Floors and Ceilings

Processing: Option1- Notification

Option 1 – RTGS sends a Notification when the floor/ceiling is breached

- U2A notification (or A2A, camt.004) with the information that a floor or ceiling amount has been breached.
- The account holder is informed **once** when a breach occurs; if the account balance further decreases/increases after the breach of the floor/ceiling, *no further notification is provided*.



Floors and Ceilings

Processing: Option2 - Rule Based LTO (1/2)

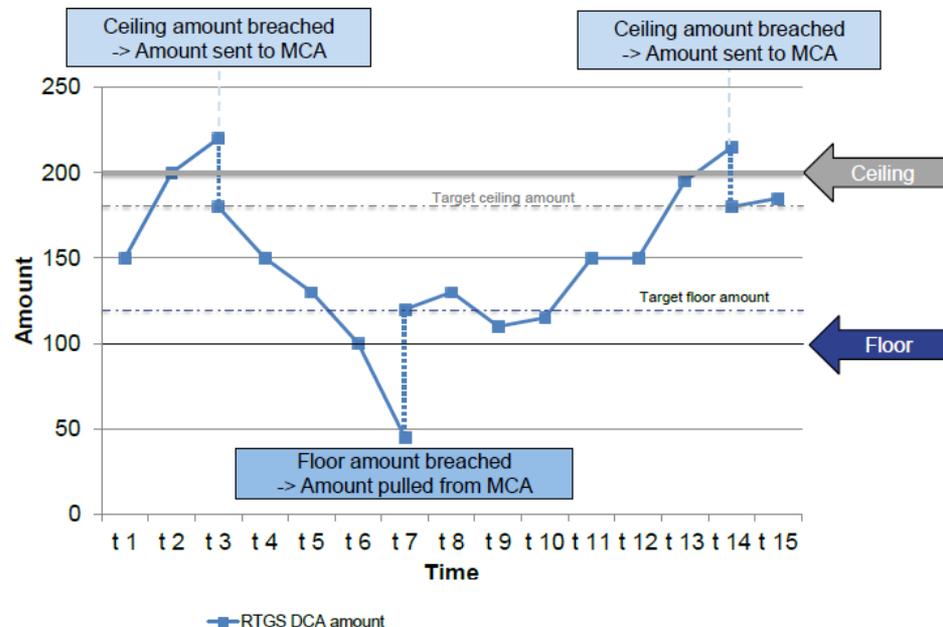
Option 2 – RTGS triggers a Ruled based LTO when the floor/ceiling is breached

➤ Floor breach

- RTGS **pulls** liquidity from the MCA to reach a pre-defined amount*
- If insufficient liquidity on the MCA: LTO partially settles, no further settlement attempt.

➤ Ceiling breach

- RTGS **pushes** the excess liquidity from the DCA onto the MCA to reach a pre-defined amount*



* The pre-defined amount can differ from the floor/ceiling amount

Floors and Ceilings

Processing: Option2 - Rule Based LTO (2/2)

When a rule based liquidity transfer is automatically created, the following rules apply:

- Partial execution is possible ✓
- Such a LTO is never queued (no further settlement attempted) ✓



6. Pending payment orders

Pending payments / AS orders

Principles (1/2)

Participants have the possibility to configure **Rule-Based LTOs*** for queued payments / AS transfers.

Two scenarios can be configured in **CRDM in U2A (only) mode**:

- an urgent payment order or an AS transfer order gets queued
- an urgent payment order, an AS transfer order or a high priority payment order gets queued

** reminder: participants can configure two types of Rule Based LTO:
i- rule based LTOs for floor and ceiling breach
ii- rule based LTO for queued payments / AS transfers*

Pending payments / AS orders

Principles (2/2)

When the conditions are met, an automatic LTO is created to pull liquidity from the linked MCA

The following principles apply:

- Partial execution is possible ✓
- Such a LTO is never queued (no further settlement attempted) ✓

Pending payments / AS orders Configuration U2A (1/2)

