Explainer on automated and rule-based liquidity transfers

1 Reference Data

1.1 Automated Liquidity Transfers

Automated liquidity transfers rely on a one-to-one relationship between an MCA and an RTGS DCA belonging to the same party. This relationship is implemented through the "Associated Liquidity Transfer Account" attribute at account level. When an MCA points to an RTGS DCA through this attribute, that RTGS DCA must point back to the MCA (so-called 1:1 link). This will be enforced through CRDM business rules[1]. Moreover, a soon as a party has an MCA and an RTGS DCA, it must link them through the "Associated Liquidity Transfer Account" attribute.
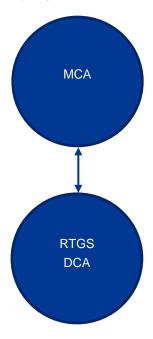

Figure 1: One-to-one relationship between MCA and DCA

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[1] The actual implementation is under discussion, but the idea is to introduce a business rule to enforce that, given two accounts where account 1 is pointing to account 2, an update of account 2 to point to any account other than account 1 is rejected. The two accounts must be an MCA and RTGS DCA respectively and belong to the same Party. This still requires the user to carry out separate configuration steps. At least three steps are required: creation of account 1, creation of account 2 linking to account 1, update of account 1 to link to account 2.

If a party has several MCAs, one of them must be flagged as the default MCA. This is the one MCA which can have a credit line and on which most CBOs will settle by default (some CBOs like cash withdrawals or invoice payments can settle on other - non default - MCAs, too). If this party also has one RTGS DCA, the default MCA and the RTGS DCA must be linked in order to be able to execute automated LTs. If a party has several RTGS DCAs, its default MCA must be linked to one of the RTGS DCAs. The other MCAs and RTGS DCAs can be linked in pairs of two. But two MCAs cannot be linked to the same RTGS DCA, and two RTGS DCAs cannot be linked to the same MCA.
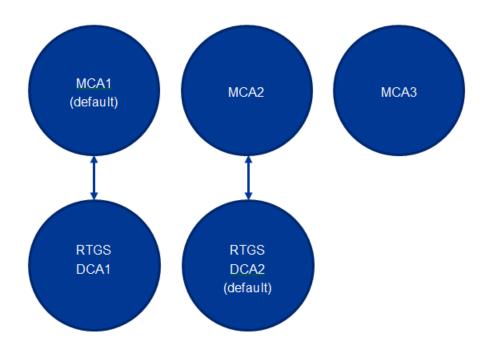
Here is an example set-up:

Figure 2: Associated Liquidity Transfer Account Set-up

The notion of default RTGS DCA is not related to the linking explained above. Flagging an RTGS DCA as default will only make the related BIC appear as "Main BIC" in the RTGS directory, and is not relevant for the processing within RTGS. A default RTGS DCA can be linked to an MCA that is not a default MCA, and vice versa.

All set-ups described in this paragraph are performed and maintained in CRDM by the central bank of the MCA and RTGS DCA Holder as part of the account set-up.

1.2   Rule-based liquidity transfers in case of pending high/urgent payments and AS transfers

These also rely on the links implemented by the Associated LT Account attribute described in 1.1: the same "couple" of accounts (belonging to the same party) is

used for the automated liquidity transfers and for the rule-based liquidity transfers in case of pending high/urgent payments and AS transfers.

They are activated by two Boolean attributes at RTGS DCA level. If they are not activated, the links are only used by the automated liquidity transfers.

- The first Boolean attribute activates the rule-based liquidity transfers in case of queued high or urgent payment orders and AS transfer orders ("Automated LT for Queued High Priority Payments" field in the CRDM GUI)

- The second Boolean attribute activates the rule-based liquidity transfers in case of queued urgent payment orders and AS transfer orders ("Automated LT for Queued Urgent Priority Payments/AS Transfer Orders" field in the CRDM GUI)

All set-ups described in this paragraph are performed and maintained in CRDM by the central bank of the MCA and RTGS DCA Holder as part of the account set-up.

1.3 Floor/ceiling rule-based liquidity transfers

Floor/ceiling rule-based liquidity transfers introduce another relationship between two accounts in RTGS and CLM. This relationship is independent from that described in 1.1 and 1.2.
It is not a one-to-one relationship: several accounts may pull from the same account if their respective floors are breached; several accounts may push to the same account if their respective ceiling is breached. But one account may not try to pull from more than one account. And one account may not push to more than one account.

An RTGS DCA may receive funds from, or send funds to, an MCA through a rule-based liquidity transfer. There cannot be rule-based liquidity transfers between two RTGS DCAs.

An MCA may receive funds from, or send funds to, an RTGS DCA or another MCA (belonging to the same liquidity transfer group) through a floor/ceiling rule-based liquidity transfer.

The rules can be set up between accounts belonging to the same or different parties, under the same or different central banks.

The "default" flags in CLM and RTGS do not have any impact.