*How to configure LTO for
queued payments in U2A?*

- **CRDM GUI path:** Common >> Cash >> Cash Accounts >> Search
- **Privileges:** Cash Account list query
- **Screen:** Cash account List

CASH ACCOUNT LIST

Status: Active
Account Type: All
Parent BIC: Choose BIC
Party Type: All
Opening Date From: yyyy-mm-dd
Closing Date From: yyyy-mm-dd

Cash Account Number:
Linked Account:
Party BIC: Choose BIC
Currency: All
Opening Date To: yyyy-mm-dd
Closing Date To: yyyy-mm-dd

Search: [Q Search] [x Reset] [New]

Status	Cash Ac...	Account...	Linked...	Parent...	Party BIC	Party Short...	Party Ty...	CUR	Opening...	Closing...
Active	ACT TEST DC	T2S Dedicated	PBBKITRR102	NCBXITRR00	PBBKITRR102	PB OF NCBXITRR	Payment Bank	EUR	2019-10-31	2019-11-01
Active	ANSYTECHAC	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2019-10-11	2020-06-12
Active	ANSYTECHAC	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2020-04-07	2020-05-31
Active	ANSYTGUARI	Ancillary Syste		NCBXITRR00	ASIKITRR200	Test CSLD ASI	Ancillary Syste	EUR	2020-06-15	2020-06-30
Active	BR Testing	Marginal Lendi	MCAACCOUN	TCSOTCS0XX	NCBXITRR00	NCB of N8IT	National Centr	EUR	2020-06-22	2020-06-26
Active	CONTINGENC	Contingency A		NCBXITRR00	PMBKITRR20	Test CSLD PMBK	Payment Bank	EUR	2019-09-16	2019-09-25
Active	CONTINGENC	Contingency A		NCBXITRR00	PMBKITRR20	Test CSLD PMBK	Payment Bank	EUR	2019-09-27	2020-08-03

click on Edit button

Pending payments / AS orders Configuration U2A (2/2)

*How to configure LTO for
queued payments in U2A?*

- **CRDM GUI path:** After clicking Edit in the previous screen, the Edit screen allows to modify/enter a new floor/ceiling
- **Privileges:** Update Cash Account
- **Screen:** Cash account New/Edit

target

BCEAdmin | 2021-11-19 07:49:52 | ? Help | Logout
Session ID: eyjhbGcOjUzd1Nj9 Business Date: 2021-11-19 Stage: EAC version: 1.1.11

Common Cash Cash Accounts Search Edit

Parent BIC: BCLXLULLXXX BIC: BCEELULLXXX
Short Name: BCEE Party Type: PMBK
Floor notification Amount: 1,000,000 Ceiling notification Amount: 100,000,000
Currency: Euro
Linked Account Type: Linked Account Reference:

Account Threshold Configuration

Target Amount after Breaching Floor: 100,002 Target Amount after Breaching Ceiling: 100,000,002
Associated LT Account: RLUEURBCEELULLXXXB00001RTGSEACE
Floor Notification: Ceiling Notification:
Ruled-based LT for Queued High Priority Payments: Ruled-based LT for Queued Urgent Priority Payments:

Can only be updated in U2A

Target Amount After ...	Target Amount After ...	Associated LT Acco...	Floor Notification	Ceiling Notification	Rule-based LT for ...	Rule-based LT for ...
100,002	100,000,002	RLUEURBCEELULLXXX	Yes	Yes	No	No

Total rows: 1



7. Reservations

Reservations Definition

- Reservation is an **optional** feature that allows **reserving liquidity on the RTGS DCA for the execution of specific cash transfer orders**:
 - **urgent** : reservation for the execution of urgent cash transfers
 - **high** : reservation for the execution of urgent & high priority cash transfers
- Two reservations methods exist:
 - **current** reservation, with **immediate effect**
 - **standing order** reservation
- When the **available liquidity is insufficient** to cover the reservation:
 - pending reservations for urgent cash transfer orders are executed first
 - the reservation settles partially,
 - the missing amount is queued,
 - the reservation is increased with every credit until the target amount is reached

Current Reservations Principles

- Current reservation is configured, by the participant, in RTGS
 - In U2A or in A2A mode
 - The reservation is **immediately effective**
 - It is only valid for the current business day
 - During the business day it is possible to modify the reservation amount

- Current reservations are deleted
 - **automatically** after the event „*Cut-off for RTGS RTS II*“
 - Upon **recall** of the participant
 - Upon submission of a new current order by the participant

Current Reservations Configuration U2A

How to create a current reservation in U2A?

- [RTGS GUI path](#): Liquidity Management Features >> Reservations – Query Screen >> [Submit]
- [Privileges](#): RTGS_ModifyCurReservation / RTGS_QueryCurReservation
- [Screen](#): RTGS Reservations – Display Screen

Display Reservations
Query Reservations > Display Reservations

☆ ? ⚙ ⏻

+ Search Criteria

- Results Last Refresh: 2021-11-11 12:25:38 CET

Account Information

Party BIC	Account Number	Account BIC
BCEELULLXXX	RLUEURBCEELULLXXXB00001RTGSEACBCEE	BCEELULLXXX

Urgent Reservation

Reservation Amount	Pending Reservation	Defined Value
0.00 EUR	0.00 EUR	0.00 EUR

High Reservation

Reservation Amount	Pending Reservation	Defined Value	New Reservation Amount
0.00 EUR	0.00 EUR	0.00 EUR	<input type="text" value=""/>

Current Reservations Configuration A2A

How to manage current reservations in A2A?

- Current Reservations can be managed in A2A using the following messages:

Message type	Use case	Sent by
camt.046 GetReservation	Request details of one or more current reservation(s) set on RTGS DCA(s) on the current business day	Business sender
camt.047 ReturnReservation	Provide details of one or more current reservation(s) set on the requested RTGS DCA(s), or information that no current reservation is defined	RTGS
camt.048 ModifyReservation	Used to (i) create/modify a current reservation (in RTGS) (ii) modify standing order for reservation (in CRDM) during the current business day	Business sender
camt.049 DeleteReservation	Used to delete the current reservation during the current business day	Business sender

- In response to the [camt.046](#) message RTGS sends the [camt.047](#) message
- In response to the [camt.048](#) and [camt.049](#) messages, RTGS sends a [camt.025](#) message to advise the progressive status of the reservation modification/deletion.

Standing Order Reservations Principles

- Standing Order Reservation are configured by the participant in CRDM
 - They are created in U2A mode only
 - They may be modified in U2A and A2A modes
 - Creation/modification is valid as of the next business day.
- A reservation resulting from a standing order is valid one day
 - The defined amount to be reserved is valid at the SoD of each business day
 - Reservations pending at the end of the day (due to lack of liquidity) are rejected
- Standing order reservations can be created in parallel for both “urgent” and “high priority” cash transfer orders.

Standing Order Reservations Configuration U2A

How to create a SO reservation in U2A?

- **CRDM GUI path:** T2 >> Cash >> *Standing Order for Reservation* >> *New*
- **Privileges:** Create Standing Order for Reservation
- **Screen:** *Standing Order Reservation New*

The screenshot displays the 'STANDING ORDER RESERVATION NEW' form. At the top, a breadcrumb trail shows the navigation path: T2 > Cash > Standing Order Reservation > + New. The form fields are as follows:

- Cash Account Number:** A dropdown menu with the text 'Choose...'.
- Amount:** A text input field.
- Valid From:** A date input field with the placeholder 'yyyy-mm-dd' and a calendar icon.
- Valid To:** A date input field with the placeholder 'yyyy-mm-dd' and a calendar icon.
- Priority:** A dropdown menu.

On the right side of the form, there is a vertical toolbar containing three buttons: 'Submit' (a plus sign), 'Reset' (a circular arrow), and 'Cancel' (an 'x' in a circle).

Standing Order Reservations Configuration A2A

*How to manage SO
reservations in A2A?*

SO Reservations can be modified in A2A using the following message:

- Camt.048 'Modify Reservation'
- In response to the *camt.048* message, CRDM sends a *camt.025* message to advise the progressive status of the reservation modification.