Figure 3 uses the same example set-up as Figure 2. Floor relationships are depicted in red, ceiling relationships in green and associated LT relationships in blue (already on Figure 2). The arrow indicates the direction of liquidity transfers, i.e. the direction in which the money flows if the rule is triggered.
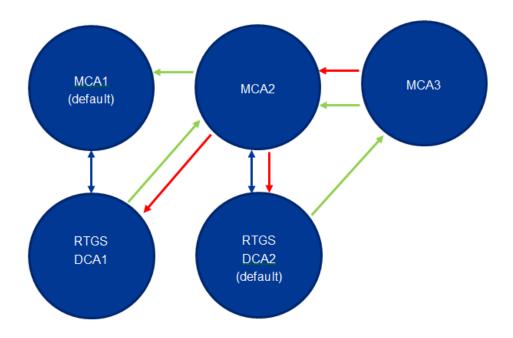
Figure 3: Floor/ceiling set-up

The CRDM set-up is done by payment banks in two steps:

1. Configuration of the cash account: the payment bank owning the account on which the rule is defined (i.e. where the floor/ceiling will be monitored), or the account´s co-manager can define four different optional account attributes:

    - Floor notification Amount (floor threshold value)

    - Ceiling notification Amount (ceiling threshold value)

    - Target Amount After Breaching Floor

    - Target Amount After Breaching Ceiling

2. Configuration of the liquidity transfer itself (in the Standing/Predefined Liquidity Transfer Order CRDM screen): The liquidity providing/draining cash accounts are configured by the party responsible for the account to be debited.

This has the following implications:

- If the floor/ceiling data is configured but the liquidity transfer is not, the configuration will not work. Conversely, the rules are active as soon as the configuration is complete; there is no activation through a Boolean attribute.

- If the accounts belong to different Parties, the owner of the cash account that receives liquidity in a floor breach has no visibility on the cash account that provides the liquidity. Similarly, the owner of a cash account that receives liquidity in a ceiling breach would potentially receive liquidity without being aware they are part of a configuration (this is possible in any kind of liquidity transfer).

Note: additional Cash Account attributes in CRDM are used to generate floor/ceiling notifications, which are however not in the scope of this document.

The CRDM set up is done in U2A. In addition, the floor/ceiling threshold amounts can be maintained in A2A by an acmt.015 message.

2 Triggering and processing of automated liquidity transfers

Automated liquidity transfers are triggered when a CBO is queued/pending on an MCA linked to an RTGS DCA, regardless of which central bank instructed the CBO. This happens for any CBO, regardless of its "source": sent by BILL, CLM-generated interest amount, instructed by a central bank, etc.

In case the available liquidity on an MCA linked to an RTGS DCA is not sufficient to execute a seizure of funds, an automated liquidity transfer is triggered too.

The automated liquidity transfer will try to pull funds from the linked RTGS DCA. If it does not fully settle in RTGS, the remaining amount is put on the top of the RTGS queue. RTGS will not generate any rule-based liquidity transfer pulling liquidity from an MCA as long as there is a queued automated liquidity transfer order in RTGS trying to pull funds from the RTGS DCA to that MCA.

A CBO instructed as a liquidity transfer (for example a cash withdrawal, set up of overnight deposit) will not trigger this mechanism if it fails to settle.

Due to the account set up described in 1.1, if a payment bank has two MCAs (MCA 1 – default, MCA 2) but only one RTGS DCA and a payment (for example the direct debit generated by BILL) tries to debit MCA 2, no automated liquidity transfer would be triggered in case of lack of funds on MCA 2, since it cannot be linked to the RTGS DCA (already linked by a one-to-one relationship with MCA 1). In this scenario, a floor may be set on MCA 2, along with a rule-based liquidity transfer pulling liquidity from the RTGS DCA.

CLM camt.054 credit notifications and RTGS camt.054 debit notifications for automated liquidity transfers may be subscribed to. They will both have the code word LAUT.

3 Triggering and processing of rule-based liquidity transfers

3.1 Pending High/Urgent Payment orders and AS transfer orders

In such scenario and based on the respective configuration, RTGS will attempt to pull liquidity from an MCA if:

- An RTGS DCA is linked to an MCA through the "Associated LT Account" attribute

- The relevant flag at Cash Account level (Automated LT for Queued High Priority Payments or Automated LT for Queued Urgent Priority Payments/AS Transfer Orders) is set to TRUE

- A "high" or "urgent" payment order, or an AS transfer order, is queued on the RTGS DCA

- There are no CBOs queued/pending on the MCA and therefore there are no pending automated LTs attempting to pull liquidity from the RTGS DCA into the MCA (see above)

The resulting rule-based liquidity transfer may settle partially on the MCA in CLM. The remaining amount will not be queued. If there are CBOs queued/pending on the MCA, no liquidity will be transferred.

Due to the account set up described in 1.1, if a payment bank has only one MCA and several RTGS DCAs it can only use rule-based liquidity transfers for high/urgent payments and AS transfers for one RTGS DCA, linked to the MCA through a one-to-one relationship.

Camt.054 notifications for such rule-based liquidity transfers may be subscribed to. They will have the code word LRQP.

3.2   Triggering and Processing Floor/ceiling rule-based liquidity transfers

The rules will be triggered by the first settled payment resulting in an account balance below/above the threshold. A liquidity transfer will never trigger a floor/ceiling rule, but each subsequent payment – whether incoming or outgoing – may trigger the rules if it results in a balance above/below the threshold.

Once a floor notification has been sent no further floor notifications will be sent for any payment changing the account balance but keeping it below the floor (whether or not the liquidity transfer triggered by the rule was fully settled).

Once a ceiling notification has been sent, no further ceiling notification for any payment changing the account balance but keeping it above the ceiling.

However: for each payment resulting in a balance below the floor, a rule-based liquidity transfer will be triggered: for each payment resulting in a balance above the ceiling, a rule-based liquidity transfer will be triggered.

A triggered floor rule will not return funds in case there are pending CBOs on the MCA from which it is trying to get funds.

The triggered rule-based liquidity transfer will have an amount equal to the difference between the target amount and the balance resulting from the payment which triggered the rule. It may settle partially. The remaining amount will not be queued.

Camt.054 notifications for such liquidity transfers may be subscribed to. They will have the code words LRFB and LRCB for floor and ceiling liquidity transfers respectively.