8. Limits

Limits Definition

- Setting limits is an **optional** feature that allows **defining a maximum amount** for the **liquidity outflow** for payments with “**normal**” priority
- Limits can only be set at **account level** i.e. not a limit towards a participant, but towards a participant’s RTGS DCA*
- Two types of limits exist:
 - **Bilateral limit**: maximum net outflow towards another RTGS DCA
 - **Multilateral limit**: maximum net outflow towards ALL other RTGS DCAs for which no bilateral limit exists
- Some general rules apply to limits:
 - The **minimum amount** of a limit is **1 million EUR**
 - If the amount of a limit is set to **zero**, the limit is considered as “**non defined**”
 - A **multilateral limit** can be defined **if at least one bilateral limit** exists

Limits Principles

- **Limits** are configured, by the participant, in CRDM in the form of Standing Order Limit:
 - In U2A or in A2A mode
 - The limit is **effective** as of the **next business day**
 - It is valid at the start of each business day
 - **Modification or deletion** of a limit is also **effective as of the next business day**

- **Limits** can be **modified**, by the participant, **intraday** in RTGS in the form of Current Limits:
 - In U2A or in A2A mode
 - If a limit is set to zero it cannot be increased during the day

Standing Order Limits Configuration U2A

How to query limits in U2A?

- [CRDM GUI path](#): Common >> Cash >> Limits >> Search
- [Privileges](#): Query Limit & Delete Limit
- [Screen](#): Limits – search/list screen

LIMIT

Status: Active | Limit Type: All

Limit Id: | Cash Account Number: |

Authorised BIC: |

Amount From: | Amount To: |

Unlimited Amount:

Valid From From: yyyy-mm-dd | Valid From To: yyyy-mm-dd

Valid To From: yyyy-mm-dd | Valid To To: yyyy-mm-dd

To Account BIC: Choose BIC | Currency: All

Search [x] Reset [x] + New

Status	Limit Id	Cash Acco...	Pare...	BIC	Short N...	CM...	L	L...	V...	V...	T...	C...
Active	500200171	RTGSDCA-CR42	NCBXITRR	PMBKITI	Test CSLD PM	0	T2 Bil	100,000	2021-0	2021-0	PMBK	EUR
Active	500195162	RTGSDCA-CR42	NCBXITRR	PMBKITI	Test CSLD PM	0	T2 Bil	1,500,0	2021-0	2021-0	PMBK	EUR

Right sidebar actions: Edit, Delete, Restore, Revisions, CMB Details, Limit Utilisation

Standing Order Limits Configuration U2A

How to create limits in U2A?

- **CRDM GUI path:** Common >> Cash >> Limits >> New/Common >> Cash >> Limits >> Search >> click on New or Edit button
- **Privileges:** Create Limit & Update Limit
- **Screen:** Limit – new/edit screen

The screenshot displays the 'LIMIT NEW' configuration interface. At the top, a navigation breadcrumb shows 'Common > Cash > Limits > Search > + New'. The main form includes the following fields:

- Limit Type:** A dropdown menu.
- Cash Account Number:** A text input field with a 'Choose...' button.
- Limit Amount:** A text input field with a red vertical bar on the left.
- Unlimited:** A checkbox.
- Valid From:** A date field showing '2021-02-19' with a calendar icon and a clear button.
- Valid To:** A date field showing 'yyyy-mm-dd' with a calendar icon and a clear button.
- To Account BIC:** A text input field with a 'Choose BIC' button.
- Time:** Two time selection fields, each with '00 : 00' and up/down arrows.

On the right side, there is a vertical sidebar with three buttons: a menu icon (three horizontal lines), a 'Submit' button (plus sign), a 'Reset' button (circular arrow), and a 'Cancel' button (X).

Standing Order Limits Configuration A2A

How to create standing order limits in A2A?

- Standing order limits can be managed in A2A using the following messages:

Message type	Use case	Sent by
camt.009 GetLimit	Query Standing Order for Limit	Business sender
camt.010 ReturnLimit	Standing Order for Limit Query Response	CRDM
camt.011 ModifyLimit	Update Standing Order for Limit	Business sender
camt.012 DeleteLimit	Delete a Standing Order for Limit	Business sender

- Detailed information is available in the CRDM UDFS Section 3.1 List of messages

Current Limits Configuration U2A

How to manage current limits in U2A?

- [RTGS GUI path](#): Liquidity Management Features >> Bilateral Limits – Query Screen (the approach is the same for multilateral limits)
- [Privileges](#): RTGS_QueryCurLimit
- [Screen](#): Bilateral Limits – Query Screen

Query Bilateral Limits

Search Criteria

Bilateral Limit(s)

Party BIC (wildcards allowed)

Account Number

Account BIC

Counterparty Account BIC

Output Parameters

Sort By

Sort Order

Current Limits Configuration U2A

How to manage current limits in U2A?

- [RTGS GUI path:](#) | Liquidity Management Features >> Bilateral Limits – Query Screen >> [Submit]
- [Privileges:](#) RTGS_QueryCurLimit
- [Screen:](#) Bilateral Limits – List Screen

Search Criteria

Results

Last Refresh: 2021-06-23 12:48:33 CEST Refresh

Party BIC	Account Number	Account BIC	Counterparty Account BIC	Defined Limit	Free Limit Position	Countable Payments	New Value
PBAACDF0002	RTGSDCPBAACDF0002EUR0001	PBAACDF0002	PBAACDF0004	1,250,250.00 EUR	1,850,250.00 EUR		0.00 EUR <input type="text"/> EUR ...
PBAACDF0002	RTGSDCPBAACDF0002EUR0001	PBAACDF0002	PBAACDF0060	1,750,000.00 EUR	3,000,000.00 EUR		0.00 EUR <input type="text"/> EUR ...

« < 1 > » Results 1 to 2 of 2

Submit Reset

Current Limits Configuration A2A

How to manage current limits in A2A?

- Current Limits can be managed in A2A using the following messages:

Message type	Use case	Sent by
camt.009 GetLimit	Request details of one or more limit(s) set on RTGS DCA(s) on the current business day	Business sender
camt.010 ReturnLimit	Provide details of one or more current limit(s) set on the requested RTGS Account(s), or information that no current limit is defined	RTGS
camt.011 ModifyLimit	Modify a current limit during the current business day	Business sender
camt.012 DeleteLimit	> Delete current limit(s) during the current business day > Delete all existing current bilateral limits in one shot	Business sender

- Detailed information is available in the RTGS UDFS Section 12 List of messages



9. Liquidity Monitoring

Liquidity Monitoring Queries

Besides the liquidity management tools, RTGS offers **queries** to monitor the liquidity outstanding on the RTGS DCAs.

Queries are available in **U2A** and **A2A** modes.

Liquidity Monitoring U2A queries

*How to monitor
DCA liquidity in U2A?*

- [RTGS GUI path](#): Liquidity >> RTGS Cash Account Liquidity – Query Screen
- [Privileges](#): RTGS_QueryAccBal
- [Screen](#): RTGS Cash Account Liquidity – Query Screen

The screenshot shows a web application interface for querying RTGS Cash Account Liquidity. The header is dark blue with a hamburger menu icon, an envelope icon, and the text 'Query RTGS Cash Account Liquidity'. Below the header, there is a 'Search Criteria' section with a 'General*' tab. Two input fields are visible: 'Account Number' and 'Account BIC', each with a search icon. At the bottom left, there are 'Submit' and 'Reset' buttons.

Liquidity Monitoring U2A queries

*How to monitor
DCA liquidity in U2A?*

- [RTGS GUI path](#): Liquidity >> RTGS Cash Account Liquidity – Query Screen >> [Submit]
- [Privileges](#): RTGS_QueryAccBal
- [Screen](#): RTGS Cash Account Liquidity – Display Screen

The screenshot displays the 'Display RTGS Cash Account Liquidity' interface. The search criteria section shows 'Account Number' as RTGSDCASBBGEF0002EUR001 and 'Account BIC' as ASBBGEF0002. The results section is divided into 'Account Information' and 'Liquidity Information'.

Account Information	
Party BIC	ASBBGEF0002
Party Name	AS Geo2
Account Number	RTGSDCASBBGEF0002EUR001
Account BIC	ASBBGEF0002

Liquidity Information	
Starting Balance	5,000,000,000.00 EUR
Settled Cash Transfers	
Settled Debit Liquidity Transfers	0.00 EUR
Settled Credit Liquidity Transfers	0.00 EUR
Settled Debit Payments and AS Transfers	0.00 EUR
Settled Credit Payments and AS Transfers	0.00 EUR
Current Balance	5,000,000,000.00 EUR
Queued Cash Transfers	
Queued Debit Liquidity Transfers	0.00 EUR
Queued Debit Payments and AS Transfers	0.00 EUR
Queued Credit Payments and AS Transfers	0.00 EUR

Total Liquidity	
RTGS DCA Liquidity	5,000,000,000.00 EUR
Total Sub-Account Liquidity	0.00 EUR
Total RTGS Liquidity	5,000,000,000.00 EUR

Sub-Account(s): No Entries found.

Liquidity Monitoring U2A queries

*How to monitor
DCA liquidity in U2A?*

- [RTGS GUI path](#): Liquidity >> RTGS Cash Account Liquidity – Query Screen >> [Submit]
- [Privileges](#): RTGS_QueryAccBal
- [Screen](#): RTGS Cash Account Liquidity – Display Screen

Earmarked Cash Transfers	
▶ Earmarked Debit Cash Transfers	2,009.00 EUR
▶ Earmarked Credit Cash Transfers	0.00 EUR
Projected Liquidity	4,999,997,991.00 EUR
Reservations	
Urgent	0.00 EUR
High	0.00 EUR
Pending Reservations	
Urgent	0.00 EUR
High	0.00 EUR
Floor/Ceiling Information	
Floor Threshold	0.00 EUR
Ceiling Threshold	0.00 EUR

New Liquidity Transfer

Liquidity Monitoring A2A queries

*How to monitor
DCA liquidity in A2A?*

- The following messages are used to monitor liquidity in A2A

Message type	Use case	Sent by
camt.003 GetAccount	Available liquidity RTGS query: used to request RTGS cash account balances	Business sender
camt.004 ReturnAccount	Query response for available liquidity RTGS query: used to provide the requested balance information	RTGS

- Detailed information is available in the RTGS UDFS Section 12. List of messages

Liquidity Monitoring EOD reporting

*How to monitor
DCA liquidity in A2A?*

- The “statement of accounts” is created during the End-of-day period (18:00 - 18:45 CET), It is not created intraday.
- The report provides information on a single cash account and it contains information about all items that are posted on a cash account and balance information of the current business day
- The report is provided in the form of an ISO 20022 message:
camt.053 – BanktoCustomerStatement
- To receive a statement of account report (for CLM or for RTGS accounts) the participant must configure this report in CRDM. This configuration is different from message subscription (i.e. you do not subscribe to a camt.053)
- For U2A only participants the statement of account will be displayed as a camt.053 XML message on the screen. The participant can initiate the download of the camt.053 XML string in a PDF format. The “Statement of Account” is available for download during 10 business days.

Event Closure

Any questions ?

Documentation : <https://www.ecb.europa.eu/paym/target/consolidation/profuse/html/index.en.html>

RTGS User handbook

https://www.ecb.europa.eu/paym/target/consolidation/profuse/shared/pdf/2021-06-22_rtgs_uhb_v1-5.pdf

RTGS UDFS

https://www.ecb.europa.eu/paym/target/consolidation/profuse/shared/pdf/2021-04-01_t2_udfs_rtgs_v2-2.pdf

CRDM User handbook

https://www.ecb.europa.eu/paym/target/consolidation/profuse/shared/pdf/2021-05-19_crdm_uhb_v2-0.pdf

CRDM UDFS

https://www.ecb.europa.eu/paym/target/consolidation/profuse/shared/pdf/2021-04-01_t2_udfs_crdm_v2-2.pdf